Google Cloud

The ROI of Gen AI in Telecommunications

A global survey of enterprise adoption and value

Table of contents

About this report 03

Introduction 04

Chapter 1
Gen AI is here 06

Chapter 2
Realizing gen AI's benefits 10

Chapter 3
C-level support helps unlock more value 22

Chapter 4
Reinvesting in innovation 25

Chapter 5
4 ways gen AI can deliver real-world impact 29

Conclusion and next steps 32

About this report

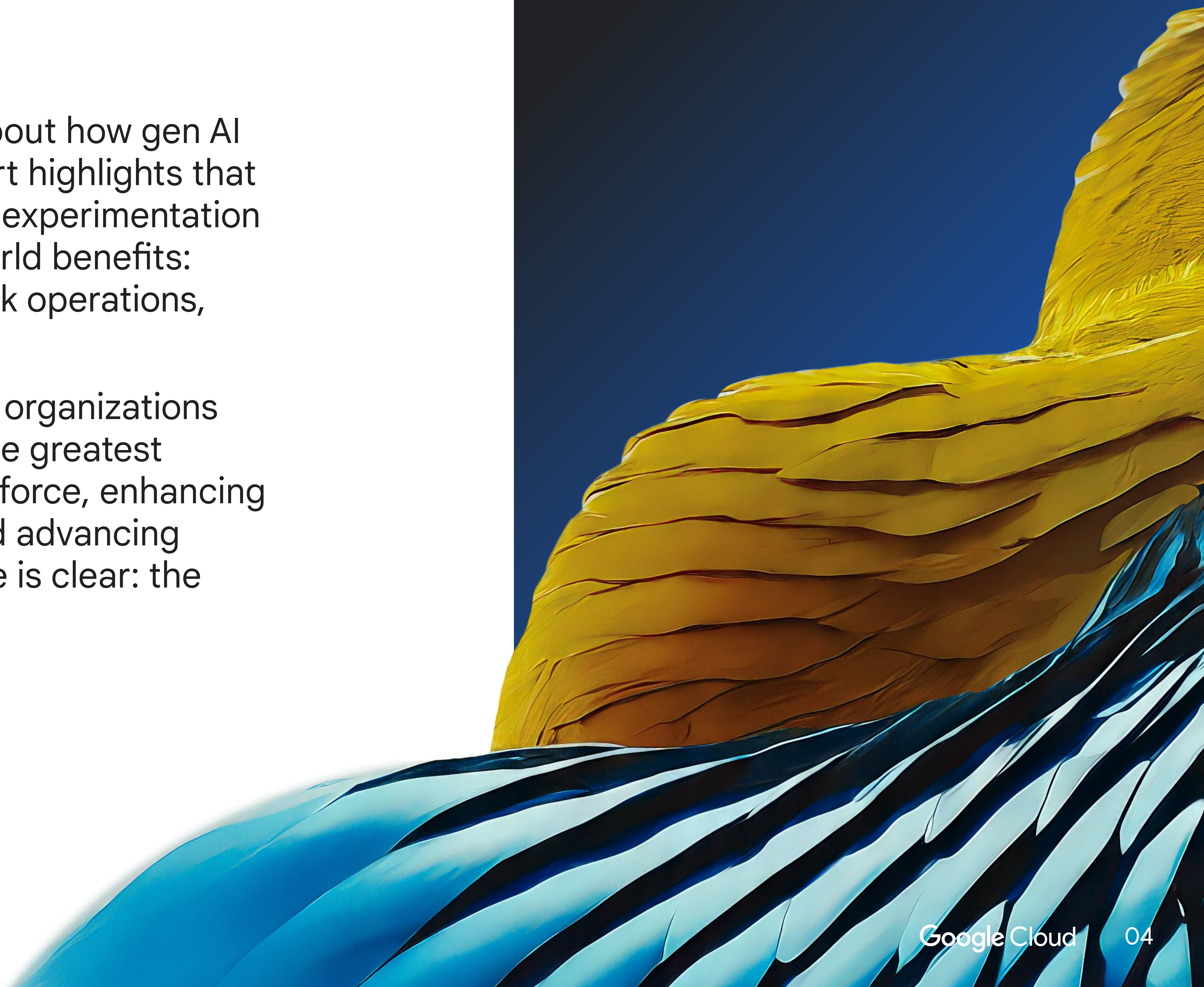
This report is based on a survey of 282 senior leaders of global enterprises ($10M+ revenue) in the telecommunications industry, conducted by Google Cloud and National Research Group. It provides a comprehensive benchmark of the impact of gen AI on business and financial performance.

Unless otherwise noted, all statistics in this report are derived from the survey and are focused on respondents in the telecommunications industry.

Introduction

A year ago, there was a surge of excitement and concern about how gen AI could transform the telecommunications industry. This report highlights that telecommunications organizations are moving beyond mere experimentation with gen AI towards production to unlock significant real-world benefits: enhancing customer experience, improving field and network operations, and improving employee productivity.

To fully harness the potential of gen AI, telecommunications organizations need to strategically invest in the areas that could lead to the greatest impact, such as scalable infrastructure, upskilling their workforce, enhancing customer experience, ensuring robust data governance, and advancing autonomous networks. As the industry evolves, the message is clear: the time to innovate with gen AI is now.



> Gen AI is rapidly transitioning from experimentation to real-world use cases, delivering clear ROI and tangible benefits, particularly in reducing operational costs and improving customer experience within telecommunications organizations.”

Anil Jain

**Managing Director, Strategic Consumer Industries,
Google Cloud**

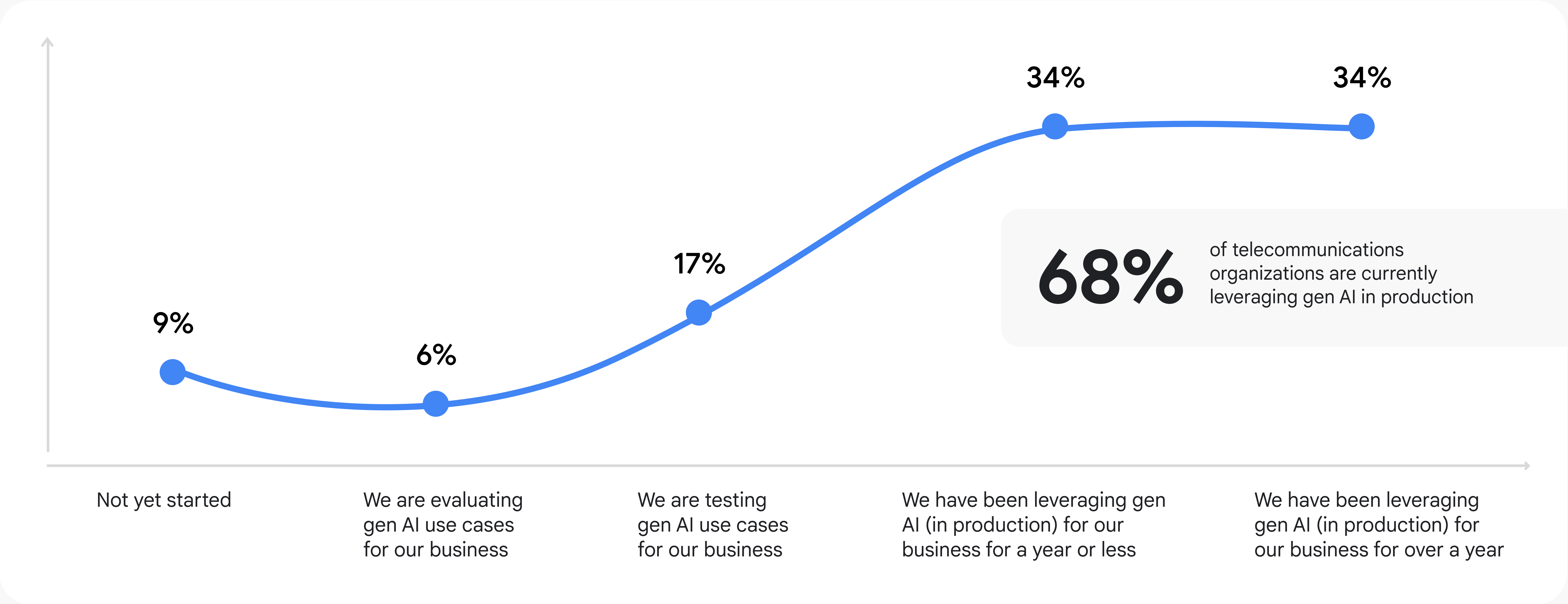
Gen AI is here

Not only is the telecommunications industry embracing gen AI, but as our survey shows it's having a strong impact on business outcomes. We've seen measurable gains across productivity, security, and customer experience, driving rapid ROI.

Chapter 01 02 03 04 05

The data shows that 68% of telecommunications executives[1] have already moved gen AI use cases into production. This rapid adoption highlights the sense of urgency for many in the industry. This shows that telecommunications organizations outpace the global average of having gen AI in production (62%[2]). There is still a large opportunity for telecommunications organizations to expand their use of gen AI and to attain improved ROI in their businesses.

Gen AI adoption among telecommunications organizations[1]



68% of telecommunications organizations are currently leveraging gen AI in production

---

[1] Total market - telecommunications (global): n=282
[2] Total (global): n=2,843

> The key to being able to take the leap from testing to production successfully is having solid foundations in place to ensure that all gen AI use cases are effective from start to finish.”

Deepika Adusumilli

Chief Data & AI Officer, BT Group

→ Learn more

It's clear that early adopters of gen AI in telecommunications are already reaping significant rewards. In fact, 68% of respondents using gen AI in production indicated that they improved leads and new customer acquisition which is critical to the health of their business as a direct result of gen AI.

Business growth attributed to gen AI[3]

Among telecommunications organizations currently using gen AI in production and reporting meaningful impact to business growth

64%

of respondents increased conversion

66%

of respondents created new products/services

68%

of respondents improved leads and new customer acquisition

64%

of respondents reported increase in revenue

---

[3] Telecommunications organizations currently leveraging gen AI in production and reporting business growth: n=124

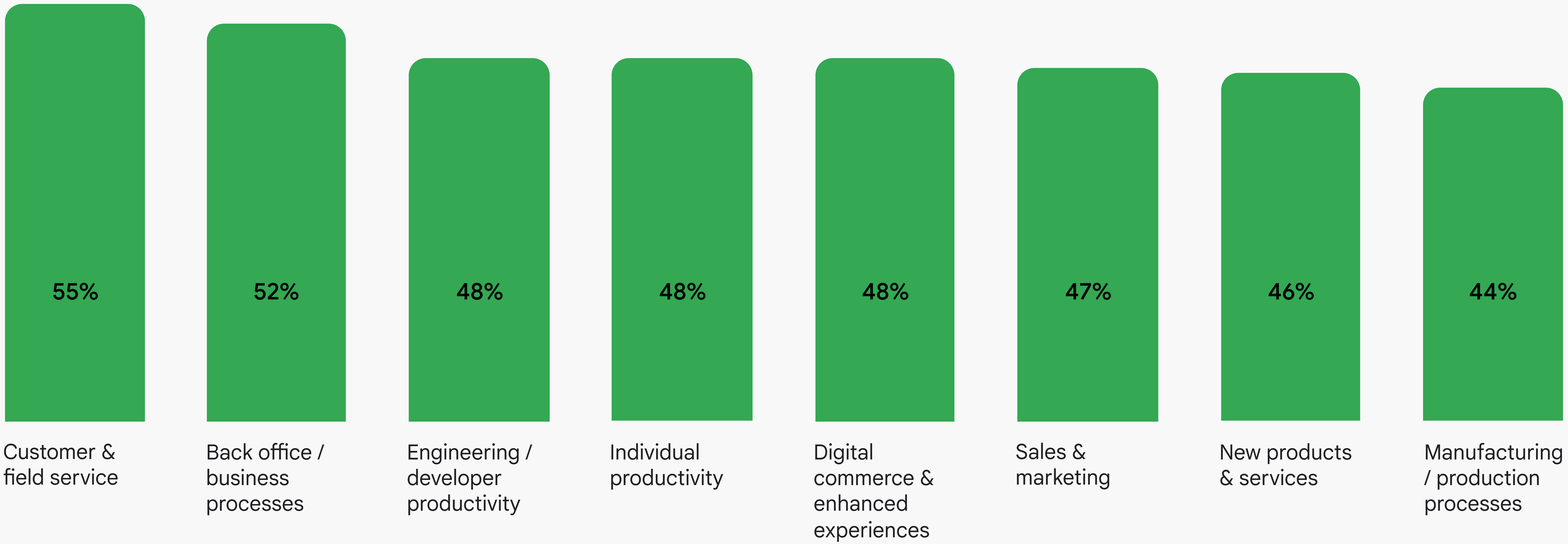
Realizing gen AI's benefits

From customer service to field operations, telecommunications organizations are already putting gen AI to work across a range of use cases to deliver ROI and increase productivity.

Contact center transformation with gen AI is advancing the industry from interactive voice response (IVR) interactions and chatbots to more friendly virtual agents driven by natural language processing. The virtual agents are not only addressing customer queries before getting to the human agent but they are also informing the human agent of prior interactions, seamlessly switching between virtual and human agents and topics.

Field technicians are also using gen AI to do their work faster. Organizations such as TELUS use multimodal gen AI in field operations with 75% of field techs utilizing it and 40% of tasks being automated as a result. AI tools can enhance existing human capability and skills and significantly increase productivity.

Telecommunications organizations have gen AI use cases in production across a range of functions[4]



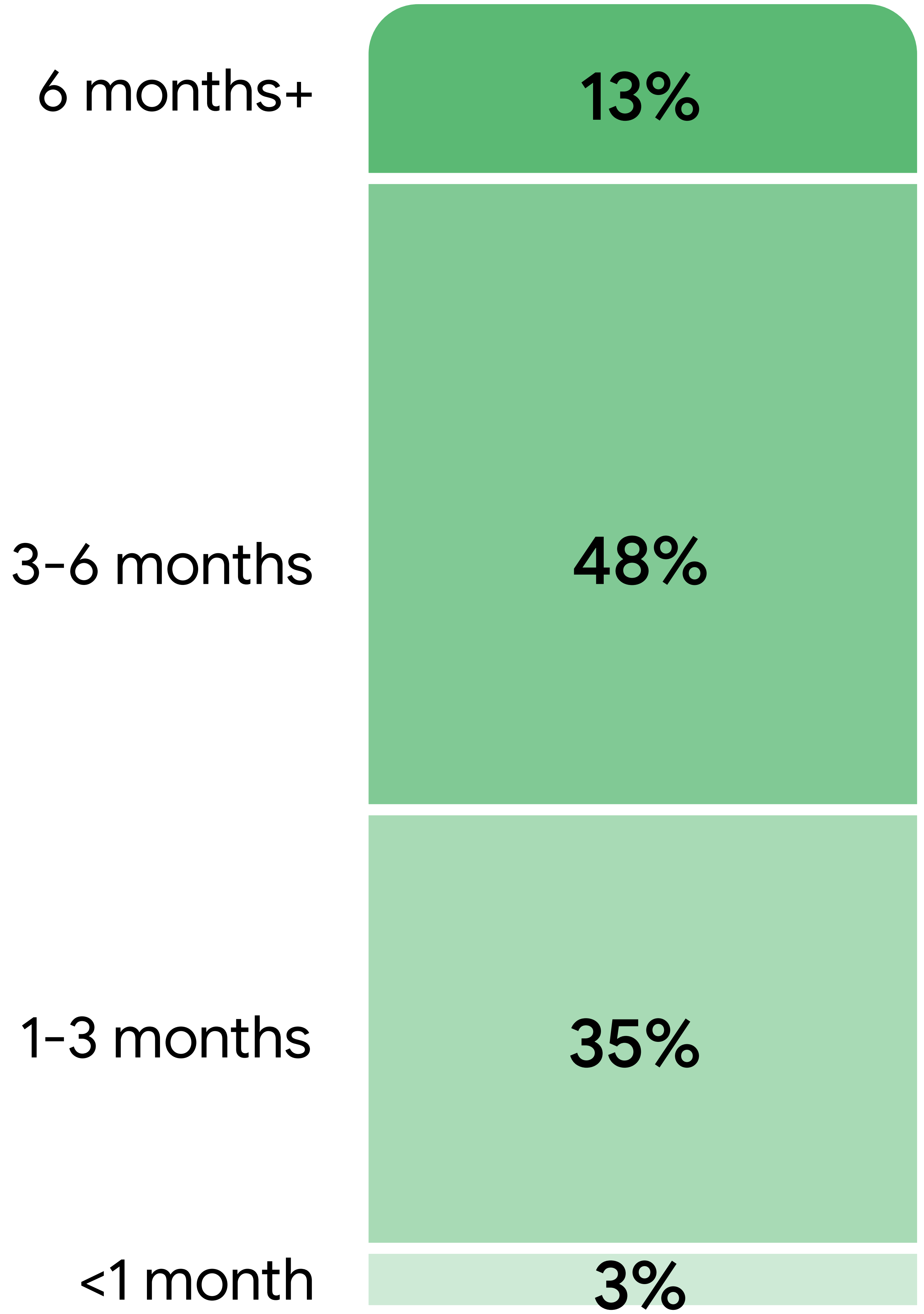
[4] Total market - telecommunications organizations that have at least one use case in production: n=272

01 Time to market

Telecommunications organizations need to stay ahead of new technological trends such as gen AI in order to maintain a competitive edge. This rapid time to market highlights the agility of telecommunications operators to adopt AI into their operations.

86% of telecommunications organizations can move a gen AI use case from idea to production within six months.[4]

Average time to market[4]



---

[4] Total market - telecommunications organizations that have at least one use case in production: n=272

02 ROI

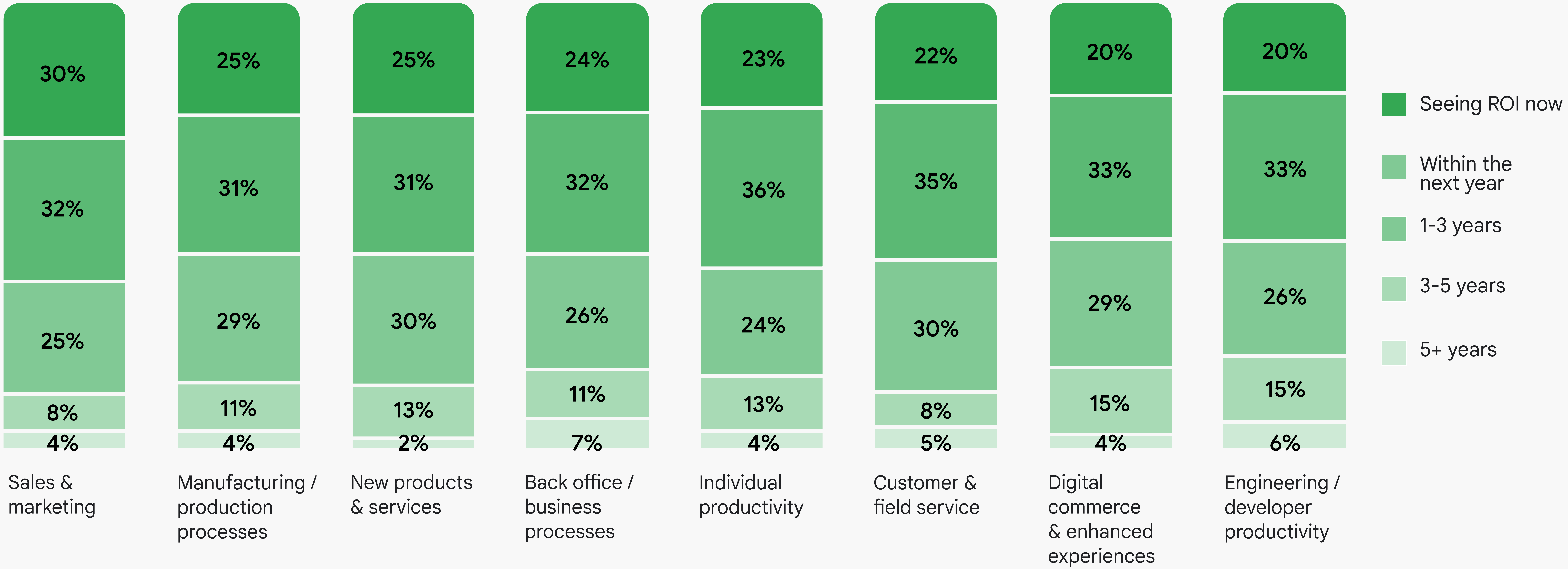
Telecommunications organizations have been seeing consistent return on their investments into gen AI. Many telecommunications use cases focus on internal operations, such as network optimization and predictive maintenance, which drive operational efficiency. Additionally, operators are deploying virtual call center agents that not only improve customer service but also deliver clear, measurable KPIs—such as reduced call handling times and increased customer satisfaction—helping to accelerate the realization of ROI.

74% of respondents who have been using gen AI in production[5] are seeing ROI from their gen AI investments now on at least one use case.

---

[5] Telecommunications organizations currently leveraging gen AI in production: n=193

ROI timeline for gen AI use cases[6]



[6] Telecommunications organizations currently leveraging gen AI in production that are currently using or planning to use gen AI on use cases: Sales & marketing: n=185, Manufacturing / production processes: n=167, New products & services: n=179, Back office / business processes: n=184, Individual productivity: n=181, Customer & field service: n=180, Digital commerce & enhanced experiences: n=171, Engineering / developer productivity: n=180

“Everything from how we plan our network investments—targeting them for customer experience, revenue growth, and churn reduction—all the way to how we optimize the network, excites me about the potential of gen AI. I'm particularly excited about how it can lower the barrier to accessing complex network data insights and shorten the insight-to-action cycle time, which is crucial for delivering an enhanced customer experience.”

Simon Norton

Head of Digital Networks, Vodafone

→ Learn more

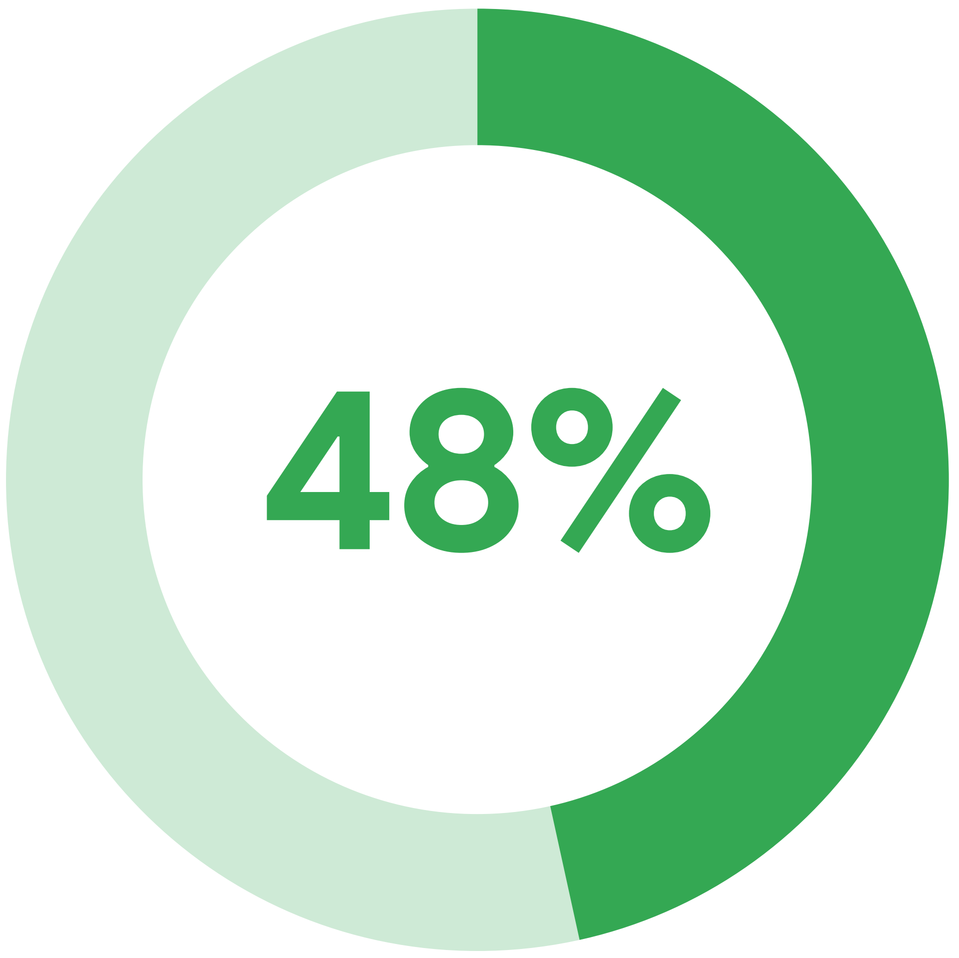
03 Productivity

Telecommunications organizations are using gen AI to increase efficiency among their workforce. Access to gen AI helps with decreasing time spent on routine tasks, allowing employees to focus on more strategic and complex tasks. For example, AI-driven tools can handle a significant portion of customer inquiries through chatbots, reducing the workload on human agents.

Similarly, gen AI assistants can support network operations center engineers for incident root-cause identification. Additionally, telecommunications companies operate with well-defined performance metrics, such as call handling times, network quality, and customer satisfaction scores, which makes it easier to track and attribute productivity improvements directly to AI interventions.

Gen AI impact on productivity[7]

Among telecommunications organizations currently using gen AI in production and reporting productivity improvements



indicate employee productivity has at least doubled

---

[7] Telecommunications organizations currently leveraging gen AI in production and reporting productivity improvements: n=123

> Results from an internal employee survey showed that team members are saving over 40 minutes on average per interaction with gen AI. As adoption has ramped up over the past year, you can imagine the time and resource efficiencies we’re already seeing.”

Hesham Fahmy

Chief Information Officer, TELUS

→ Learn more

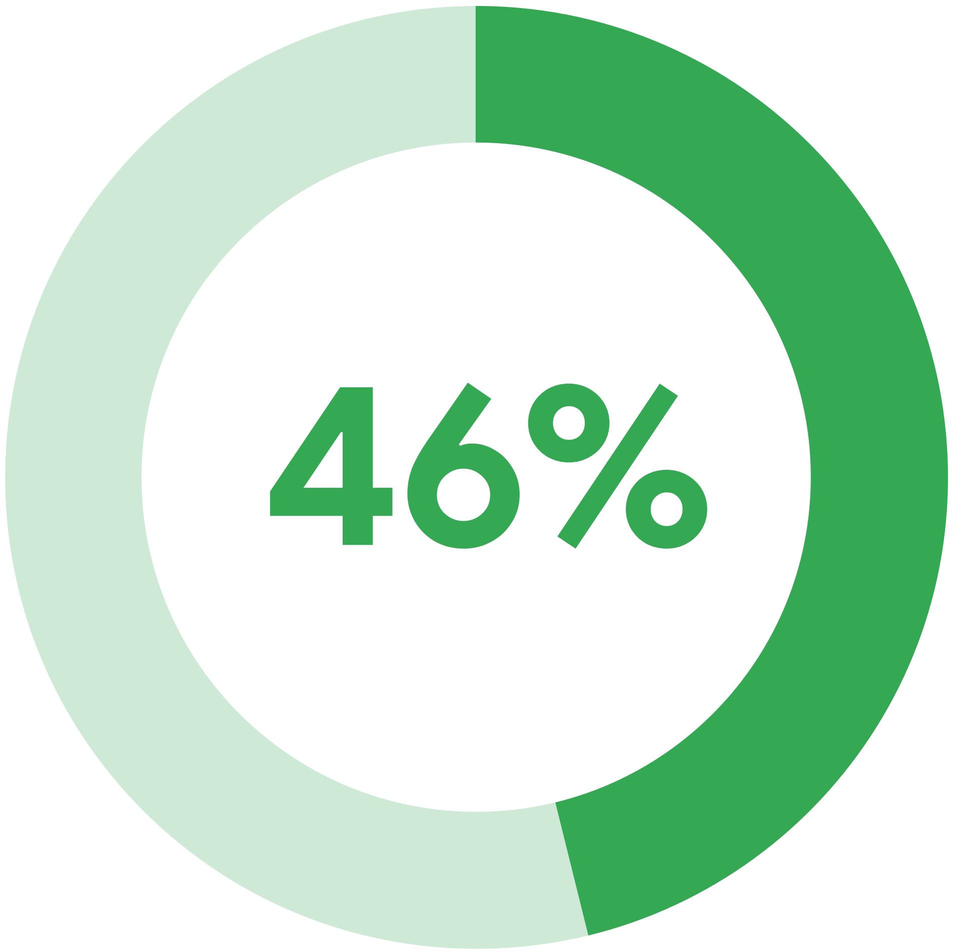
04 Security

The adoption of gen AI in telecommunications is showing promise in security. Use cases include anomaly detection, threat classification and prioritization, attack path simulation (based on digital twins), threat intelligence summarization, automation of incident response, malware classification, and identification of security vulnerabilities in code.

This underscores the technology's potential to bolster threat detection, search, summarize and recommend, reduce response times, and enhance overall network resilience. For an industry that manages vast amounts of sensitive customer data and is a frequent target for cyber threats, these advancements are crucial. Telecommunications organizations that effectively leverage gen AI for security are not only safeguarding their operations but also building greater trust with their customers.

Gen AI impact on security[8]

Among telecommunications organizations currently using gen AI in production



indicate improved security

---

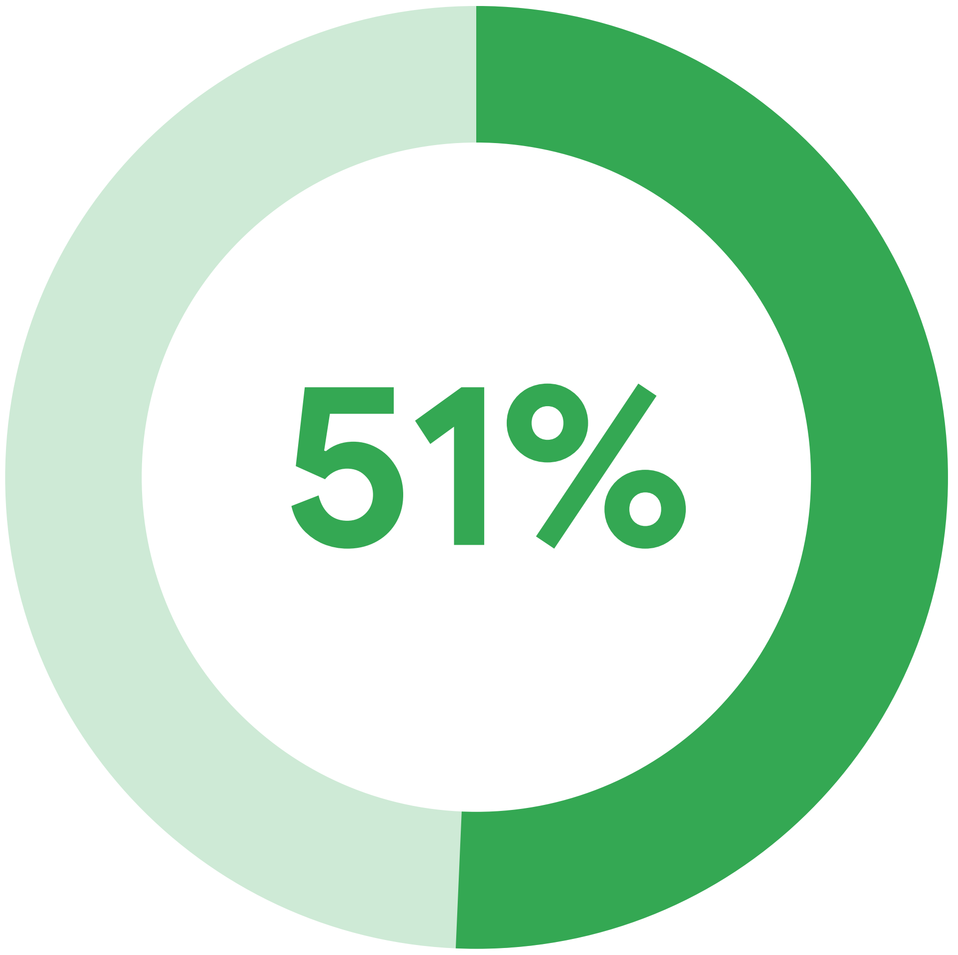
[8] Telecommunications organizations currently leveraging gen AI in production: n=193

05 Customer experience

Over half of respondents[9] in the survey reported significant improvements in user experience from gen AI. This trend highlights how AI-driven insights and automation are enhancing customer interactions, enabling more personalized service, and reducing friction around touchpoints. Customer satisfaction is a critical metric amongst telecommunications organizations. As gen AI continues to develop, its role in transforming the user experience will likely become even more pronounced.

Gen AI impact on user experience[9]

Among telecommunications organizations currently using gen AI in production



indicate improved user experience

---

[9] Telecommunications organizations currently leveraging gen AI in production: n=193

Gen AI solutions can equip call center staff with gen AI tools to enhance their productivity and effectiveness. Specifically, these tools can provide live call transcription; recommended responses derived from knowledge bases; real-time conversation analysis; and post-call sentiment analysis, leading to faster, more accurate, and more effective resolution of customer queries.”

Vikram Sinha

President Director & Chief Executive Officer,
Indosat Ooredoo Hutchison

→ Learn more

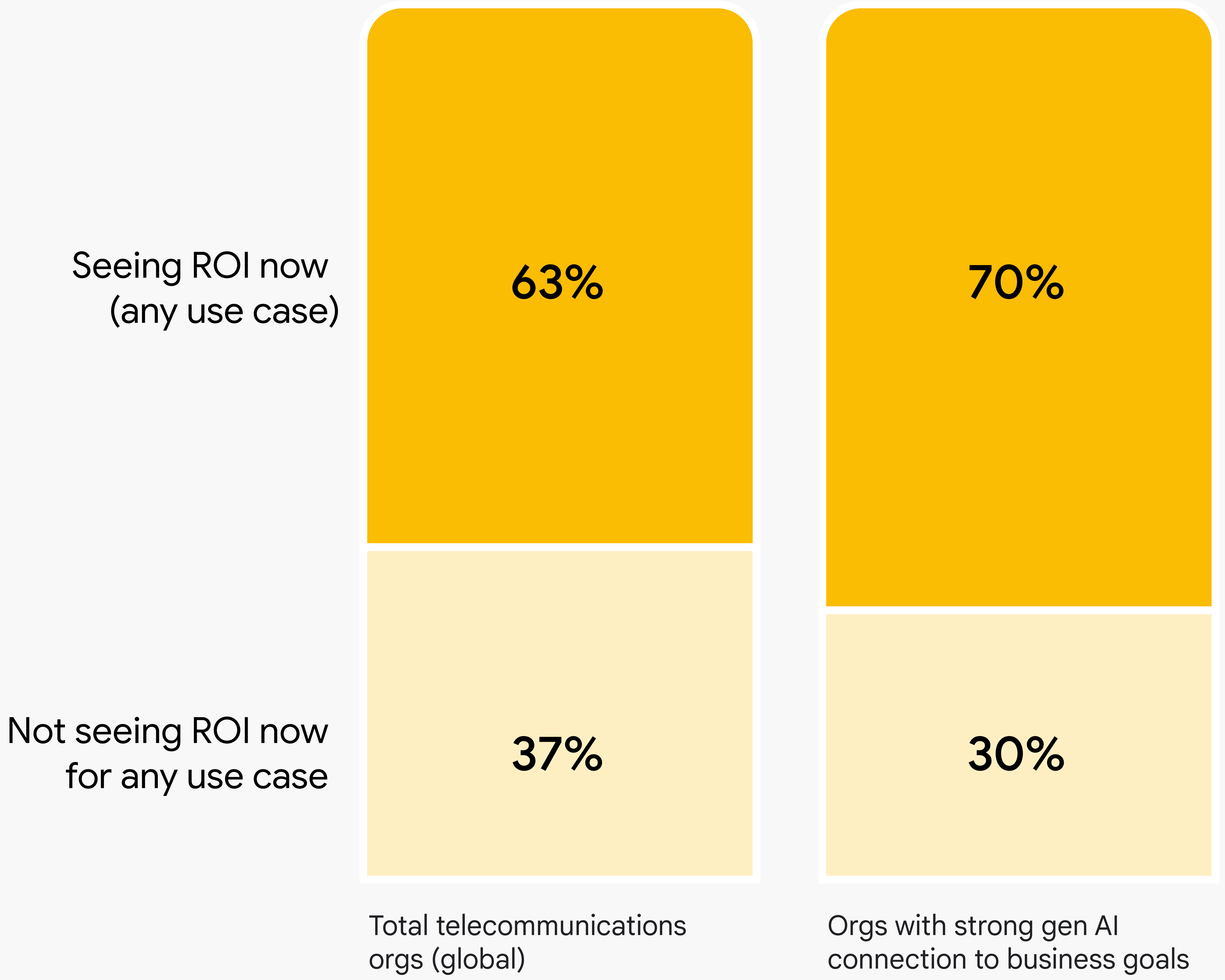
C-level support helps unlock more value

C-suite commitment is key for successful gen AI adoption. Organizations with a strong gen AI connection to business goals are slightly more likely to see a ROI from gen AI projects (70%[10]). This underscores the importance of a shared vision for AI initiatives, as it often translates into greater financial success.

---

[10] Telecommunications organizations that have strong gen AI connection to business goals: n=174; Total market - telecommunications (global): n=282

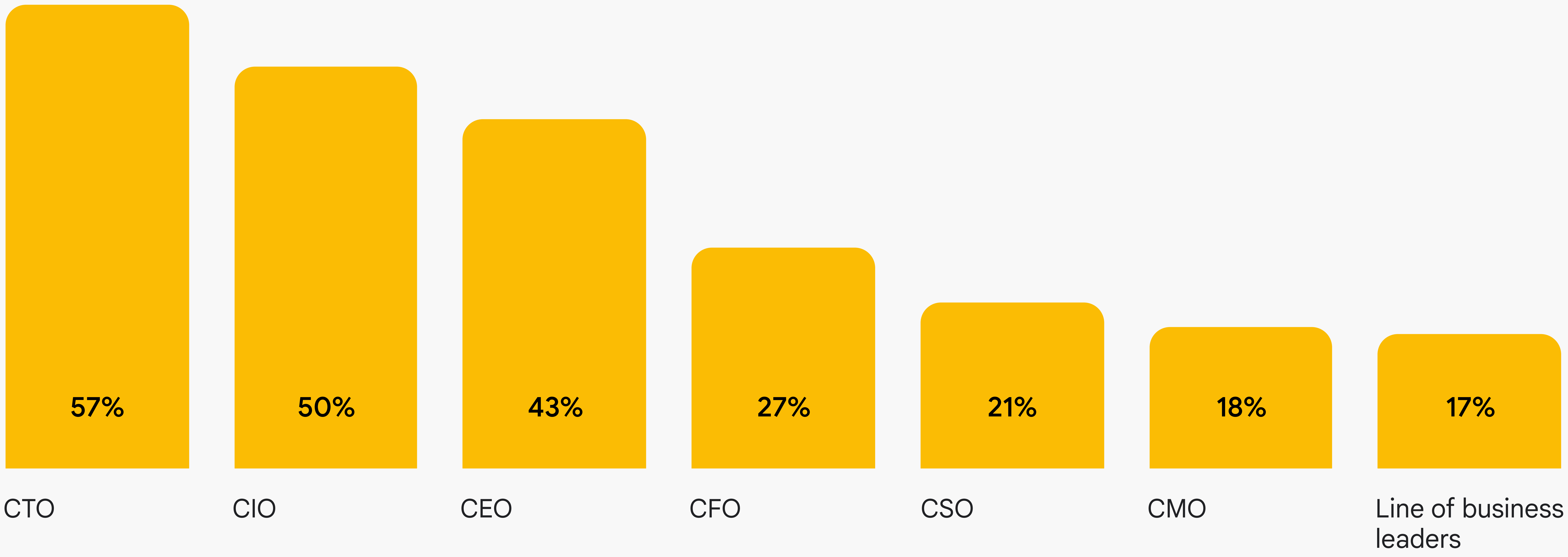
Telecommunications organizations with a strong connection between gen AI and business goals report ROI now on at least one use case[10]



[10] Telecommunications organizations that have strong gen AI connection to business goals: n=174; Total market - telecommunications (global): n=282

In fact, 65% of telecommunications organizations[11] say responsibility for driving gen AI strategy should be shared. CTOs, CIOs, CEOs typically lead technology and innovation workstreams, often in collaboration with other C-suite executives and the lines of business leaders. However, our survey reveals the need for closer collaboration with C-suite executives and lines of business leaders, to ensure alignment between strategic business goals and gen AI initiatives.

Leaders responsible for driving gen AI strategy[11]



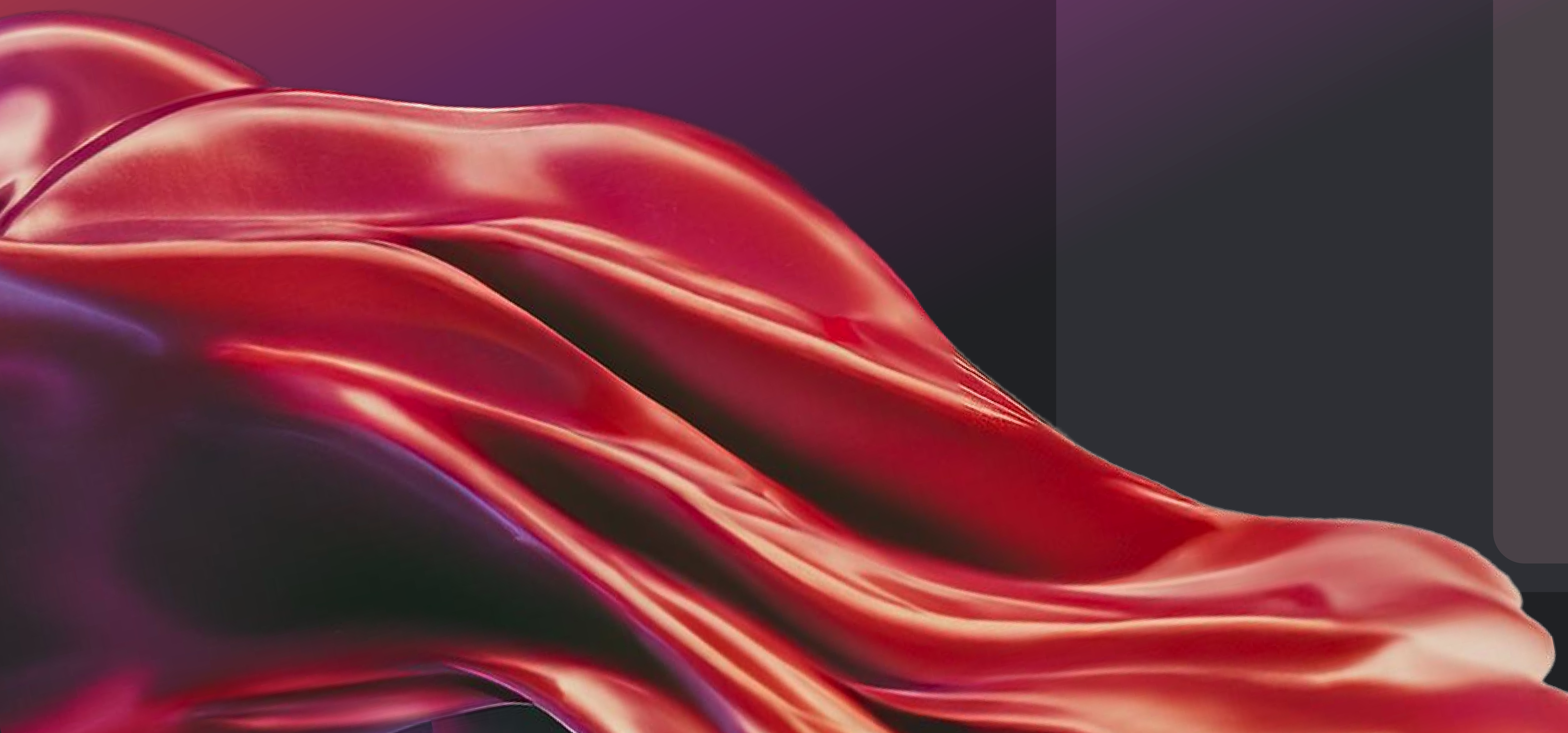
---

[11] Total market - telecommunications (global): n=282

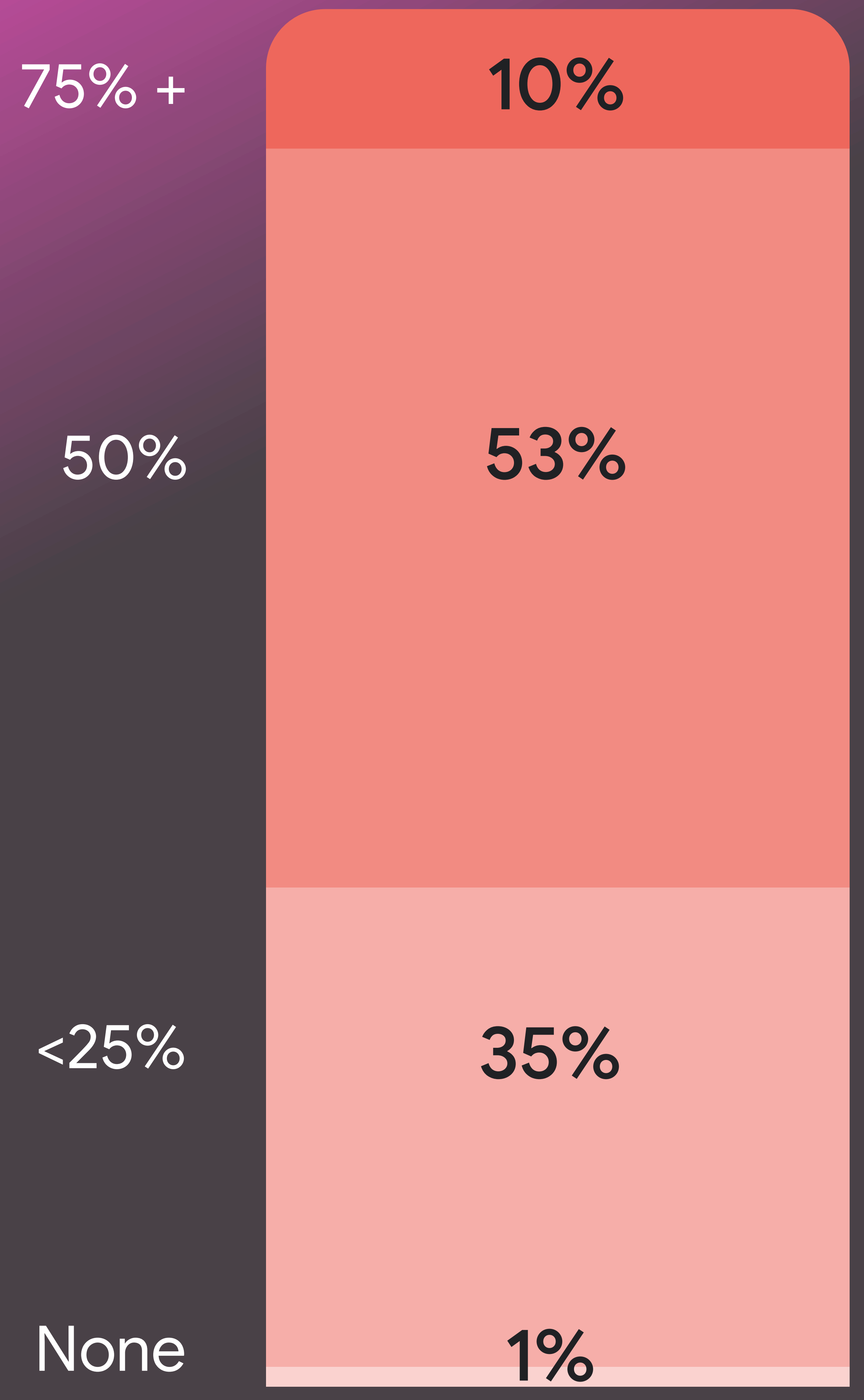
Reinvesting in innovation

With 63% of telecommunications organization respondents[12] intending to allocate at least half of their future AI budget toward gen AI, it's undeniable the technology is here to stay.

[12] Telecommunications organizations with defined funding plans for gen AI: n=271

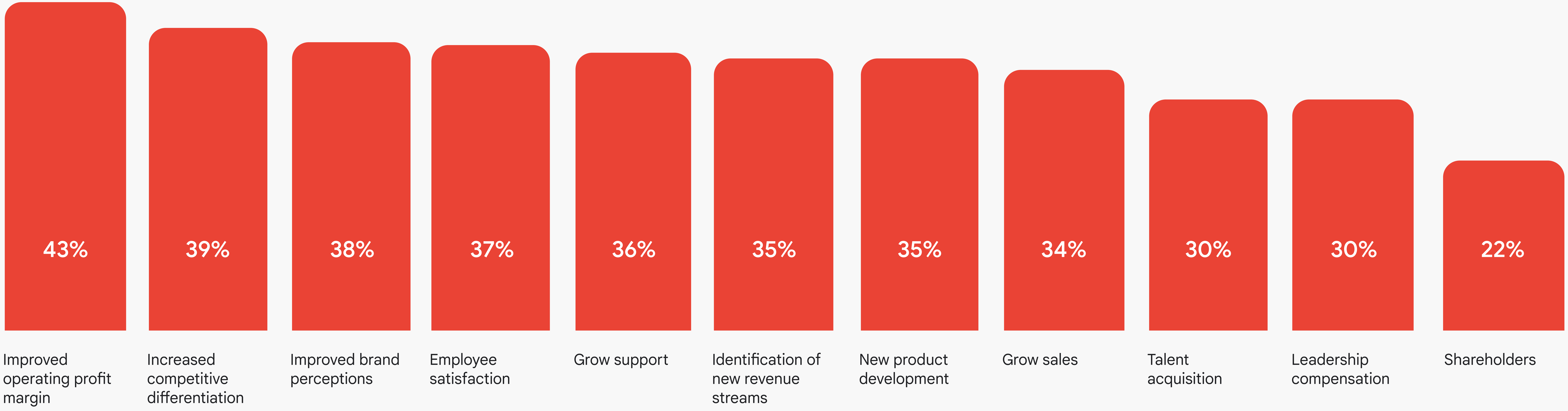


Future AI budget allocated to gen AI[12]



Telecommunication organizations that realize gains from gen AI have their sights set on reinvesting across a wide range of priorities. In fact, 43% of respondents hope to leverage gen AI gains to improve operating profit margin, 39% want to increase competitive differentiation, and 38% seek to improve brand perception.[13] The question is, can this virtuous cycle of innovation sustain itself? The potential is there, but it's crucial to ensure these early successes translate into long-term growth.

Ways organizations want to use gains from gen AI[13]

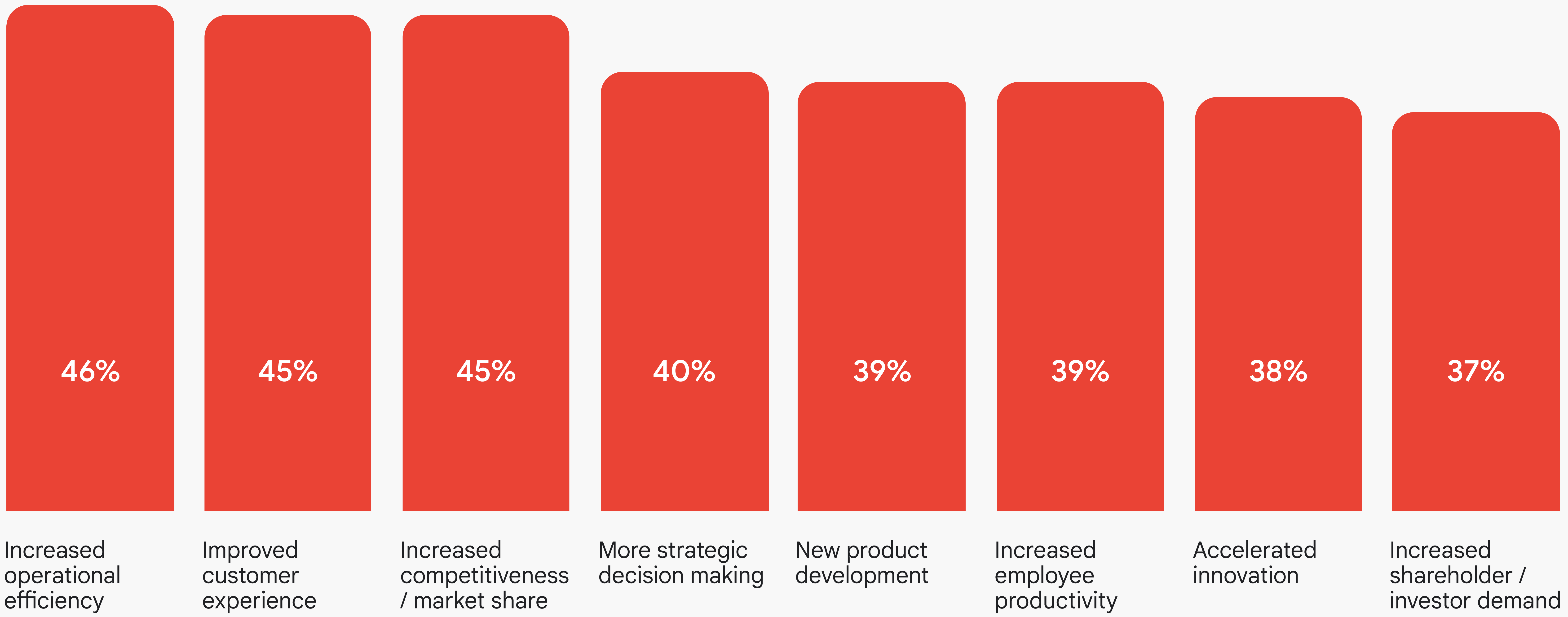


---

[13] Total market - telecommunications (global): n=282

Over the next two to three years, telecommunications organizations plan to use gen AI to address a range of objectives, with operational efficiency (46%) and customer experience (45%) at the top of their list.[14] As these organizations embark on this journey, these seemingly competing priorities may end up supporting each other. For example, more transformational initiatives like accelerated innovation and new product development—which are also in their sights—could help elevate the customer experience.

Planned business objectives to pursue with gen AI in the next 2-3 years[14]



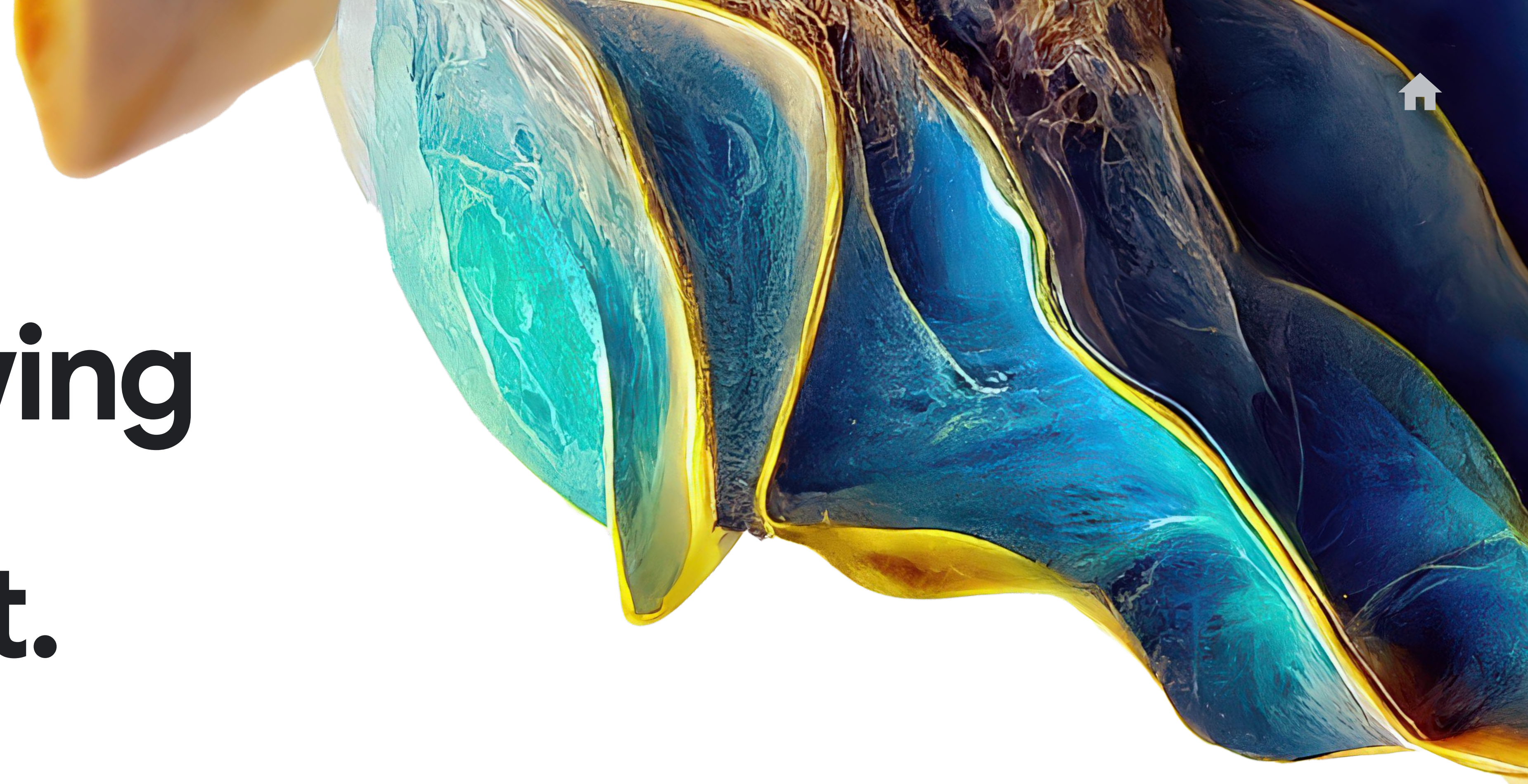
---

[14] Total market - telecommunications (global): n=282

4 ways gen AI can deliver real-world impact

Gen AI is past the "wow" and the potential stage, and it is moving towards understanding how organizations in the telecommunications industry can utilize this technology to supercharge their businesses. There is large potential to revolutionize network operations, customer engagement, and overall business efficiency.

Not sure where to start? Focus on the following four use cases that fall at the intersection of business value, strategic, data, and gen AI fit.



01

Enhance customer experiences through virtual agents to increase customer satisfaction and customer conversion, and improve deflection rates.

02

Strengthen field operations to accelerate troubleshooting, support employee training, and drive operational efficiency and customer satisfaction.

03

Improve network operations to improve demand forecasting, optimize energy spend, and detect anomalies faster.

04

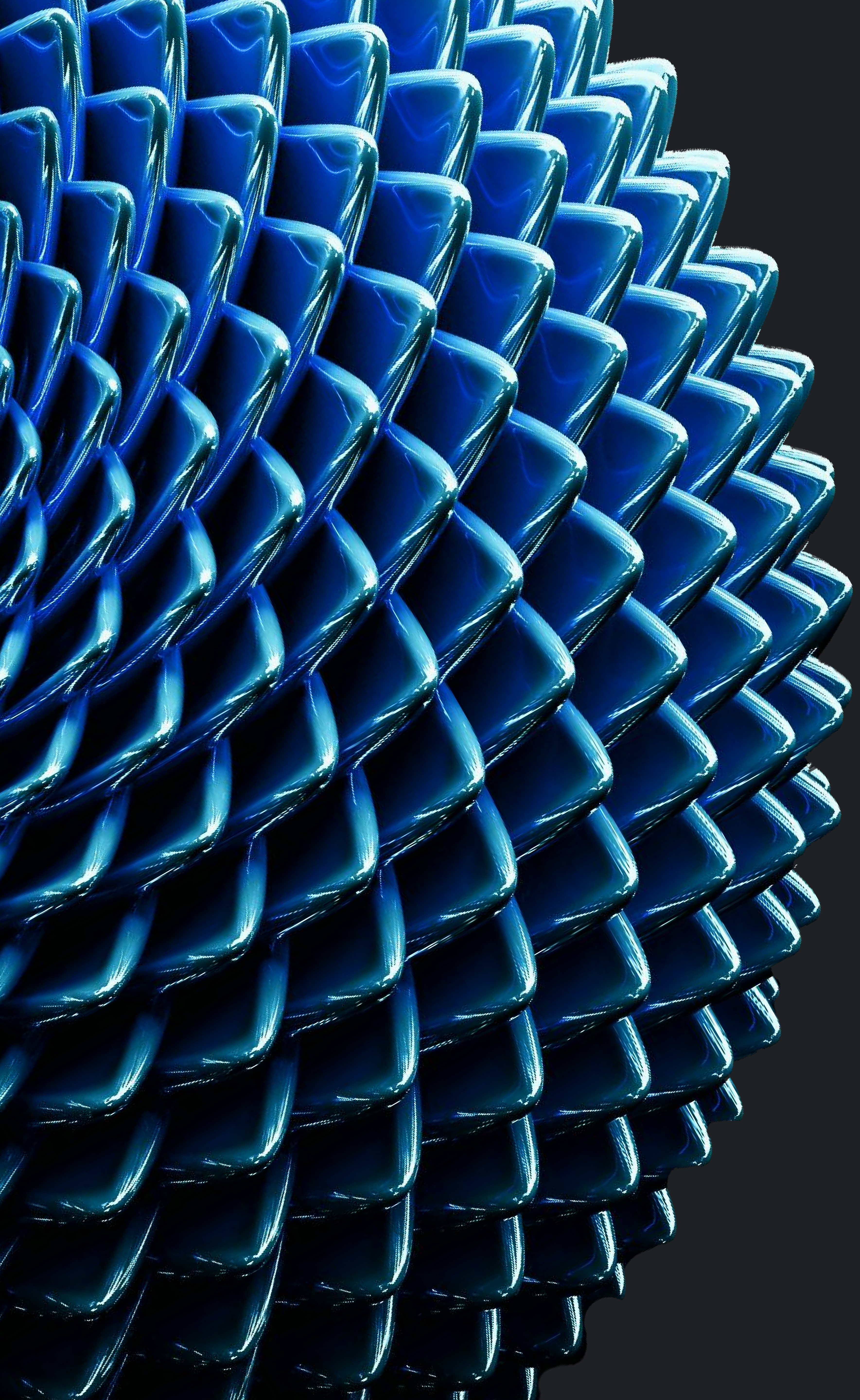
Optimize IT transformation to boost employee productivity, improve time to market, and reduce IT operations spend.

> Development is directly proportional to usage for AI, so the more team members we get using our AI tools, the better these tools will get—creating a loop effect that encourages more users.”

Hesham Fahmy

Chief Information Officer, TELUS

→ Learn more



How Google Cloud helps organizations realize business value

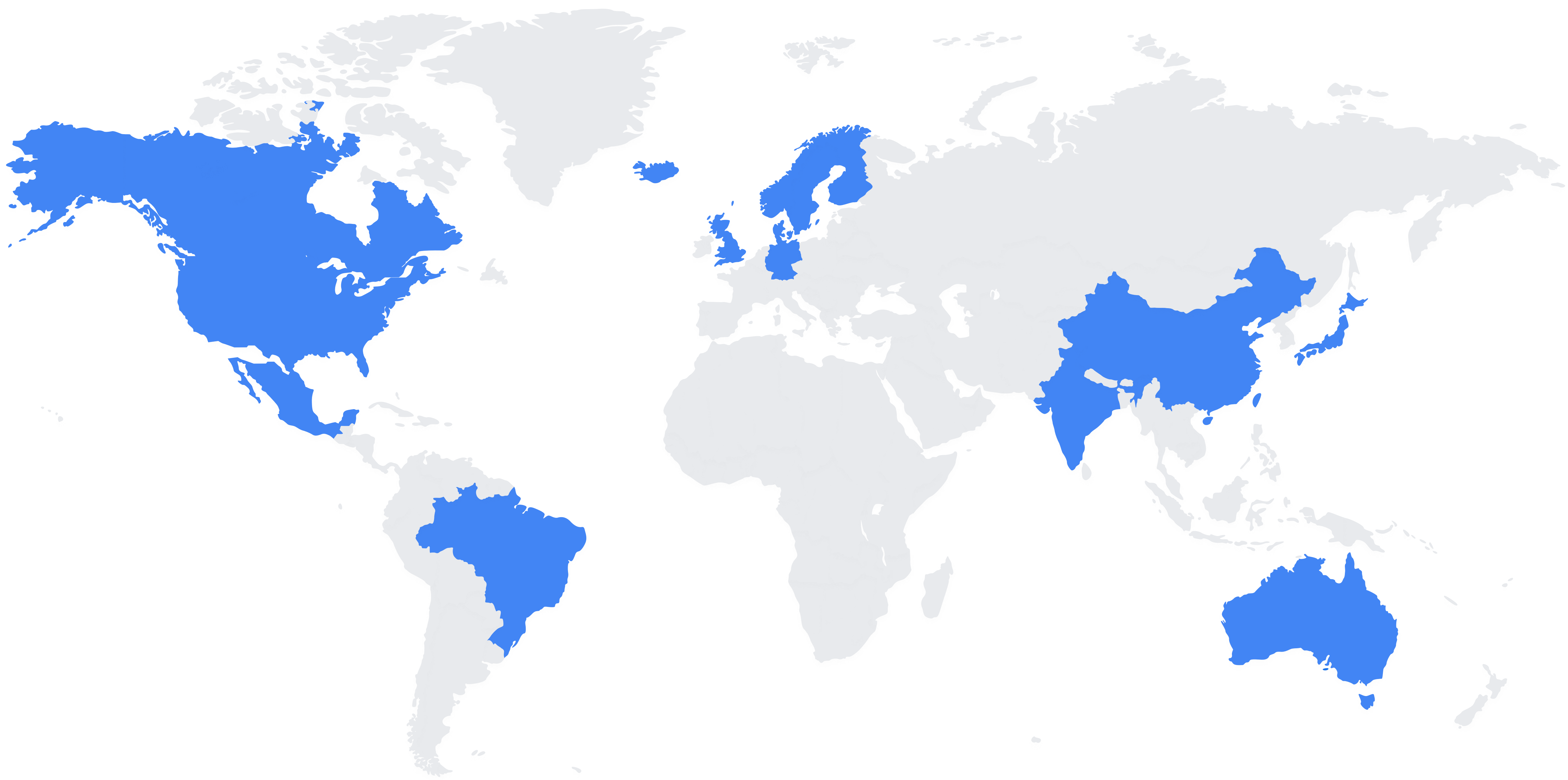
Google Cloud helps organizations build transformative gen AI experiences with confidence and speed. Google's comprehensive AI stack, backed by a decade of research, empowers businesses to access and customize leading foundation models, build and deploy gen AI applications with an integrated developer platform, boost productivity with AI agents, and develop their own models using Google Cloud’s cutting-edge AI Hypercomputer infrastructure.

Methodology

A 14-minute online survey with a total of n=2,843 business leaders, n=282 from telecommunications organizations.

Upper-level, senior executive, and C-suite business leaders, including:

83	CEO, CIO
69	CFO, CMO, CTO
65	CISO, CDO, CSO, COO, Director of Digital Strategy, VP of IT
65	IT Director, Head of Innovation



NorthAm	110	EMEA	61
LATAM*	23	APAC	88

*Low base (n<100)

Over
100
full-time employees

Over
$10m
annual revenue

Must be at least interested in gen AI use cases

A robust representation from priority industries

Global fieldwork conducted across 19 countries from February 23 - April 5, 2024

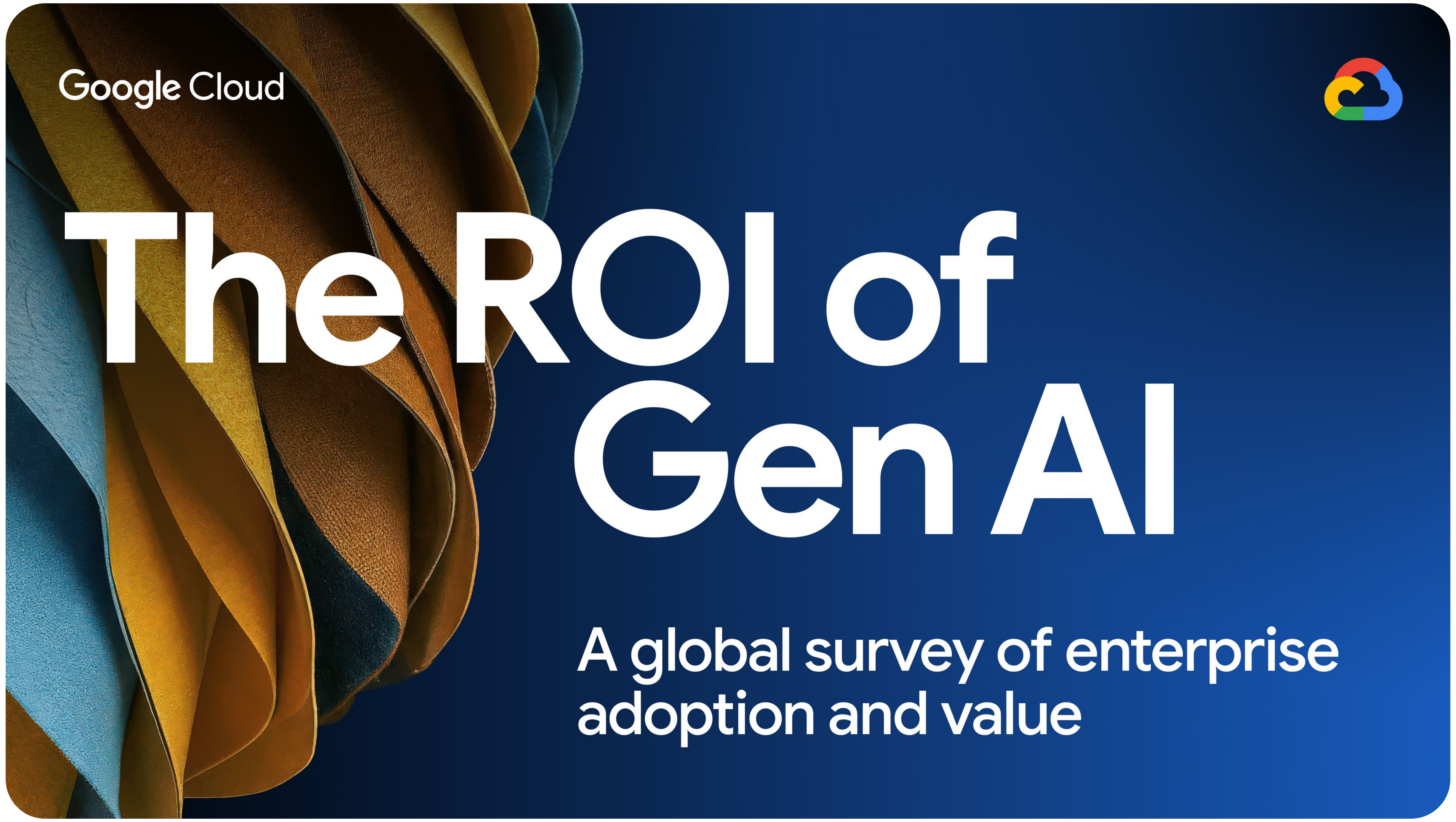
Additional North America augment fieldwork conducted July 2-24, 2024

nrg

National Research Group is a leading global insights and strategy firm at the intersection of content, culture, and technology.

The world's most innovative brands turn to us for insights into growth and strategy for any content, anywhere, on any device.

Read the report



Google Cloud

The ROI of Gen AI

A global survey of enterprise adoption and value

Learn more about Google Cloud for Telecommunications