CONFLUENT

# The Asia-Pacific Data Streaming Advantage

Why Real-Time Data Gives APAC Businesses a Clear Edge

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# Data Streaming: Fueling Business Agility and Innovation in APAC

Organizations are achieving some impressive results from real-world deployments, with most reporting **5x or more ROI.**

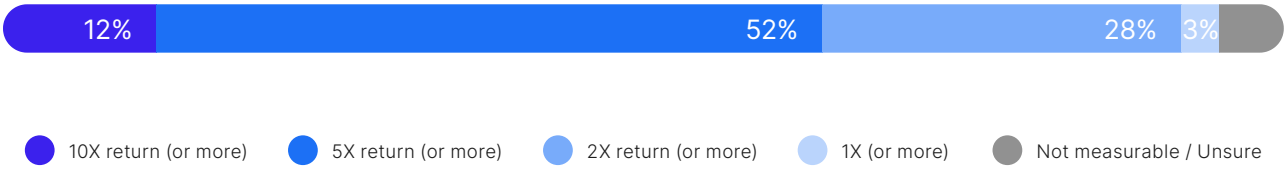
# Why Data Streaming—and Why Now?

Gone are the days when IT and business leaders got excited about 10%, 30%, or even 50% return on investment (ROI) from a technology initiative. Nowadays, stakeholders crave returns measured in multiples. This is especially true in markets looking to not just catch up, but get ahead in an ever more volatile global economy in which historical norms are being challenged every day.

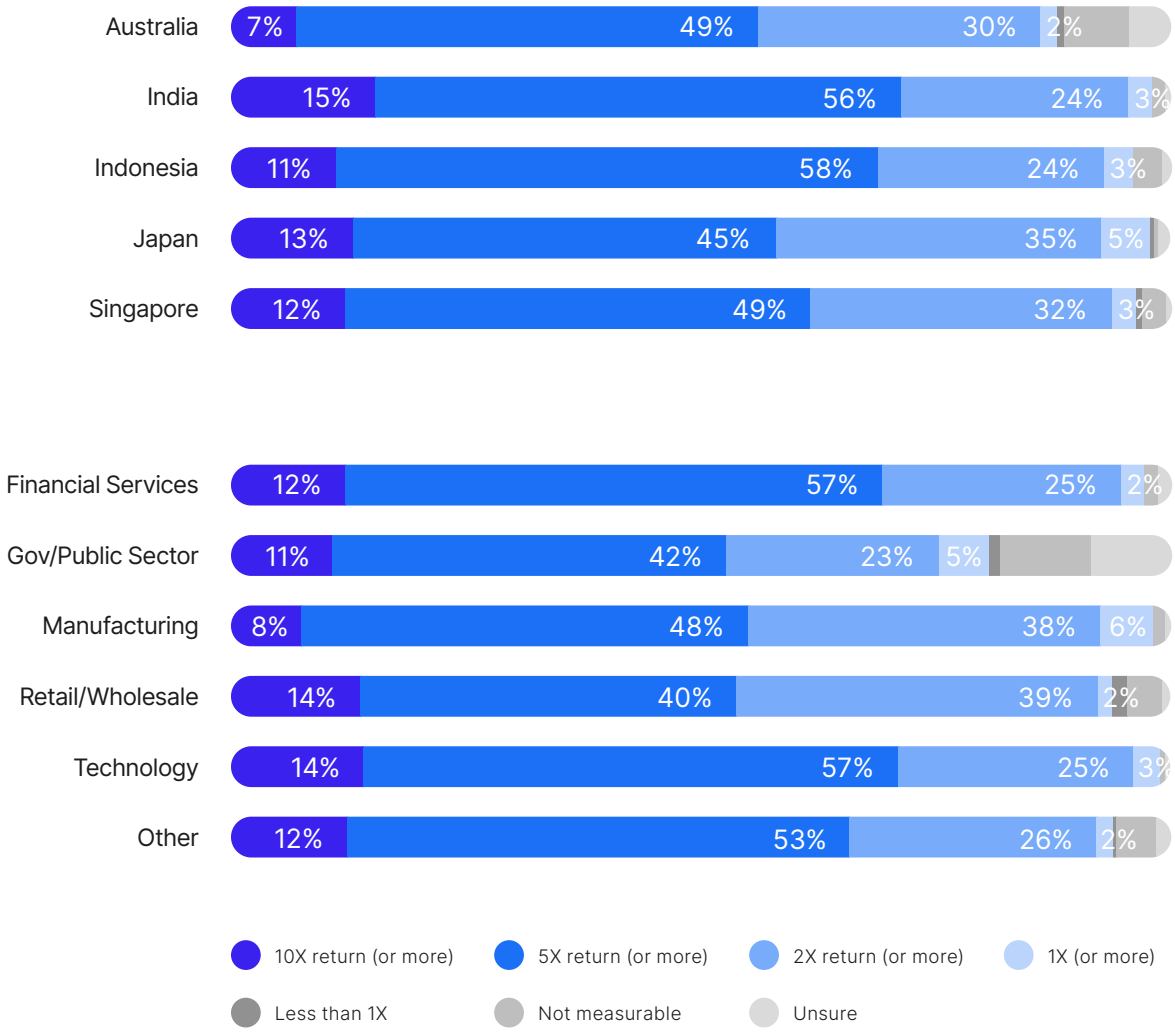
The Asia-Pacific (APAC) region, in particular, has been at the forefront of this shift, with many countries experiencing rapid economic growth and technological advancement. As businesses in APAC navigate the challenges and opportunities presented by this dynamic landscape, they are increasingly turning to innovative solutions that can deliver substantial returns on investment and provide a competitive edge at the local, regional, and global level.

To better understand these trends, we conducted a comprehensive global study on data streaming technologies in partnership with Freeform Dynamics and Radma Research (see Methodology). From this broader research, we've extracted and analyzed data specifically from 1,424 IT leaders and senior stakeholders across the APAC region, covering Australia, India, Indonesia, Japan, and Singapore. This focused analysis allows us to provide deep insights into how APAC businesses are leveraging data streaming technologies and the returns they're seeing.

## What's the rough order of magnitude of the ROI you have realized from your data streaming investments to date?

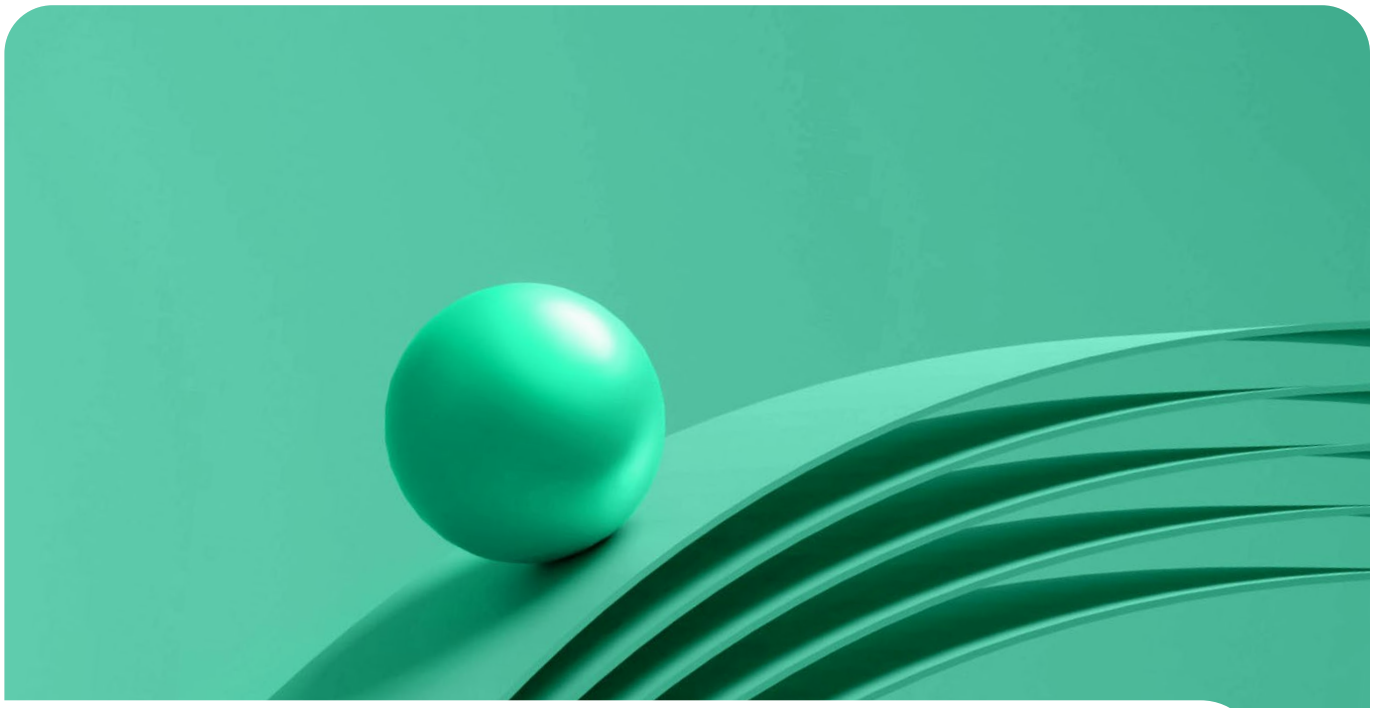


## ROI by region and industry




As we can see from the chart above, 64% of APAC data streaming adopters report achieving 5x ROI or greater from their investments in this space. This figure rises to 69% for Indonesian businesses and 71% for Indian companies. Even in more mature markets like Australia and Japan, over half of the surveyed organizations are seeing similarly high levels of return.

In the remainder of this report, we'll bring you up to speed on what lies behind these impressive ROI numbers. We'll identify the problems addressed by modern data streaming solutions and the business benefits they deliver. We'll then discuss some practical specifics, providing country-level perspectives along the way, and finish with some final thoughts and takeaways.



# Behind the ROI Numbers

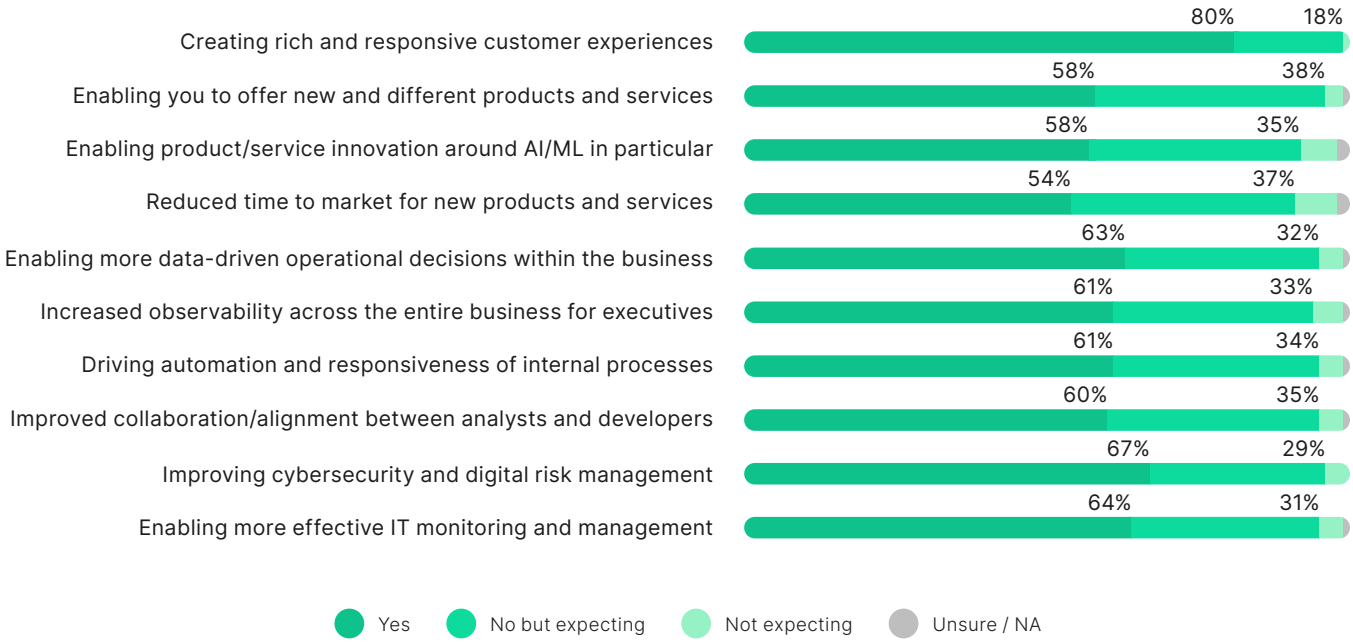
The strong returns reported for data streaming investments aren't just abstract numbers—they're built on tangible business benefits. Let's take a closer look.

# Alignment With Core Business Imperatives

So, how exactly is data streaming translating to high ROI? The answer to this becomes clear when we examine some of the specific areas in which data streaming is contributing value to business in the Asia-Pacific region.

The research shows that data streaming is delivering benefits across a range of business activities and imperatives, from customer-facing operations, through product and service delivery, to innovation and ongoing management. These benefits translate to strategic advantages that contribute directly to business performance and competitiveness.

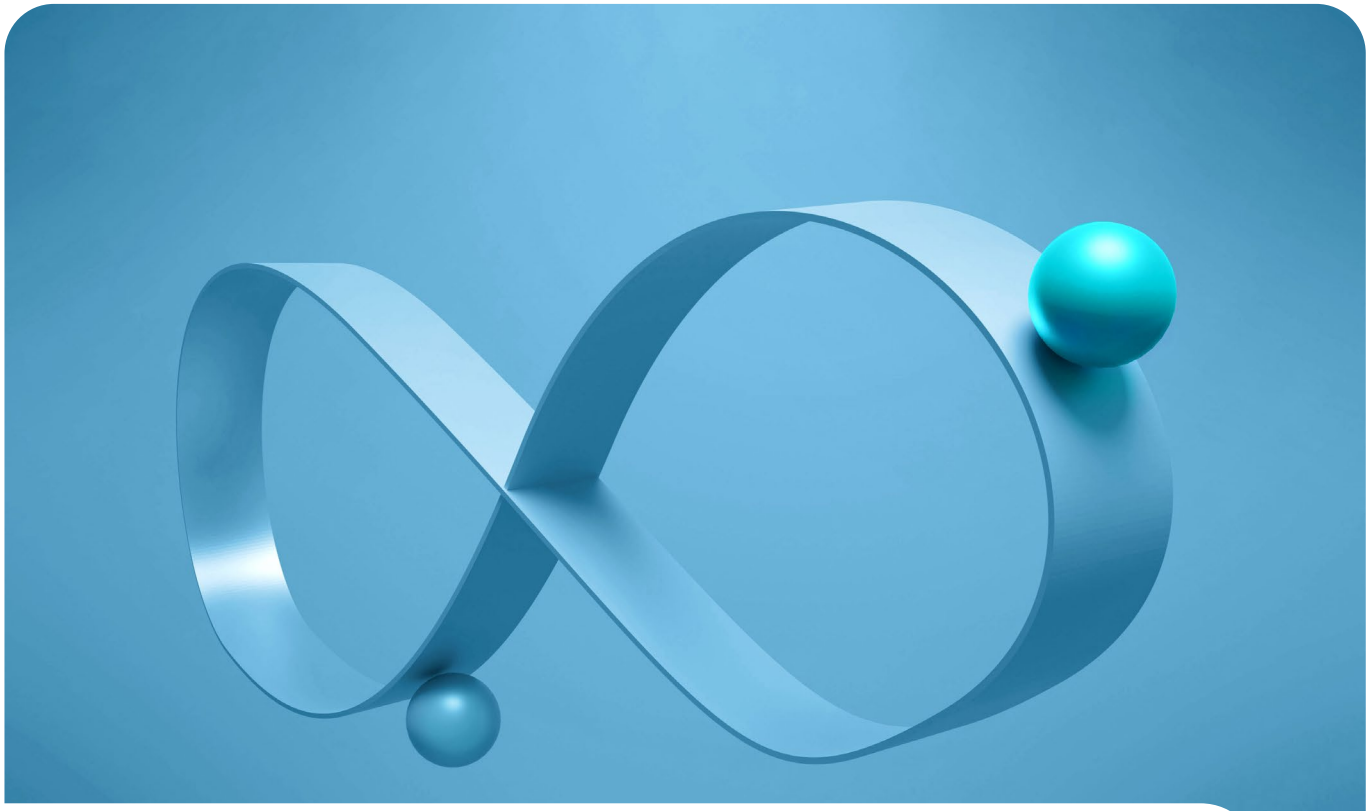
## Have you achieved significant benefits from your data streaming activities to date in the following areas?



This data particularly showcases the breadth as well as the depth of the potential. A notable 80% of organizations report significant benefits in creating rich and responsive customer experiences, a key factor driving the high ROI. Internally, 63% of businesses report more data-driven operational decisions—leading to faster, more informed and inclusive decision-making.

From an innovation perspective, 58% of organizations say data streaming is enabling them to offer new and different products and services, with the same percentage calling out advantages when looking to innovate around artificial intelligence (AI) and machine learning (ML) in particular.

It's important to appreciate that some of the "board-level" benefits we see above stem from helping to deal with less glamorous day-to-day problems to do with common data-related frustrations. Before we get to that, though, we need to do a quick level-set on streaming technology and highlight a recent development that has made solutions in the space much more accessible to APAC businesses.



# Data Streaming: From Niche to Mainstream Necessity

Data streaming has been delivering competitive advantages for those with the resources and expertise to make it work, but the emergence of platform-centric options has quickly opened up the opportunity for all mainstream APAC businesses.

# A Quick Overview

Let's start with the definition of data streaming we used when gathering responses in the research:

> Data streaming is the continuous flow of data or events as they occur in real time. For example, it can be a stream of customer orders, biometric data from wearables, financial transactions, website clicks, security information and events, or manufacturing status updates. Data streaming enables continuous processing of data as it is generated, enabling software-driven workflows and automation.

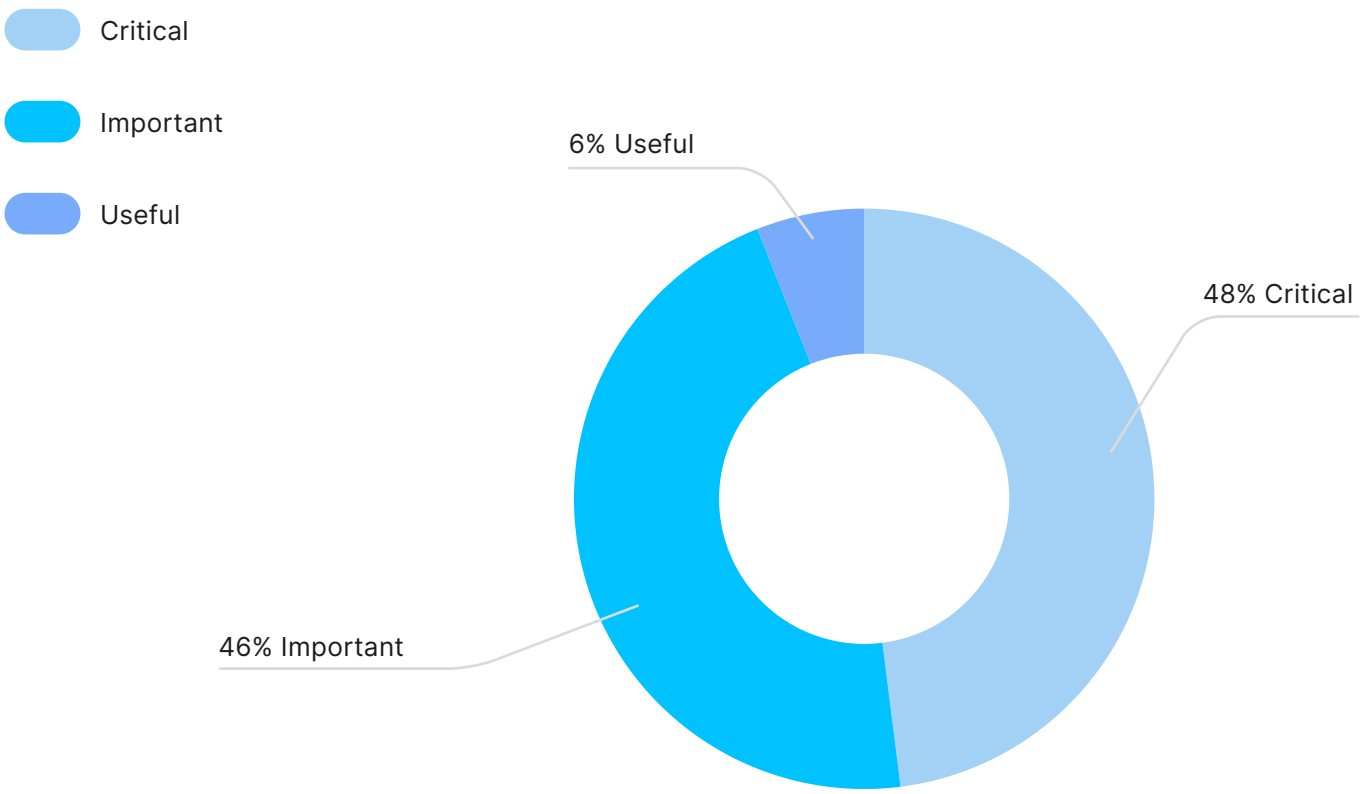
This sounds quite straightforward, but until relatively recently the reality has been a little different. Data streaming used to be a heavy engineering project, and to make it work you needed lots of time, expertise, and skills. This is why many organizations have not historically been in a position to exploit the potential, especially in the APAC region, which has had less exposure to the topic compared to other parts of the world.

That's changing very rapidly, however, with a shift toward a more accessible plug-and-play platform-centric approach, often accompanied by cloud-based delivery. We are talking here about data streaming platforms (DSPs).

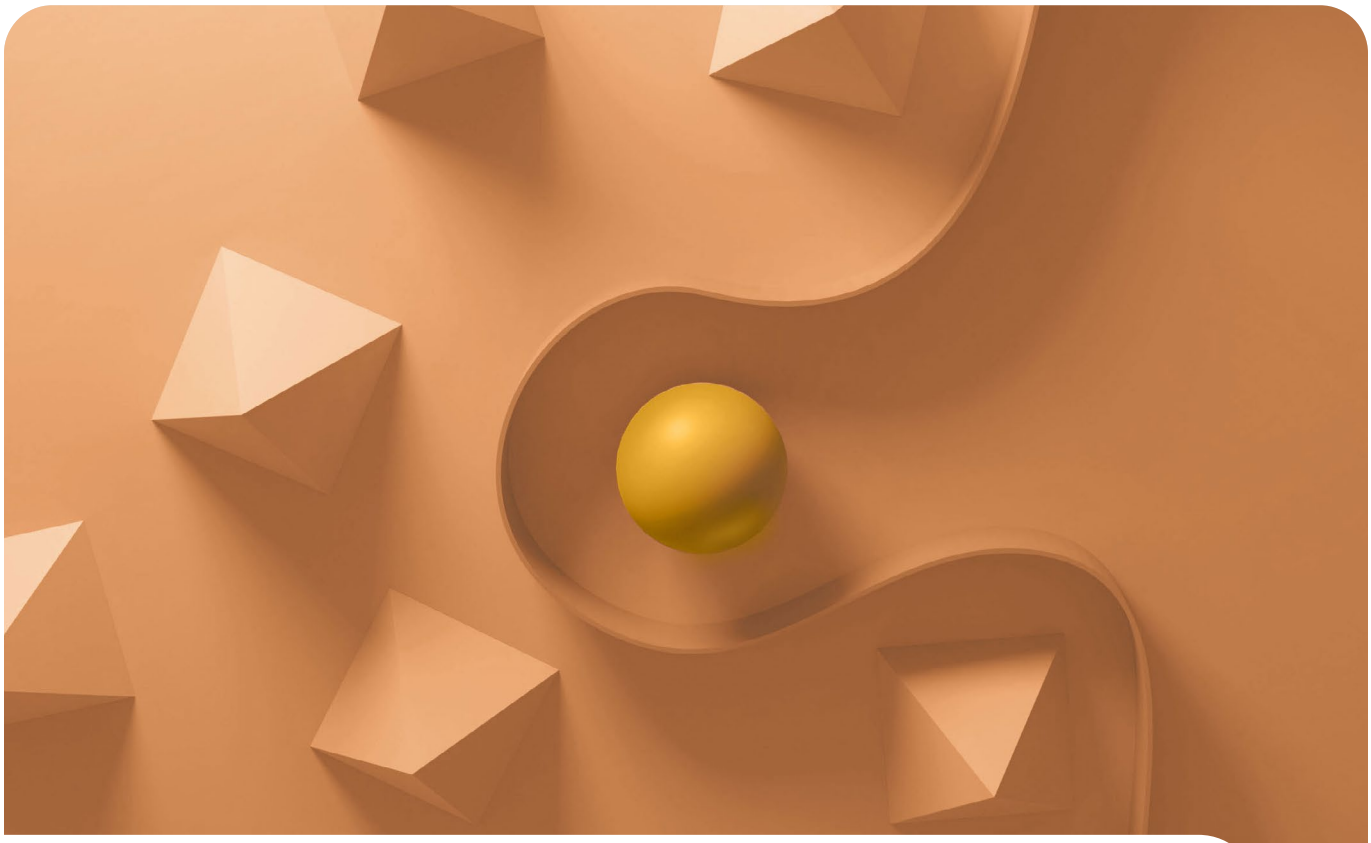
> Data streaming platform: It's a software platform that empowers businesses to stream, process, connect, and govern real-time data streams—making your data trustworthy and reusable at the source, so you can drive agility and innovation.

DSPs are game-changers, dramatically simplifying adoption, development, deployment, and operation of data streaming applications. Together with more friendly "start small and scale" commercial models, the barrier to entry is now significantly lowered, which is why APAC companies that aren't already actively implementing data streaming are now faced with such a compelling opportunity. Conversely, based on their experience to date, most streaming adopters in the APAC region already see DSPs as a necessity.

## How important do you see data streaming platform (DSP) technology to achieving your data and information related goals?




An overwhelming 94% of respondents view DSP technology as either critical or important to achieving their data and information-related goals. This strong endorsement from early adopters suggests that many more APAC businesses will likely be encouraged to start using DSPs as a key part of how they handle data in the near future.



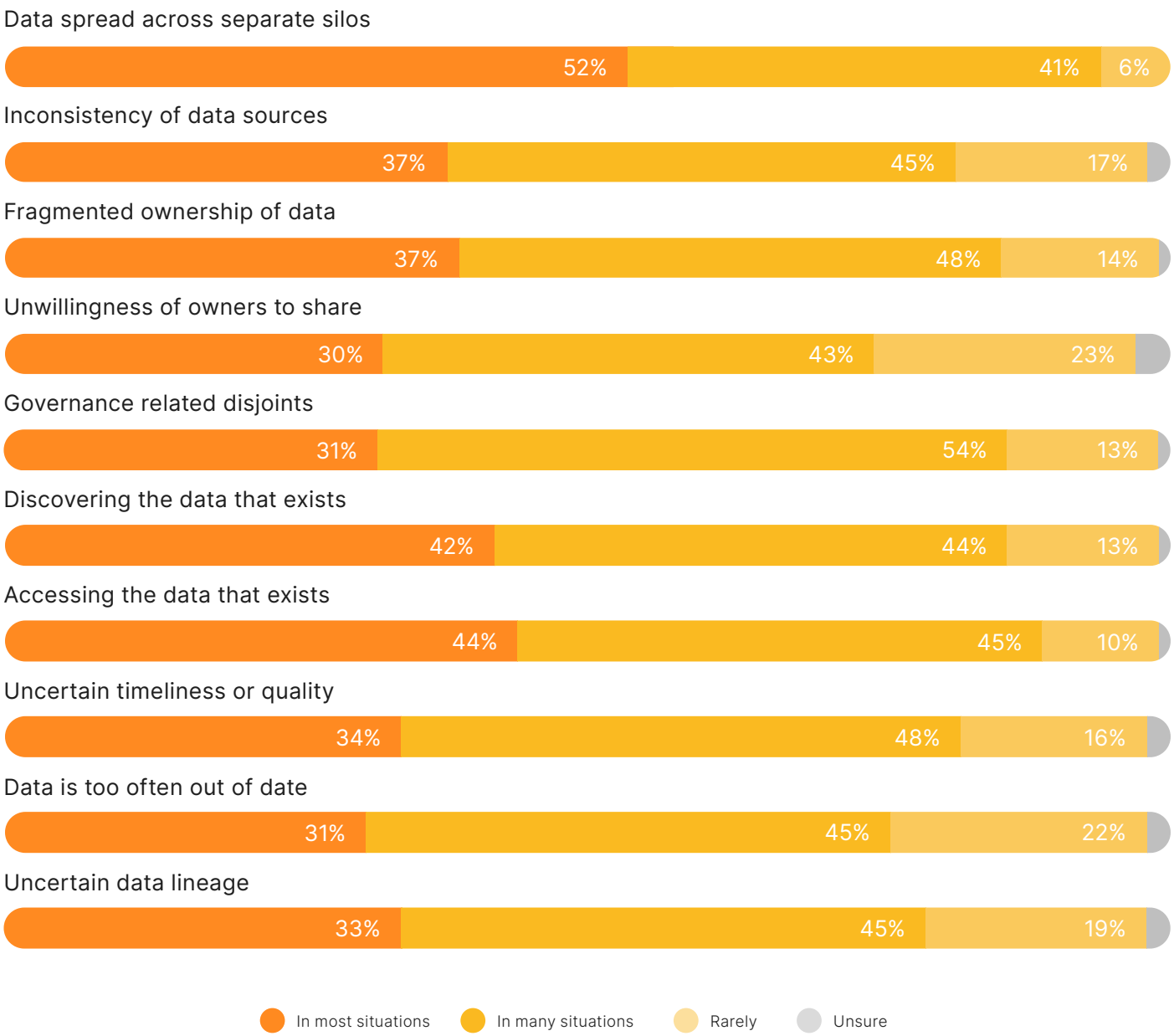
# From Tactical Pain Relief to Strategic Enabler

When it comes right down to it, data streaming platforms enable the rapid and continuous flow of data around your organization in a much easier, more open, and overall much safer and controlled manner. The impact of this is profound when you consider it in relation to traditional data-related challenges, emerging priorities, and ultimately, enabling the data-driven enterprise.

# Tackling Familiar Data Challenges

When we consider some of the challenges and frustrations faced by so many organizations, it's clear that the mitigating role of DSPs is widely recognized.

## To what degree can DSP technology help to mitigate these kinds of issues?



We'll look more closely at how DSPs work a little later, but suffice it to say for now that one of their core capabilities is allowing data to be easily, safely, and continuously shared around the organization from the original source. With "in-flight" merging, splitting, transformation, and enrichment along the way, clean and coherent "streams" of information can be published by any team and consumed by any other—an approach often referred to as the "publish and subscribe" sharing model.

One of the advantages is a dramatic reduction in the need for repeated extraction and manipulation of data to serve different application and business unit needs. This is a familiar practice that typically results in the creation of multiple copies of source data that are difficult to track, control, and later reconcile—a direct cause of many data fragmentation challenges.

Related to this, by simplifying the sharing process and putting control into the hands of the publisher, DSPs can help to overcome the concerns of data owners, who are often reluctant to share raw data for others to manipulate in case it's used inappropriately. DSPs not only allow data to be prepared, enriched, and filtered before publication, they also enable the "upstream" enforcement of policy. Risks are reduced for both producers and consumers, and trust is increased across the board.

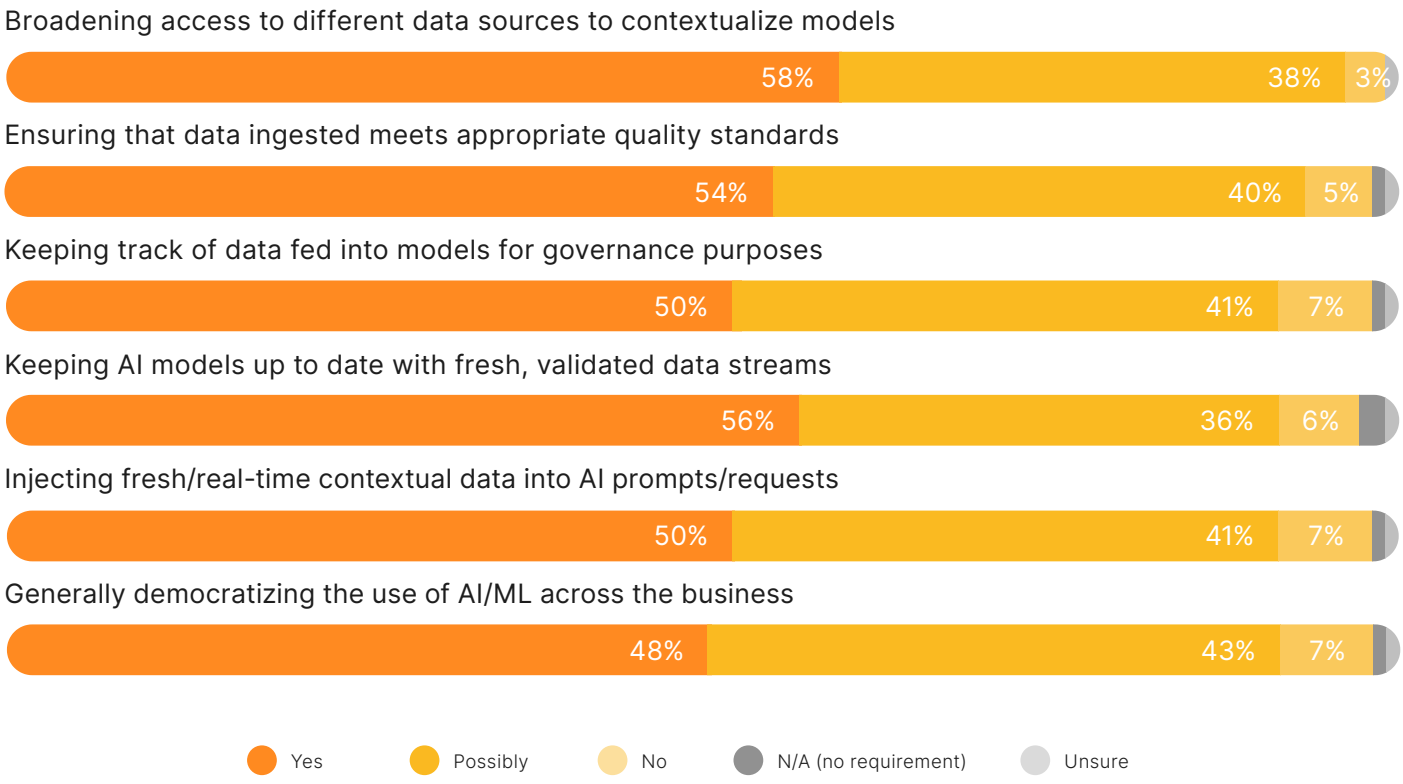
As shown on the above chart, all of this ultimately also improves the experience of users within the business. Accurate and up to date information can be made available on a continuous basis.

Beyond the benefits explicitly shown, DSPs also impact at a higher, more strategic level. A key principle underpinning many digital transformation initiatives is the breaking down of organizational silos to enable seamless and agile operations across business units and functions. Streamlining the flow of activity and information across the customer lifecycle is a good example of this, where you might harmonize flows across marketing, sales, delivery, billing, and services. The relevance of DSPs in this context is easy to understand.

# Enabling Innovation With Artificial Intelligence

Many of the benefits of DSPs we've touched on so far can also be leveraged when looking to innovate around emerging technologies. Accelerating and easing the adoption of generative AI is a great example here, where the role of DSP technology is broadly acknowledged.

## Do you see DSP technology easing the path to enterprise-level AI/ML adoption in the following ways, whether building your own models or augmenting third-party foundation models?

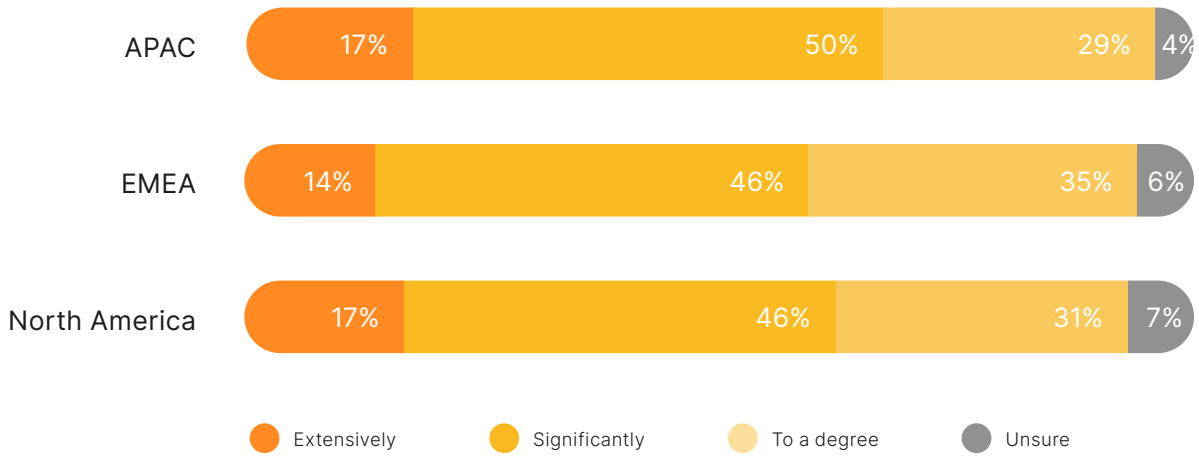



These findings are arguably some of the most important to emerge from the research from an innovation perspective. As businesses across APAC explore the potential of AI, they're discovering that data streaming platforms play a crucial role in unlocking its full potential.

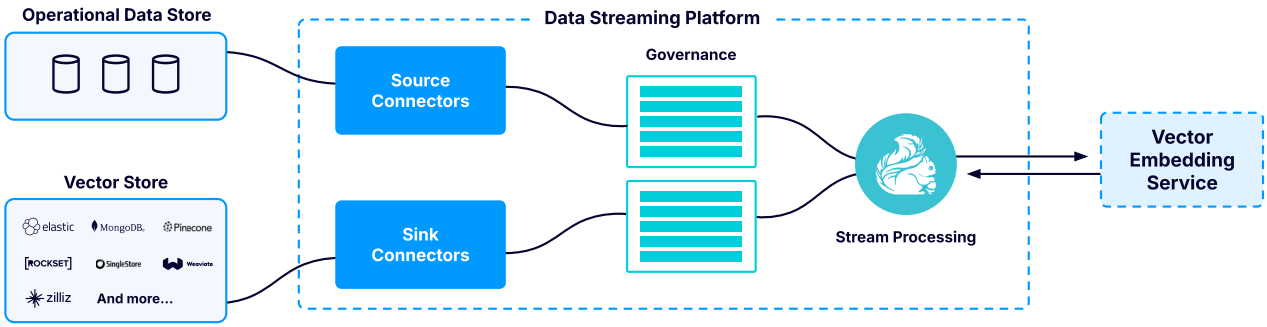
**In fact, 67% of respondents say DSPs extensively or significantly ease adoption of AI.**

## Degree too which DSP technology eases the adoption of AI/ML?

Respondents categorized based on the number of options classed as “Yes”




AI technologies, particularly the latest developments in generative AI and large language models (LLMs), require large amounts of up to date, contextual data to function effectively. This is where data streaming platforms shine. By providing a continuous flow of real-time data, DSPs enable AI systems to stay current and make more accurate predictions and decisions. The diagram below illustrates how a data streaming platform fits into a generative AI-enabled application that uses the popular Retrieval Augmented Generation (RAG) pattern:



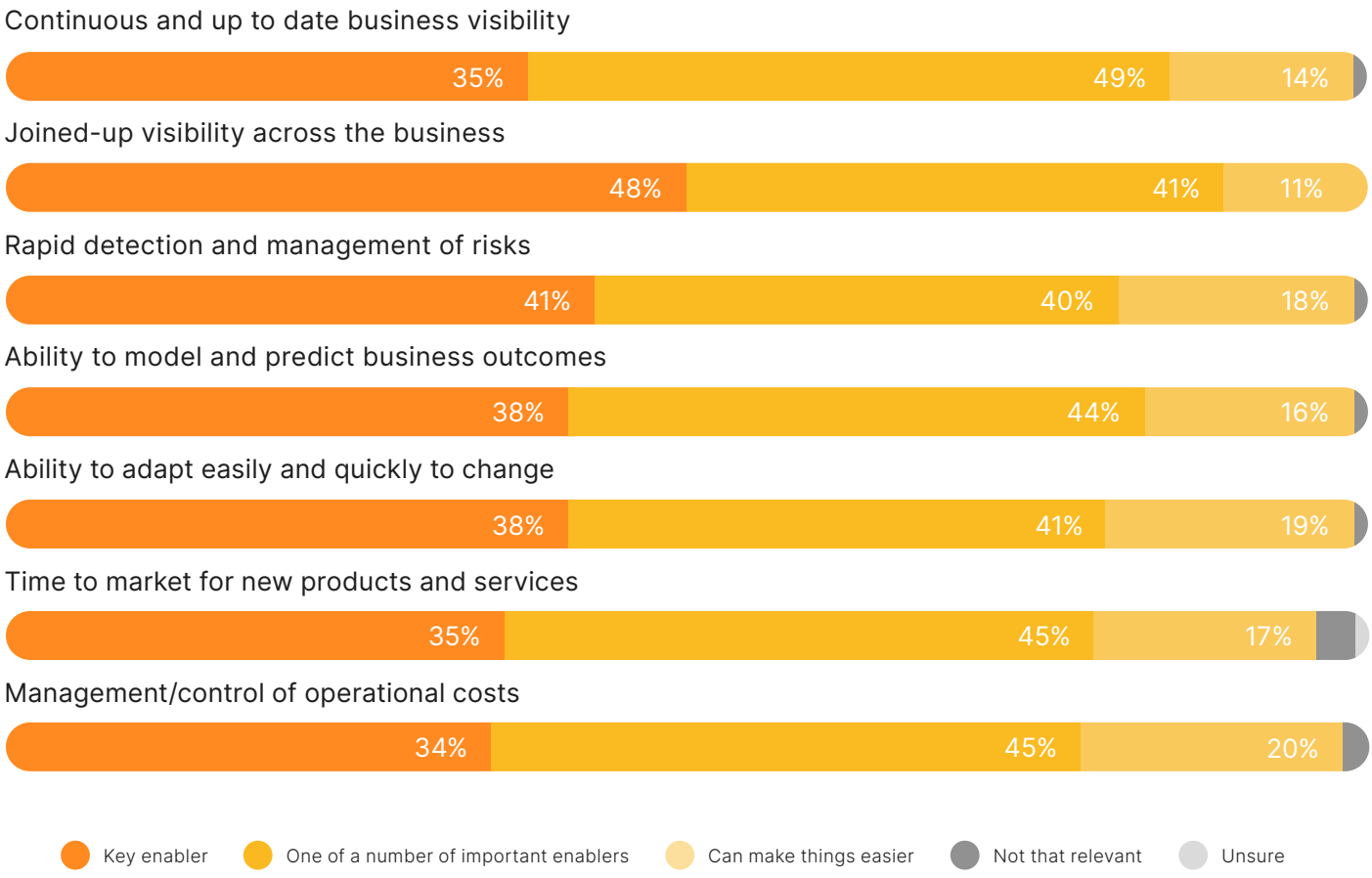
The RAG pattern brings business-specific context to foundational AI models. As shown, the data streaming platform allows organizations to locate and transform relevant domain-specific data, curate it in a vector store for retrieval augmentation, and deliver it to AI components. This pattern enables both the data augmentation and inference workflows required for generative AI use cases. In these scenarios, a data streaming platform can help ensure that vector stores receive a continuous stream of fresh, relevant, and trustworthy data so it can be curated and made available for retrieval by AI apps in real time.

# Enabling the Real-Time Enterprise

Turning to some of the latest ideas in strategic business thinking, data streaming platforms have an important role to play in enabling the idea of the real-time enterprise. What do we mean by this?

Well, a problem people in decision-making roles frequently complain about is delayed insights. Critical events, like sudden changes in customer behavior or market conditions, can easily go unnoticed if you're relying on historical backward-looking reports that have an inherent lag, e.g., those that are based on a snapshot from yesterday, last week, last month, etc. The window of opportunity to take action is then lost. In a real-time enterprise, those events would be captured and acted on straight away, with live forecasts and predictions available that always reflect up-to-the-minute reality. This is exactly where the relevance of DSPs becomes clear.

## How much do you see DSP technology enabling the following?

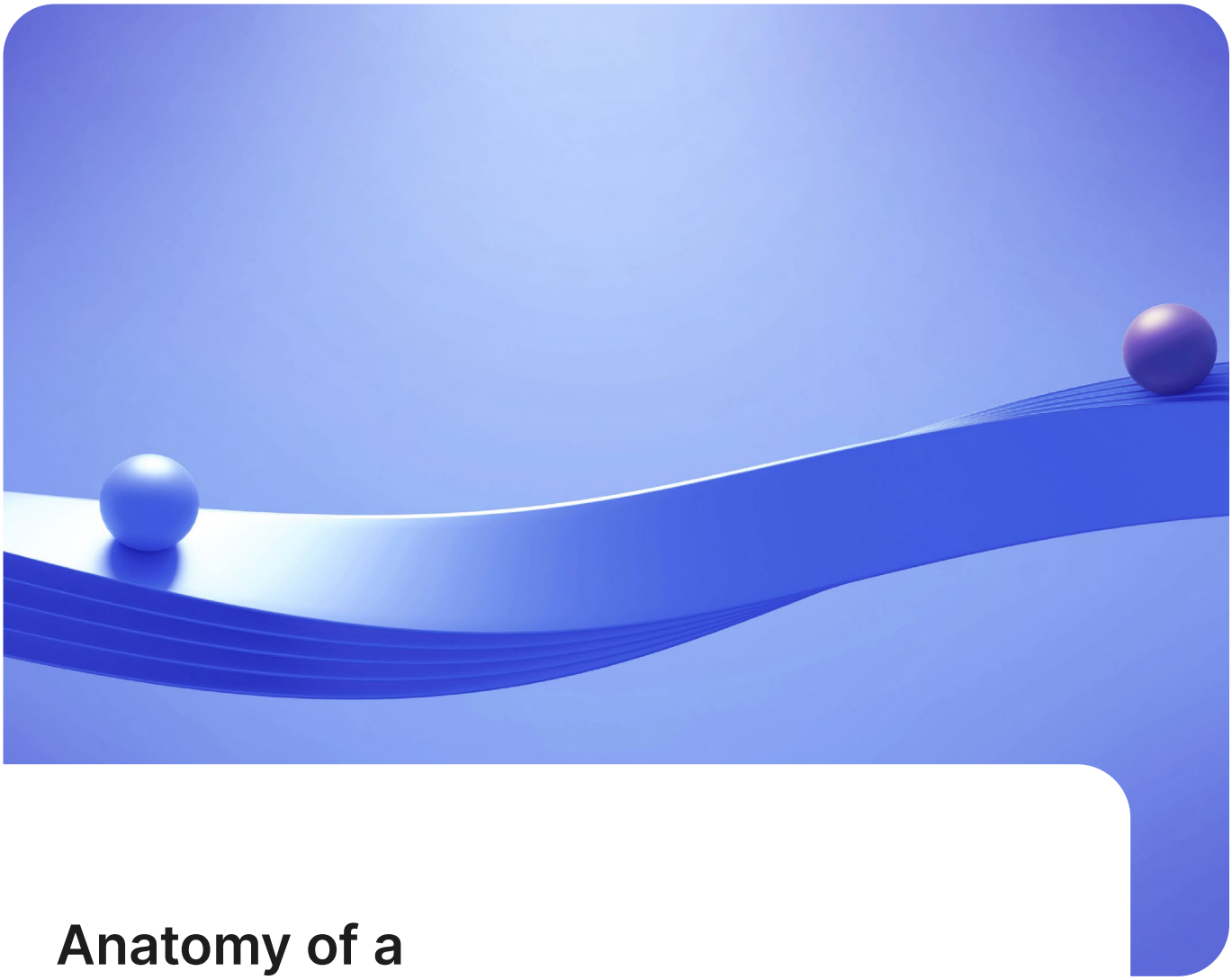


Looking at these numbers, we see that 84% of respondents regard DSPs as key or important enablers for continuous and up to date business visibility, while nine out of 10 view them as important for joined-up visibility across the business. It's then not surprising that almost 80% acknowledge the role of DSPs in adapting quickly to change, and accelerating time to market for new products and services.

Zooming out from the numbers, the key takeaway from all this is that removing data-related friction and delay, which broadens access to information and insights, can profoundly change how a business operates and competes. In a region like APAC undergoing so much market change and transformation, the impact of this is far from trivial.

So do we have your attention?

Let's quickly move onto how DSPs work, and how smart engineering, packaging, and delivery are opening up the streaming opportunity to businesses of all types and sizes.



# Anatomy of a Data Streaming Platform

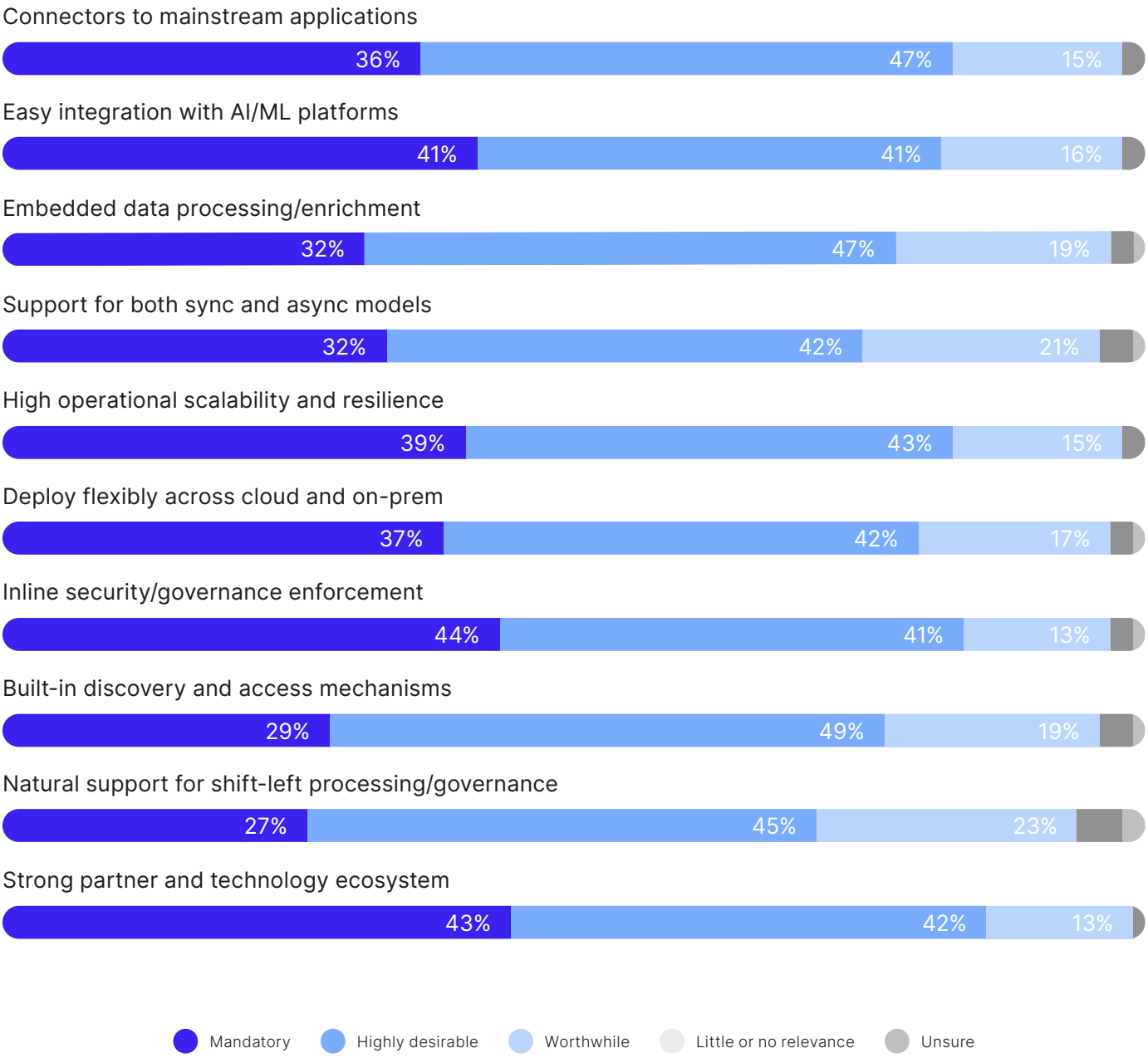
Data streaming platforms aren't magic—they're sophisticated technology simplified. With this in mind, let's explore some of the key components of how the breadth and style of these platform-based solutions are making advanced data streaming capabilities accessible to businesses of all sizes.

# A Peek Under the Hood

The impressive benefits and strategic advantages of DSPs we've discussed clearly don't materialize out of thin air. Behind every successful data streaming implementation lies a well-engineered, thoughtfully designed solution. While it might seem like magic from the outside, there's a solid technology foundation making it all possible. Let's take a closer look at what's really involved in bringing these capabilities to life.

At their core, DSPs comprise four key functional areas: connect, process, stream, and govern. Each plays a key role in making data streaming accessible, efficient, and secure for businesses of all sizes.

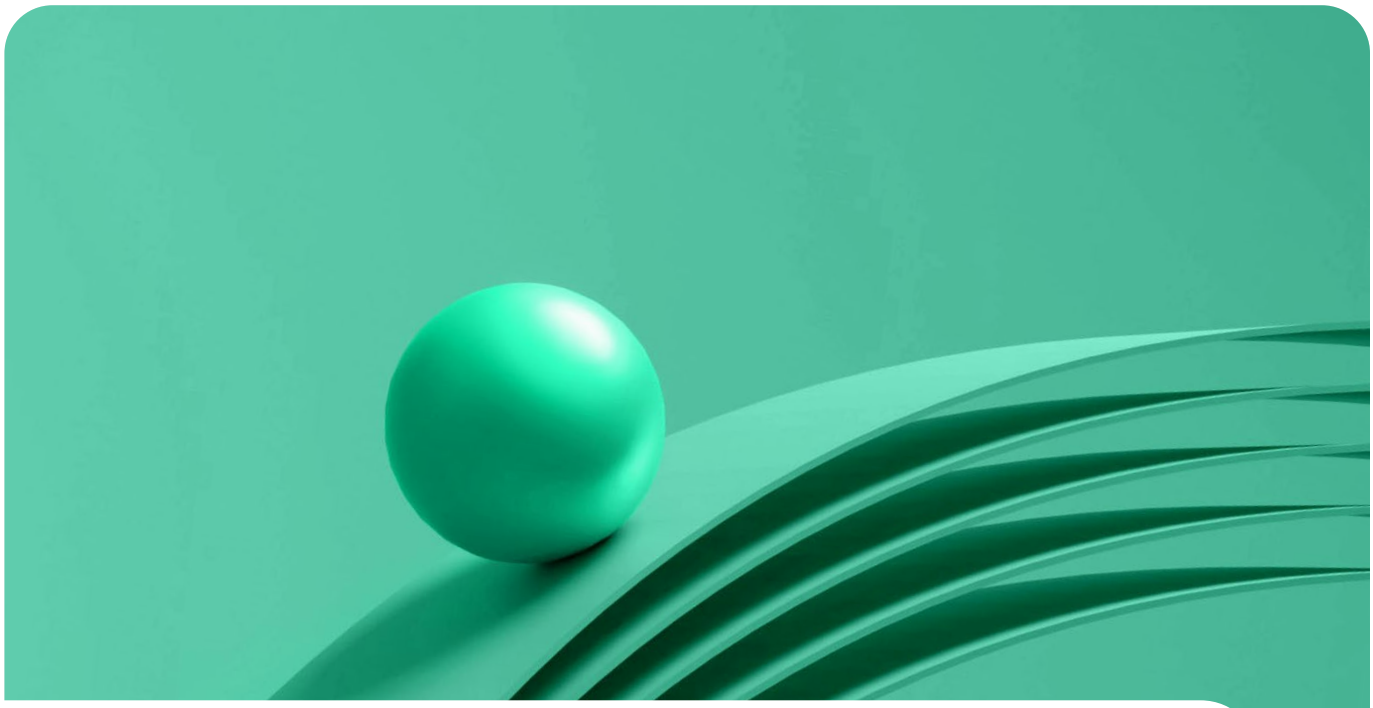
## When considering a DSP, how would you rate these capabilities?



In reality this chart provides a simplified view, but it shows enough to give you an idea of how much a modern DSP delivers. What sets DSPs apart from using the traditional engineering-centric approach to data streaming projects, is their ability to package this broad range of complex functionality into a developer-friendly, efficient, and secure platform that's supported as a coherent whole.

This approach allows businesses of all sizes to harness the power of real-time data safely and effectively, without the need for a dedicated team of highly specialized engineers. DSPs make advanced data streaming capabilities accessible to any development team.

The research results above also show how DSPs are designed as extensible foundations. They provide out-of-the-box capabilities and allow businesses to build custom solutions, integrate with existing systems, and develop innovative applications on top of them. This flexibility ensures that as your data needs evolve, your DSP can adapt and grow with you, continually enhancing your ability to leverage real-time data for business advantage.



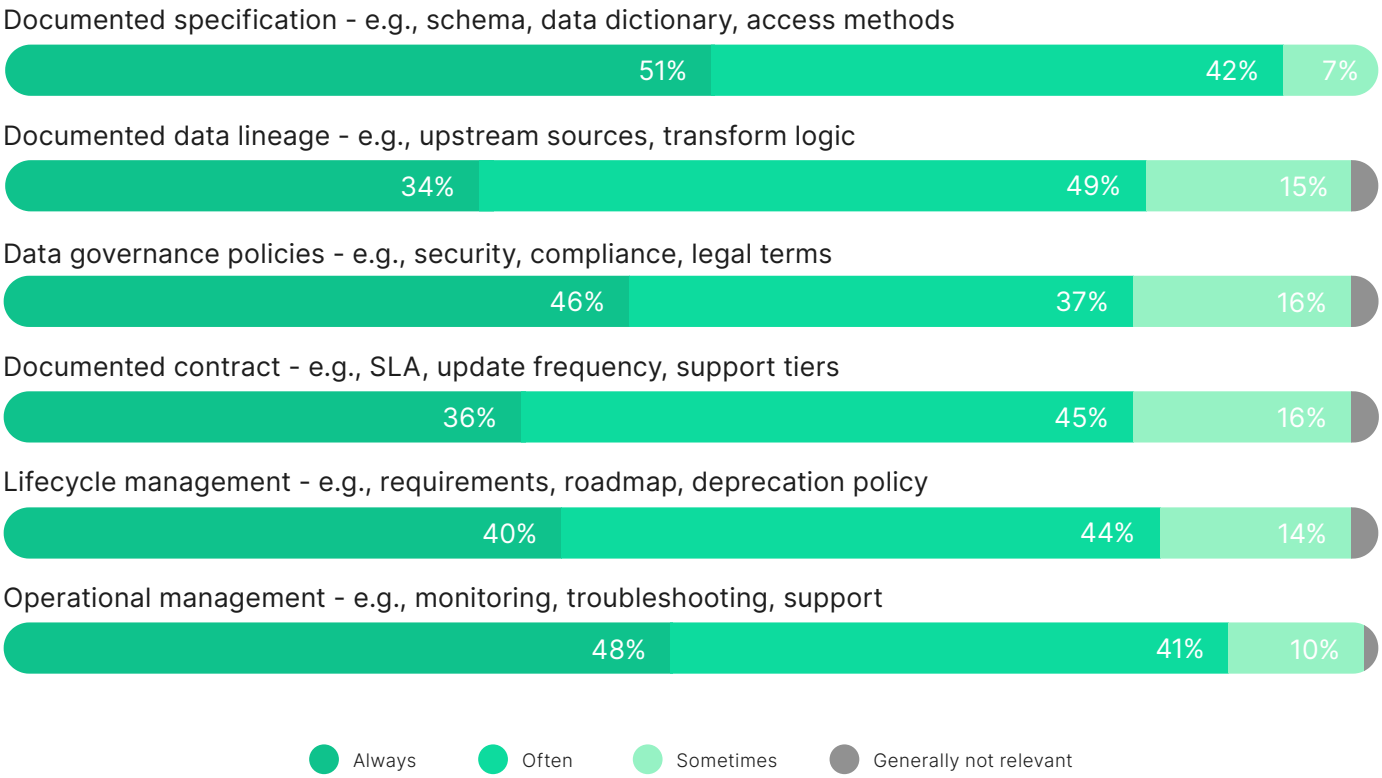
# Taking Things to the Next Level With Data Products

Across the APAC region, data streaming adopters recognize the potential of data products as a way of transforming raw data streams into well-defined, reusable assets that enhance data discoverability and value creation.

# Beyond Basic Streaming

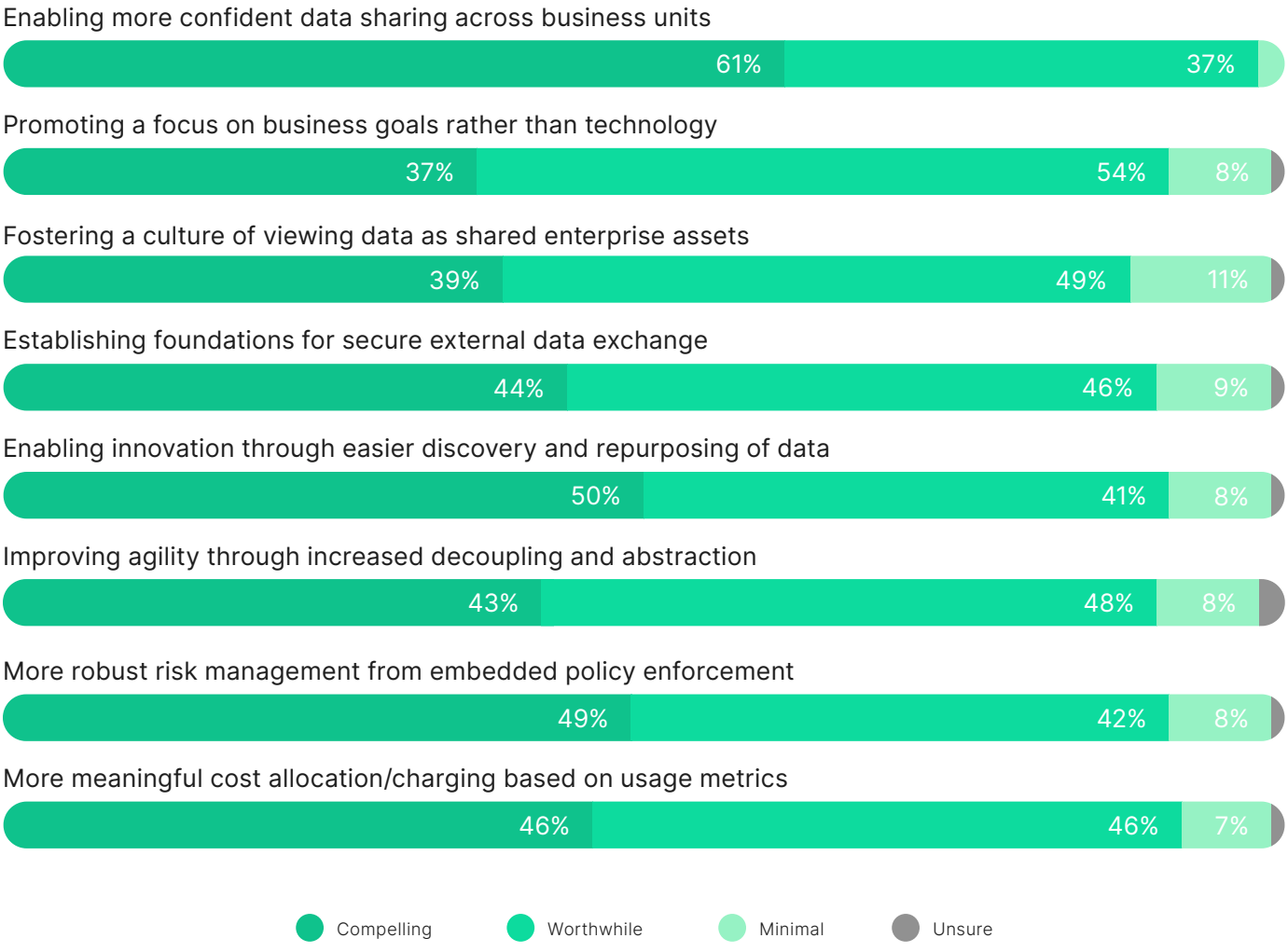
As organizations mature in their use of data streaming, many are evolving toward data products. This approach transforms raw data streams into well-defined, easily consumable assets that can be shared and reused across the business. By packaging streams as products, organizations enhance data discoverability, understanding, and reuse, opening up new opportunities for innovation and value creation.

## Are the following important when publishing streams as data products?

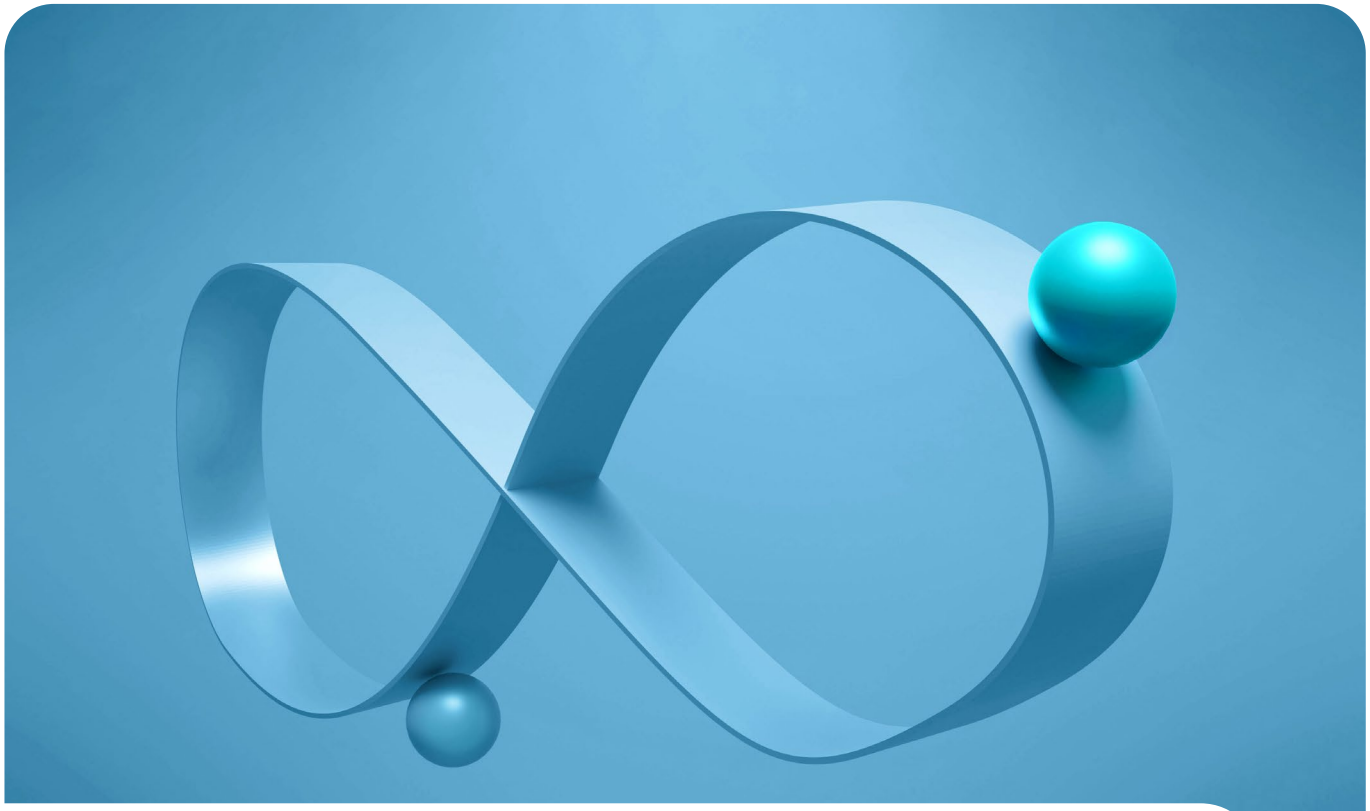


Creating effective data products involves several key elements. As the research shows, APAC businesses prioritize documented specifications, operational management, and data governance policies. These components ensure that data products are not just accessible, but also trustworthy, compliant, and maintainable over time.

## How would you rate the following potential benefits of publishing streams as data products?



The benefits of this approach are clear. Data products enable more confident data sharing across business units, foster a culture of viewing data as a shared enterprise asset, and drive innovation through easier discovery and repurposing of data. By improving data reliability and accessibility across the organization, data products are helping APAC businesses unlock new value from their data streaming investments.



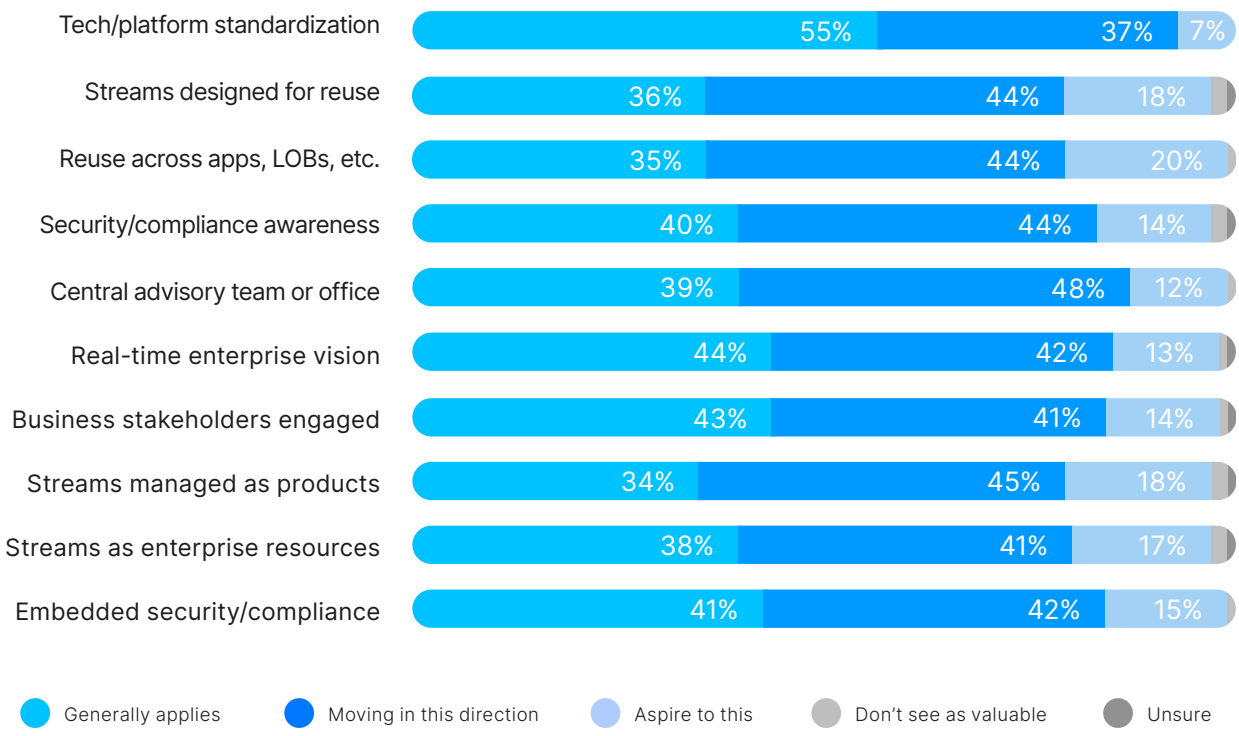
# Maturity of Activity

So how far have users come in their use of data streaming technology? Even within the APAC adopter community surveyed in this research, some are more progressed than others along their data streaming journey.

# Assessing Progress

As organizations develop their use of data streaming, they typically progress through various levels of sophistication and integration, a journey we can map using a maturity model. This kind of analysis starts with an assessment of progress in relation to key aspects of adoption, as shown on this chart.

## How much do the following apply to the use of data streaming across your organization?



# 2024 Maturity Distribution APAC

Based on data like this, we can derive an overall maturity score for each survey respondent, then group organizations according to the level of maturity they've reached.

**1%**

Data streaming is a strategic enabler with all qualities of Level 4, plus streams managed as a product

Level 5

**11%**

Several deployments in production for critical systems with data reuse and integrations across business units and a common operating model established

Level 4

**66%**

Deployments in production for a few critical systems with data and usage siloed across teams

Level 3

**16%**

Projects identified and deployed for noncritical application

Level 2

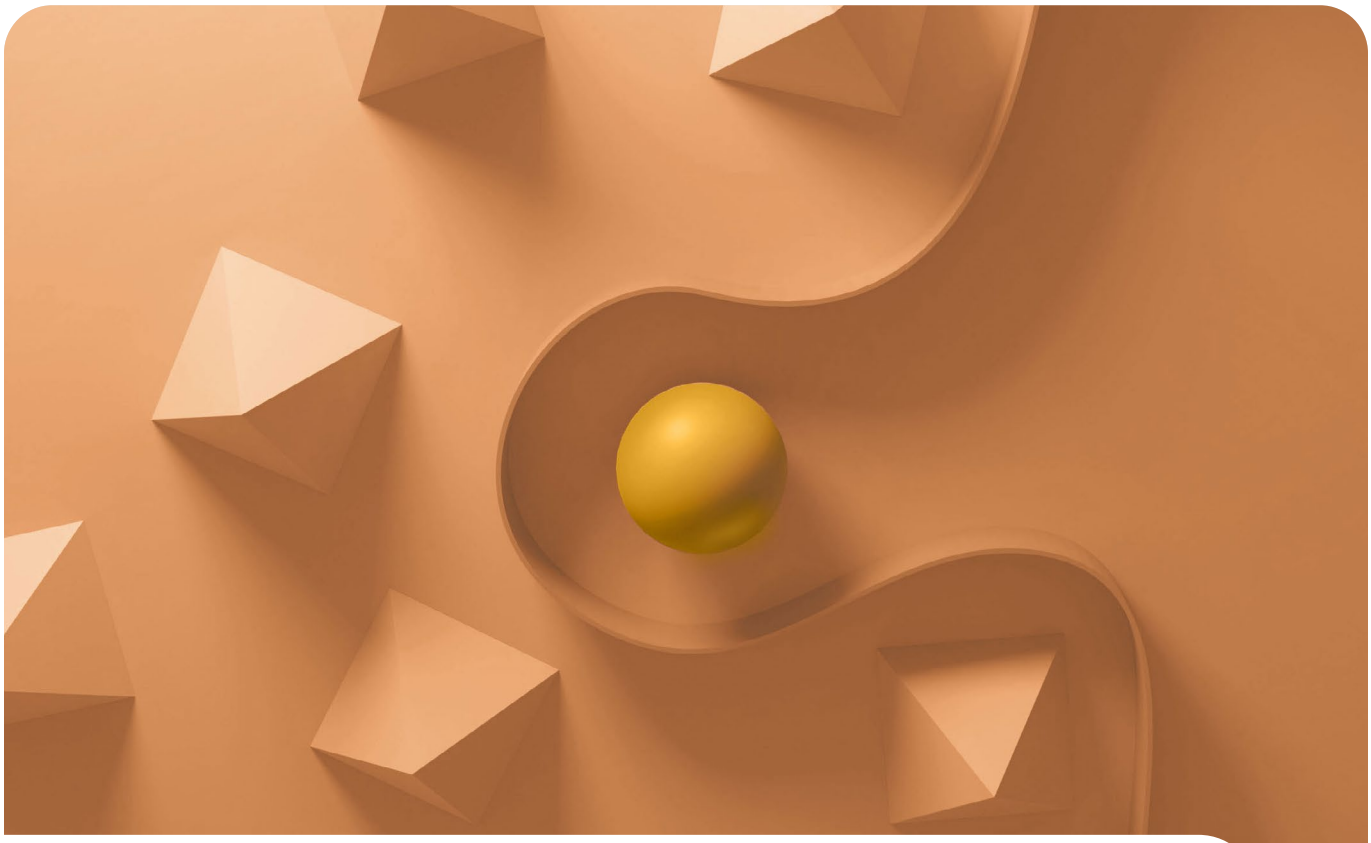
**6%**

Experiments in pre-production

Level 1

What's encouraging about this chart is that streaming adopters seem to move rapidly from initial experimentation to critical deployments, a journey made easier by DSPs. From this point onwards, however, organizational silos need to be broken down to reach maturity Level 4, with a shift in overall mindset and culture required to reach full Level 5 maturity.

Let's now look at how things are playing out at an individual country level.



# Country-Level Perspective

While we've been looking at the APAC region as a whole up to this point, it's important to recognize that the countries making up this diverse area each have their own unique characteristics when it comes to data streaming adoption.

# A Tour of the APAC Region

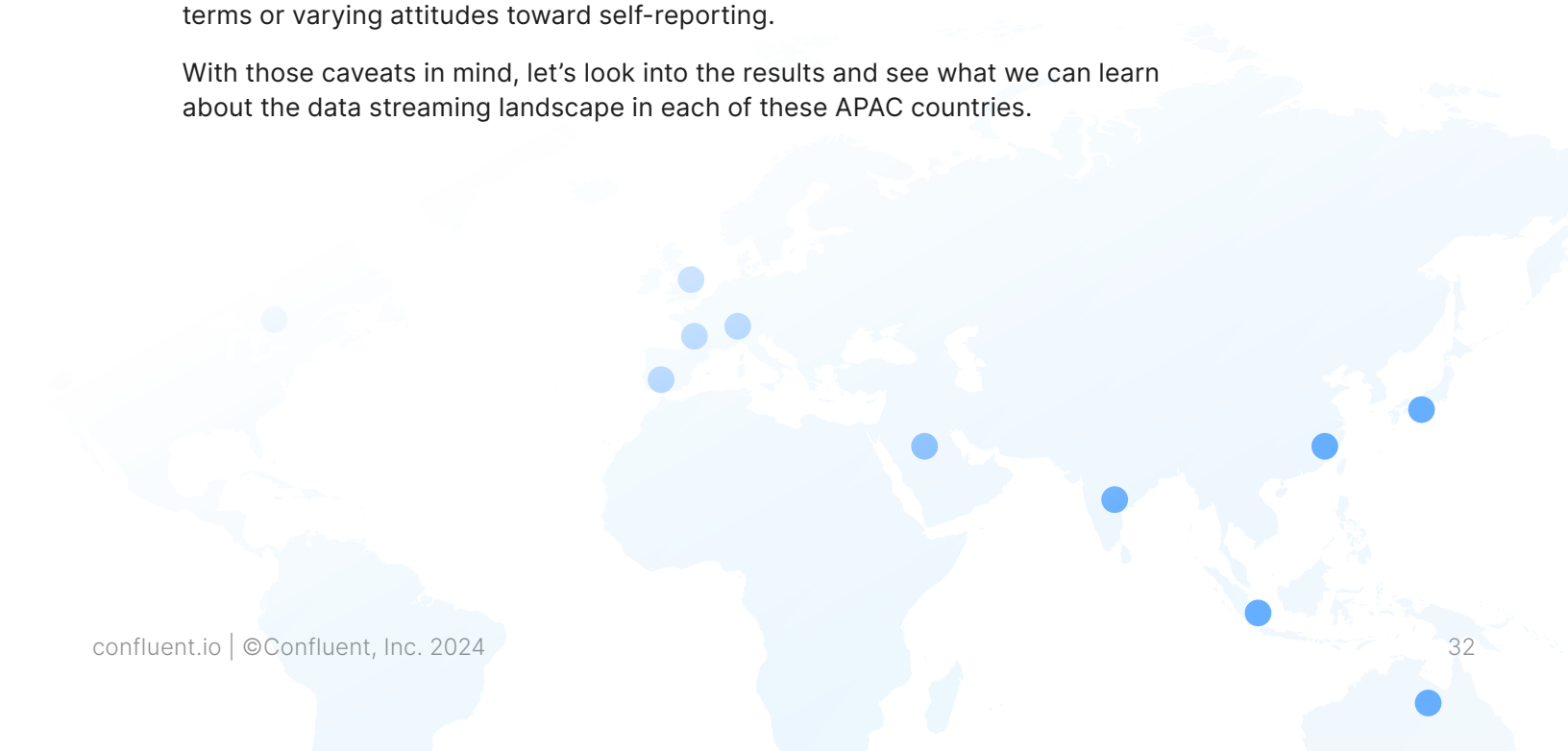
In the following sections, we drill down into country-specific research findings for Australia, India, Indonesia, Japan, and Singapore to get a more nuanced view of what's happening on the ground in different parts of the region.

It's tempting to think of APAC as a homogeneous market, but as we'll see, there are some interesting and important differences between countries. These variations reflect the local economies, histories, priorities, and the technology backdrops that shape each nation's approach to data streaming and digital transformation more broadly.

For instance, we'll see how Singapore's advanced digital infrastructure and strong focus on innovation have positioned it as a leader in certain aspects of data streaming adoption. Meanwhile, India's rapidly growing IT sector and large pool of tech talent are driving a particularly strong emphasis on AI and machine learning integration with streaming technologies. Indonesia shows a notable enthusiasm for new technologies, while Japan's approach is more measured, reflecting its mature economy and traditional business practices. Australia's vast geography and relatively small population create unique challenges and opportunities that influence its data streaming priorities.

As we explore these country-specific insights, it's important to bear in mind that cultural differences and the limitations of survey methodology can also influence the results. Responses may be colored by local interpretations of technical terms or varying attitudes toward self-reporting.

With those caveats in mind, let's look into the results and see what we can learn about the data streaming landscape in each of these APAC countries.



COUNTRY-LEVEL PERSPECTIVE:

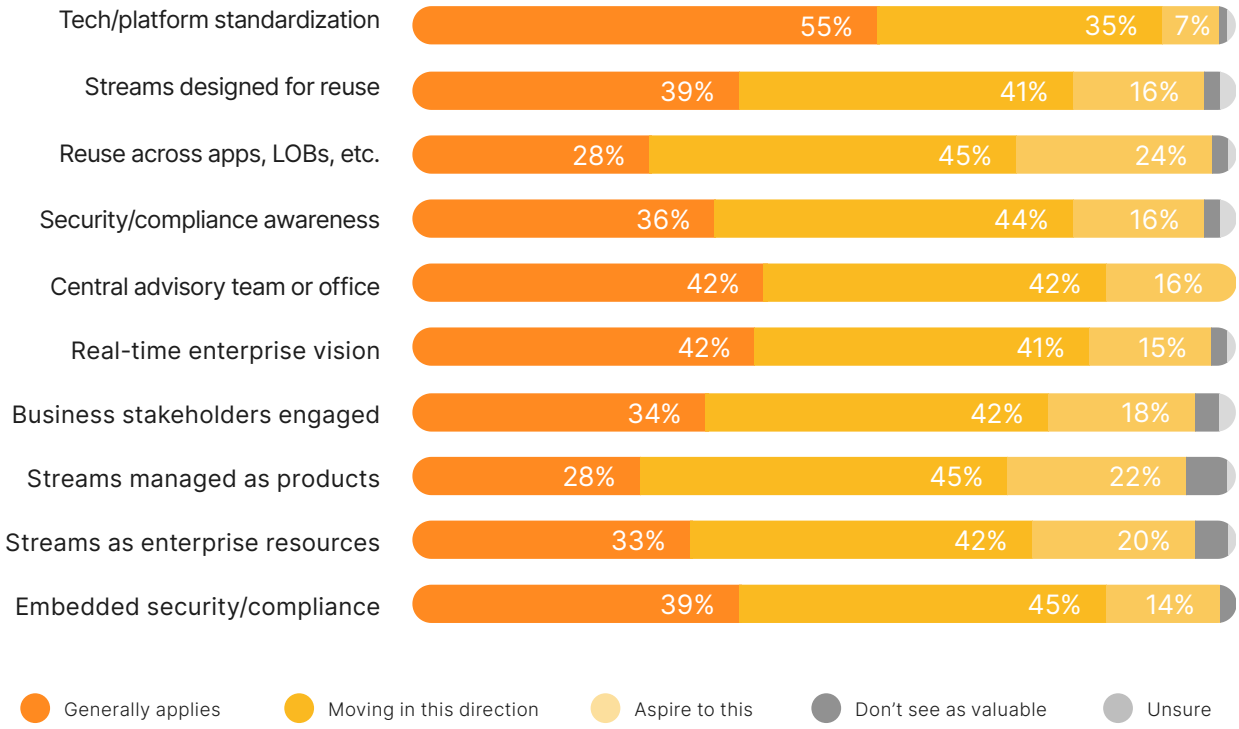
# Australia

Australia's approach to data streaming reflects its position as a mature, stable economy with a strong technology sector.

# Data Streaming in Australia

Looking at how data streaming is being applied across Australian organizations, we see a solid foundation but also room for growth.

## How much do the following apply to the use of data streaming across your organization?




Well over half of respondents have already standardized on a select set of streaming technologies or platforms, which is a good foundation. However, only 28% say they generally design streams for reuse across applications and use cases, and the same percentage manage streams as products. This suggests many Australian businesses have embraced data streaming, but are still working toward better integrating and optimizing their approaches.

# 2024 Maturity Distribution Australia

**0%**

Data streaming is a strategic enabler with all qualities of Level 4, plus streams managed as a product

Level 5

**7%**

Several deployments in production for critical systems with data reuse and integrations across business units and a common operating model established

Level 4

**64%**

Deployments in production for a few critical systems with data and usage siloed across teams

Level 3

**19%**

Projects identified and deployed for noncritical application

Level 2

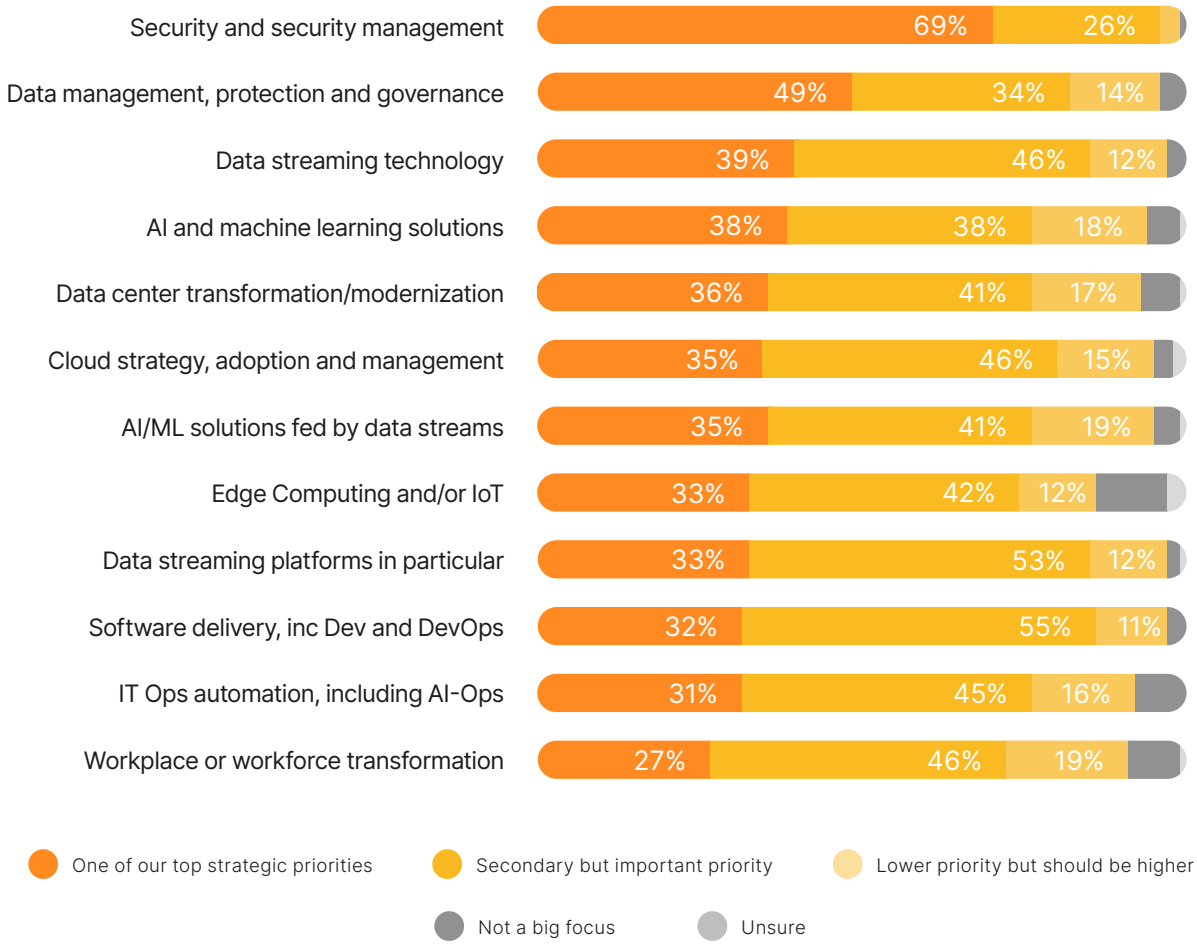
**10%**

Experiments in pre-production

Level 1

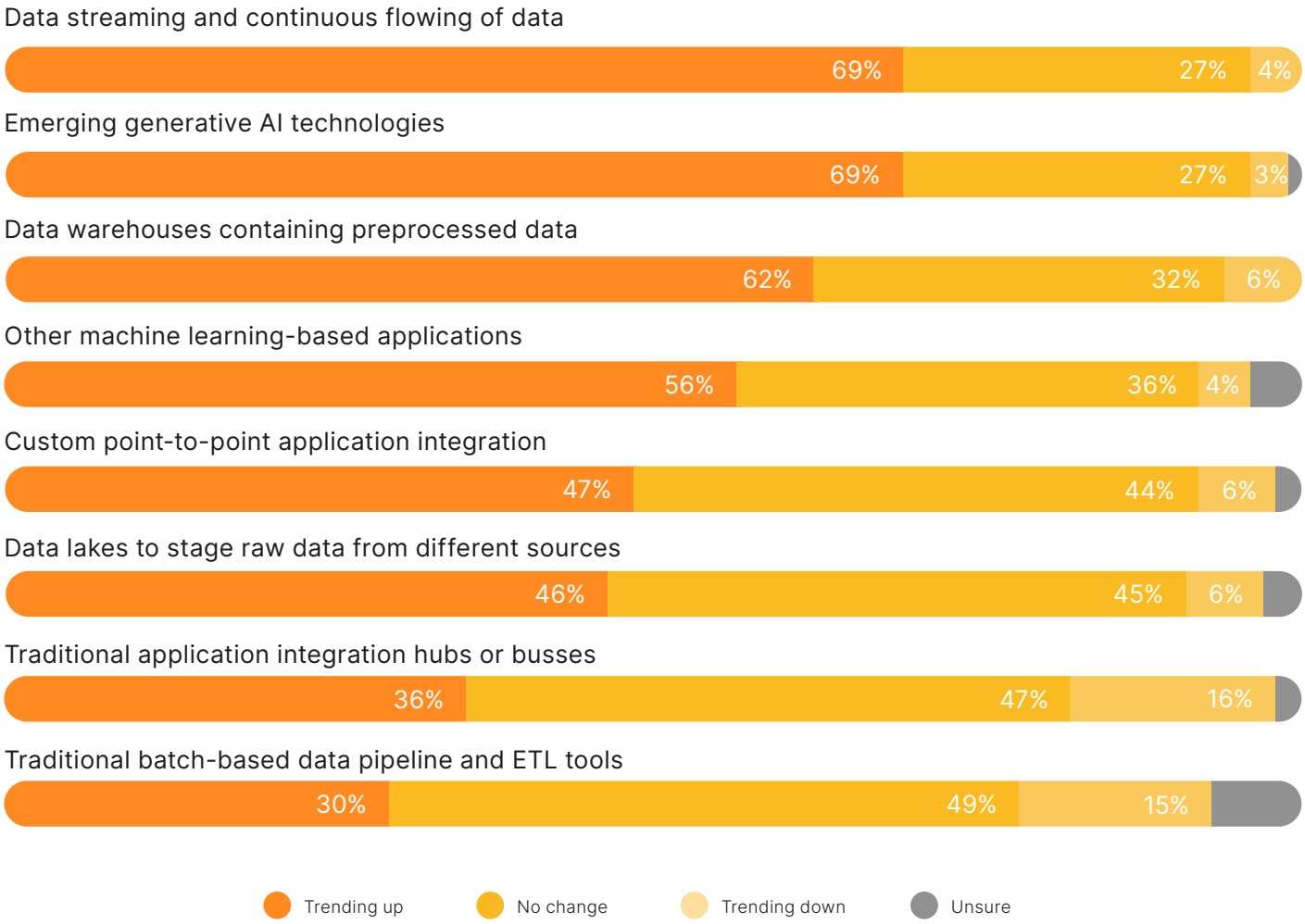
The maturity distribution tells an interesting story. A significant 64% of Australian organizations are at Level 3 (critical silos), with data streaming enabling real-time capabilities within specific domains. However, only 7% have reached Level 4, indicating that broader, cross-functional integration of data streaming is still a work in progress for many.

## And finally, looking ahead, how does investment in the following fit into your overall agenda for 2024?



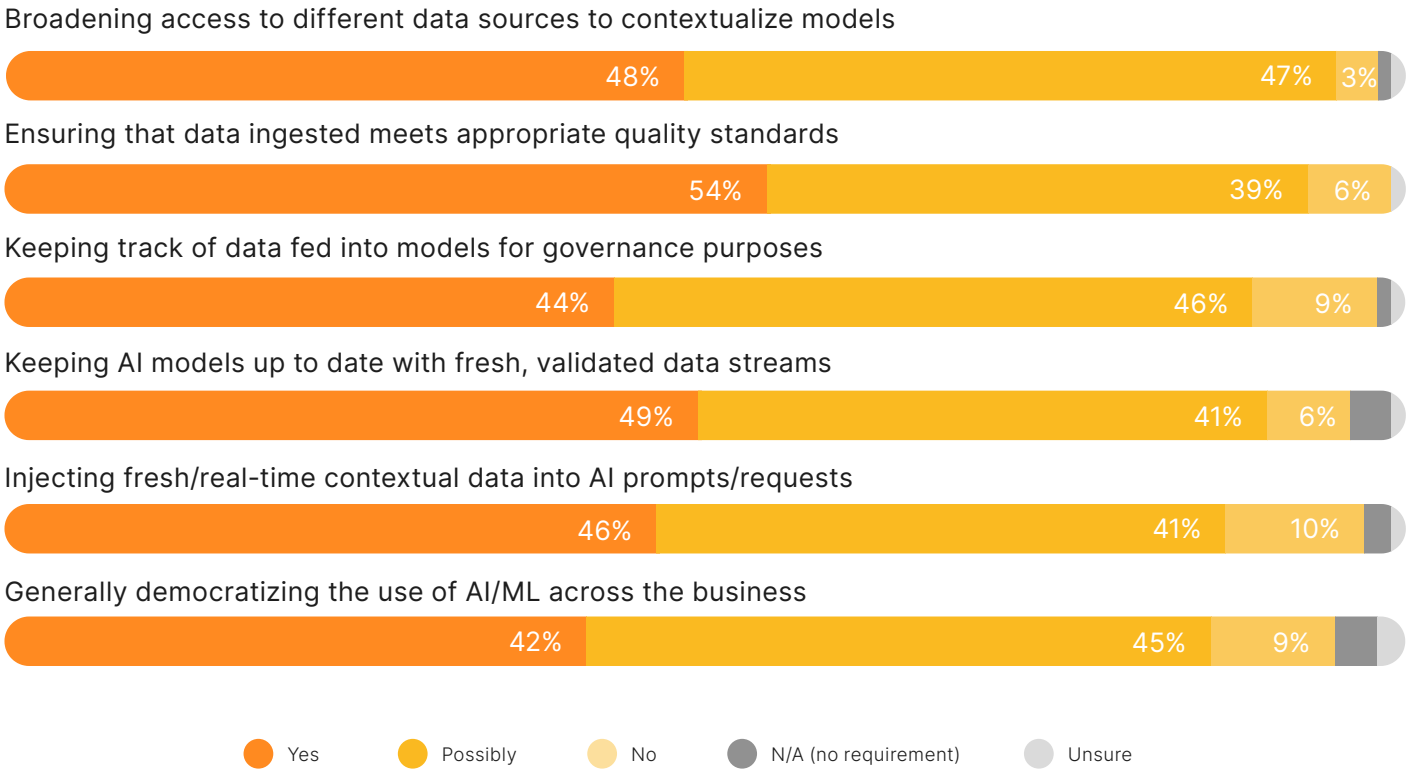

When it comes to investment priorities, security and data management top the list for Australian businesses. This aligns with the country's strong focus on data protection and privacy. Data streaming technology is seen as important, but not as high a priority as in some other APAC countries. This could reflect a more measured approach to adopting new technologies.

## Do you see the use of the following types of technology trending up or down over the coming two years?




Looking ahead, Australian businesses indicate strong interest in emerging technologies, with 69% seeing both data streaming and generative AI trending up over the next two years. However, there's also continued investment in more traditional technologies, suggesting a balanced approach to innovation.

## Do you see DSP technology easing the path to enterprise-level AI/ML adoption in the following ways, whether building your own models or augmenting third-party foundation models?




Australian organizations clearly see the potential of DSP technology to support AI/ML adoption. They are particularly positive about its role in ensuring data quality and broadening access to data sources.

# In Summary

Australia's data streaming landscape reflects a pragmatic approach to technology adoption. While there is a clear recognition of the value of data streaming and related technologies, implementation appears to be steady rather than hasty. This measured approach may work well in the long run, but there could also be short-term opportunities. For example, by leveraging data streaming for competitive advantage, particularly in areas like cross-functional integration, critical to many digital transformation initiatives; and treating data streams as products, critical to unlocking the value of data assets more broadly across the business.

> "Confluent is a strategic platform for us. With every project we look at, we now think about how we use Confluent to move things around and join things together."
>
> JUDO BANK

COUNTRY-LEVEL PERSPECTIVE:

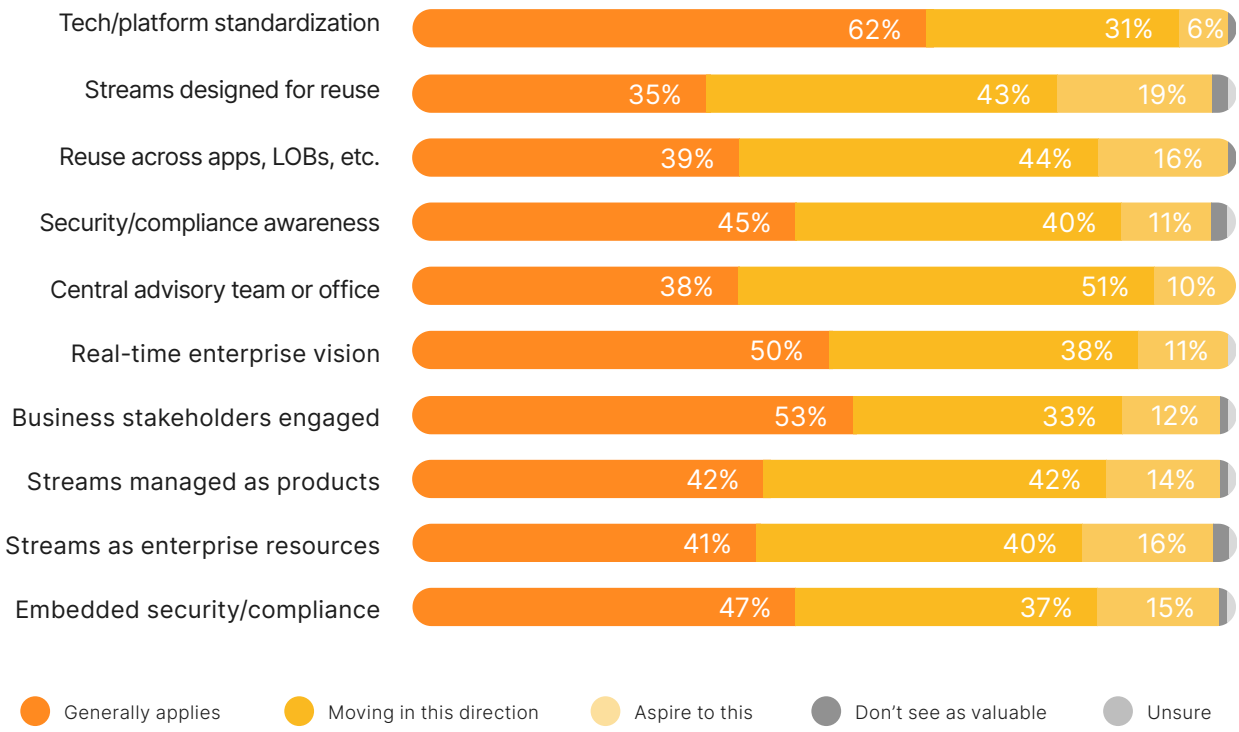
# India

India's vibrant IT sector and vast tech talent pool are driving strong interest in data streaming technologies.

# Data Streaming in India

Indian organizations are showing considerable commitment to data streaming practices.

## How much do the following apply to the use of data streaming across your organization?




Almost two-thirds have standardized on a select set of streaming technologies or platforms, while 39% are designing streams for reuse across applications and use cases. In addition, 42% are managing streams as products. These figures suggest that many Indian businesses are not just adopting data streaming, but are actively working to extract maximum value from it.

# 2024 Maturity Distribution India

**2%**

Data streaming is a strategic enabler with all qualities of Level 4, plus streams managed as a product

Level 5

**13%**

Several deployments in production for critical systems with data reuse and integrations across business units and a common operating model established

Level 4

**65%**

Deployments in production for a few critical systems with data and usage siloed across teams

Level 3

**16%**

Projects identified and deployed for noncritical application

Level 2

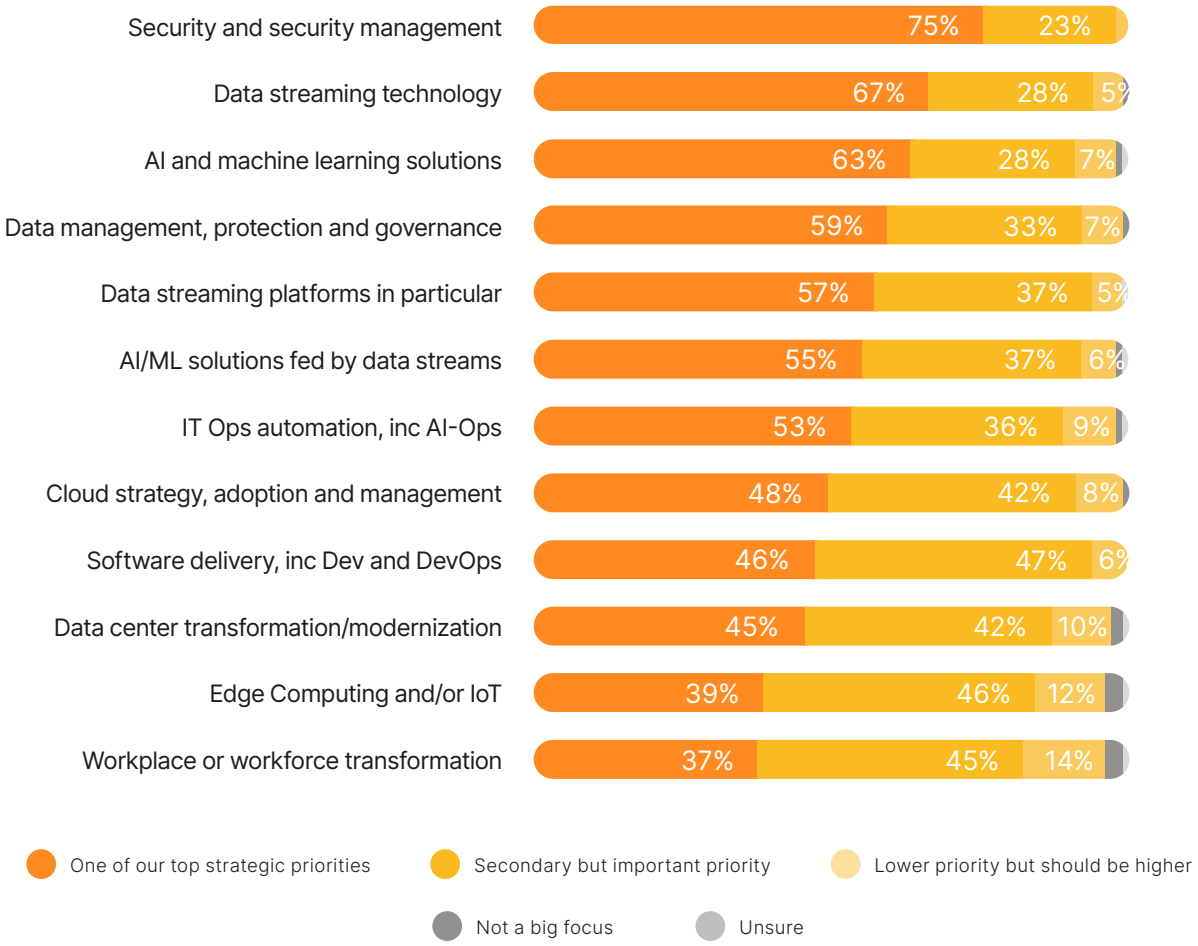
**4%**

Experiments in pre-production

Level 1

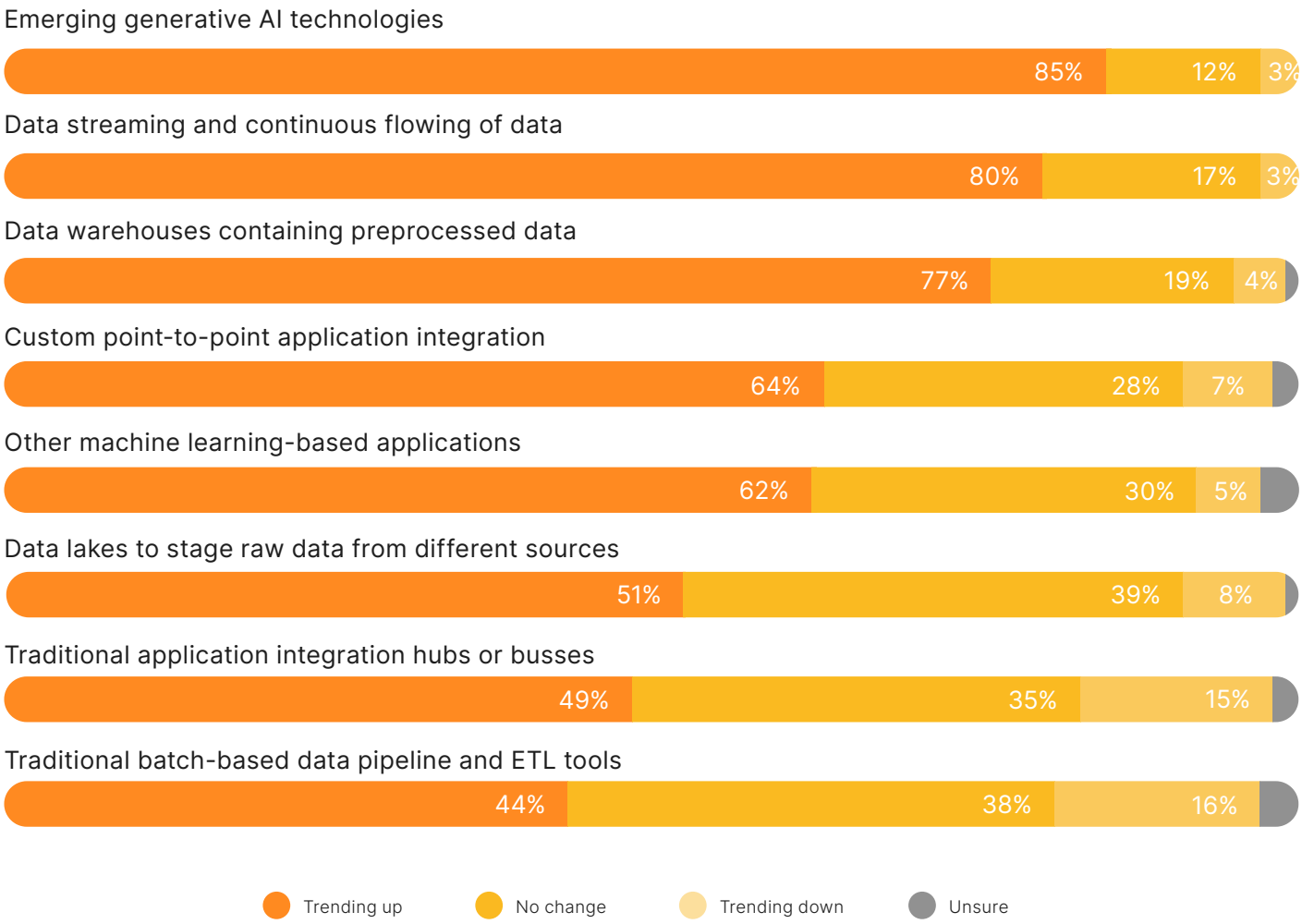
Looking at maturity levels, India's distribution is similar to the APAC average, with 65% at Level 3 (critical silos). However, India edges ahead with 15% at Levels 4 and 5 combined, hinting at a growing number of organizations pushing for more strategic, enterprise-wide use of data streaming.

## And finally, looking ahead, how does investment in the following fit into your overall agenda for 2024?



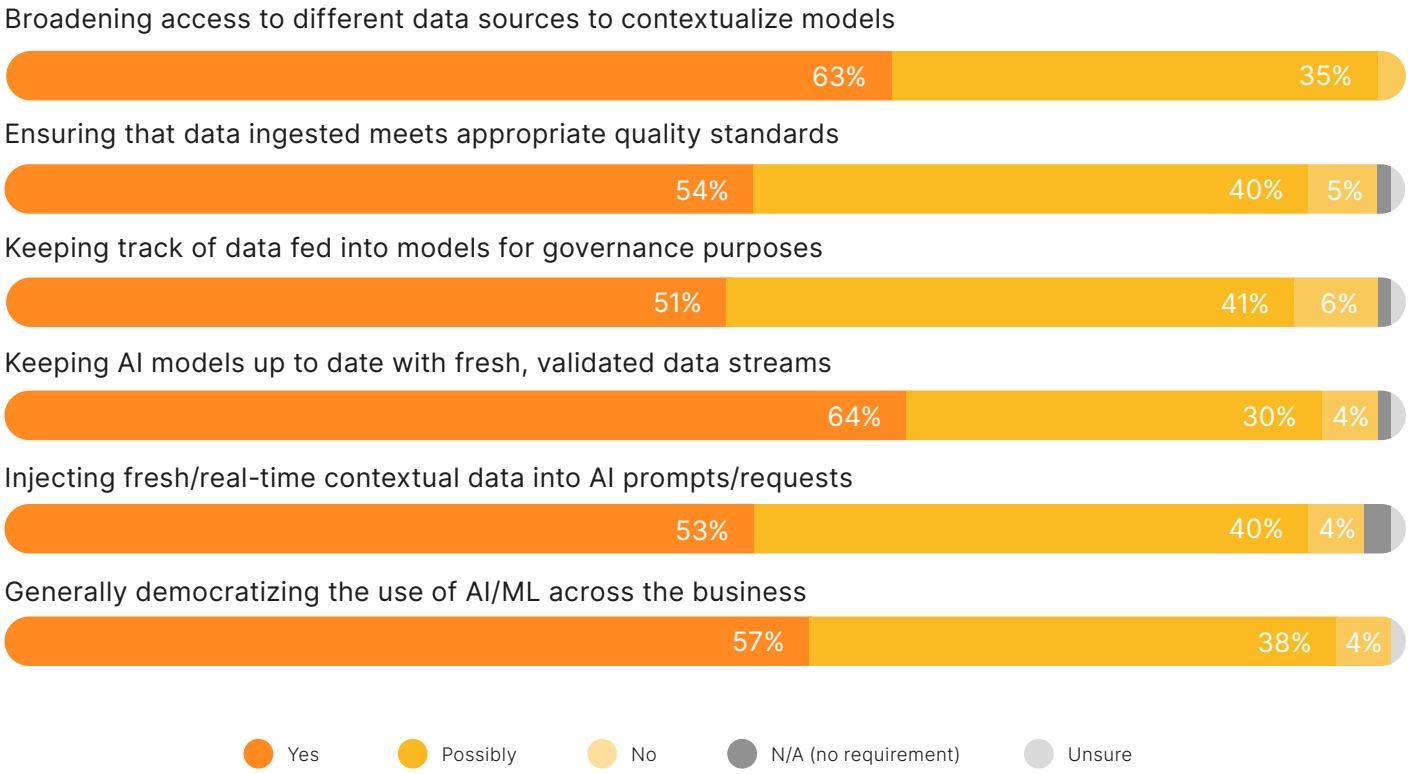

When it comes to investment priorities, Indian businesses are backing up their words with action. While security remains the top concern, data streaming technology and AI/ML solutions follow closely behind, underscoring India's enthusiasm for cutting-edge technologies that can drive business transformation.

## Do you see the use of the following types of technology trending up or down over the coming two years?




Looking ahead, Indian organizations are eager to embrace emerging technologies. A considerable 85% see generative AI trending up, closely followed by data streaming at 80%. This forward-looking stance could position Indian businesses well in the rapidly evolving tech landscape.

## Do you see DSP technology easing the path to enterprise-level AI/ML adoption in the following ways, whether building your own models or augmenting third-party foundation models?




Overall, Indian businesses are optimistic about the role of DSP technology in AI/ML adoption. They are particularly positive about its potential to keep AI models up to date with fresh data streams and broaden access to different data sources. This alignment between data streaming and AI initiatives could be a powerful combination for Indian organizations.

# In Summary

India's approach to data streaming appears to be characterized by enthusiasm and a willingness to embrace new technologies. While this eagerness could lead to some implementation challenges, it also positions Indian businesses to potentially leapfrog more cautious competitors. The key for India will be to balance this enthusiasm with careful planning and execution to ensure that investments in data streaming deliver tangible business value.

> "Scaling was the bottleneck in our growth. But, thanks to Confluent, we've been able to rearchitect with ease and harness real-time data to create better, more seamless experiences for all."
>
> **~ ALOK SHARMA**
>
> DIRECTOR OF ENGINEERING
>
> MEESHO

COUNTRY-LEVEL PERSPECTIVE:

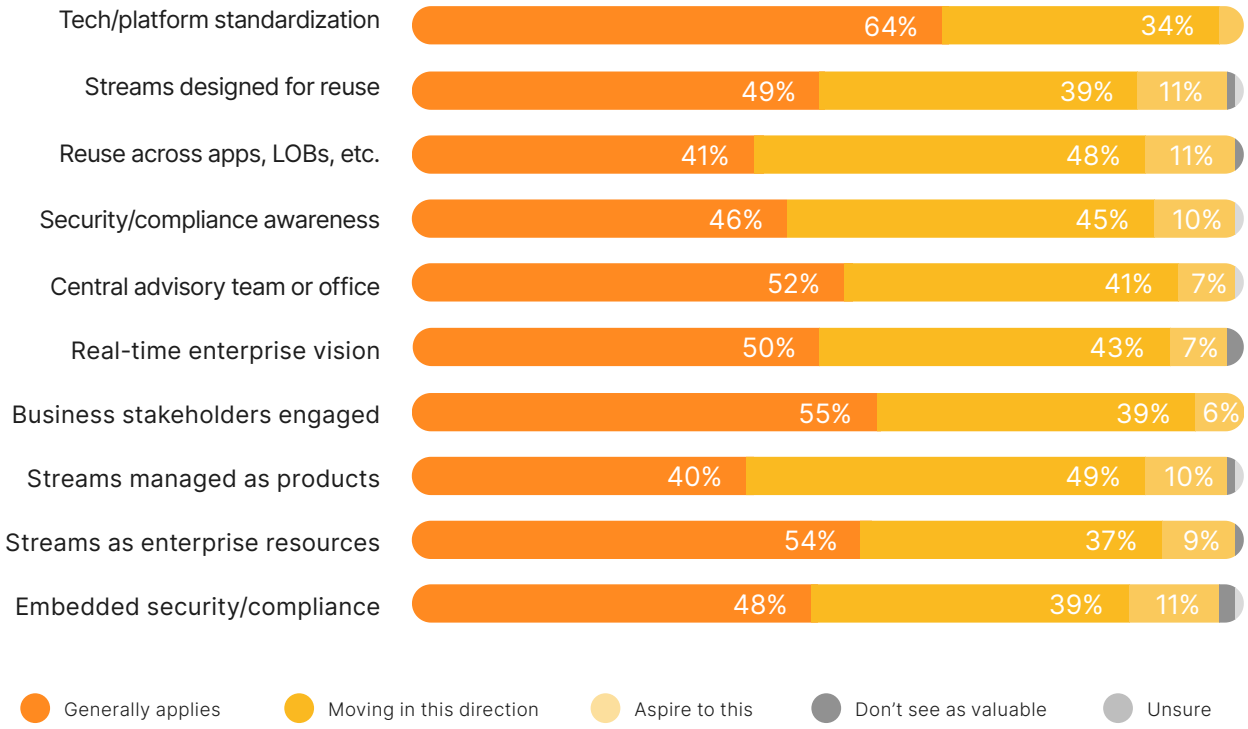
# Indonesia

Indonesia, with its fast-growing economy and tech-savvy population, is showing remarkable enthusiasm for data streaming technologies.

# Data Streaming in Indonesia

The Indonesian organizations that have adopted data streaming are progressing very well.

## How much do the following apply to the use of data streaming across your organization?




Almost two-thirds have standardized on a select set of streaming technologies or platforms, leading the APAC region in this aspect. 41% are designing streams for reuse across applications and use cases, while 40% are managing streams as products. These figures suggest Indonesian businesses are not just adopting data streaming, but are actively working to embed it deeply into their operations.

# 2024 Maturity Distribution Indonesia

**5%**

Data streaming is a strategic enabler with all qualities of Level 4, plus streams managed as a product

Level 5

**13%**

Several deployments in production for critical systems with data reuse and integrations across business units and a common operating model established

Level 4

**67%**

Deployments in production for a few critical systems with data and usage siloed across teams

Level 3

**13%**

Projects identified and deployed for noncritical application

Level 2

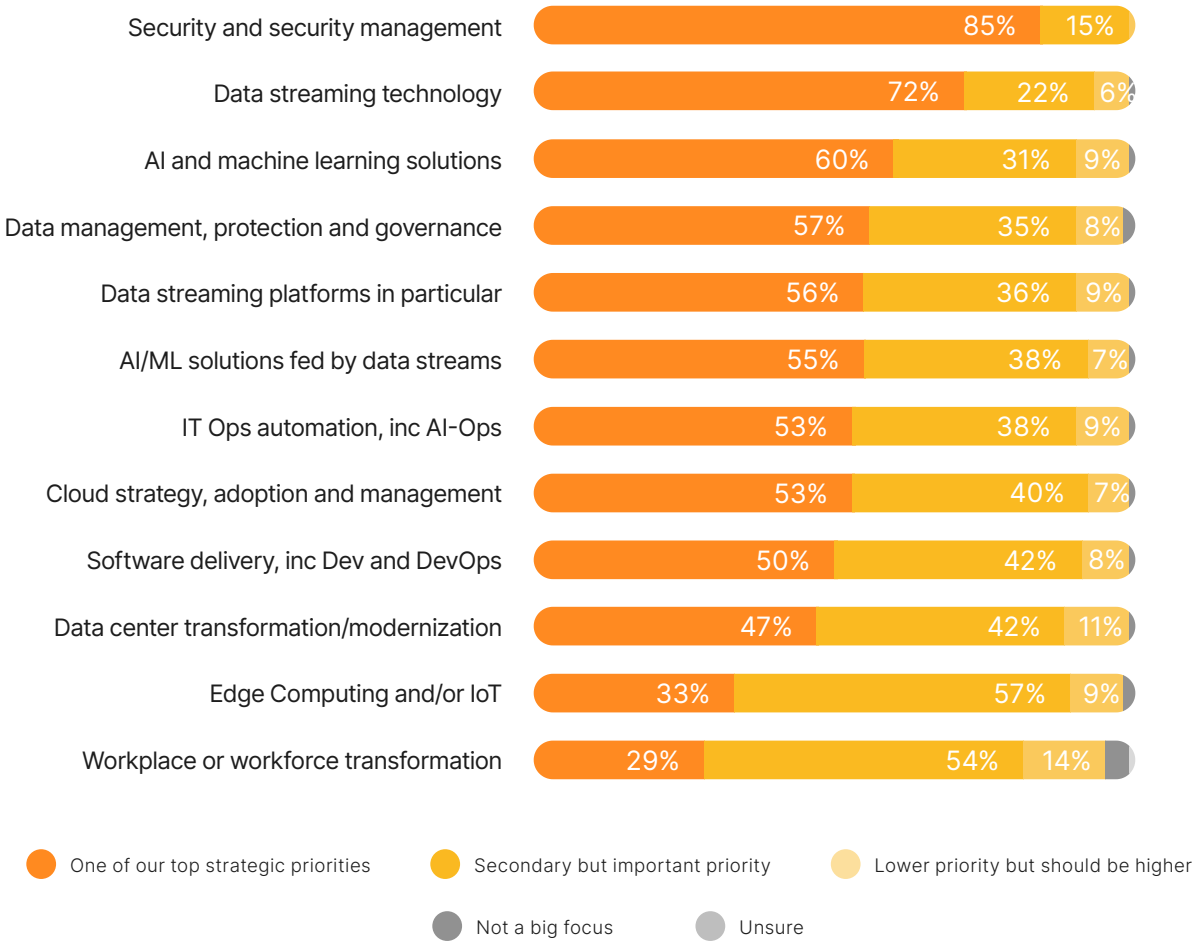
**2%**

Experiments in pre-production

Level 1

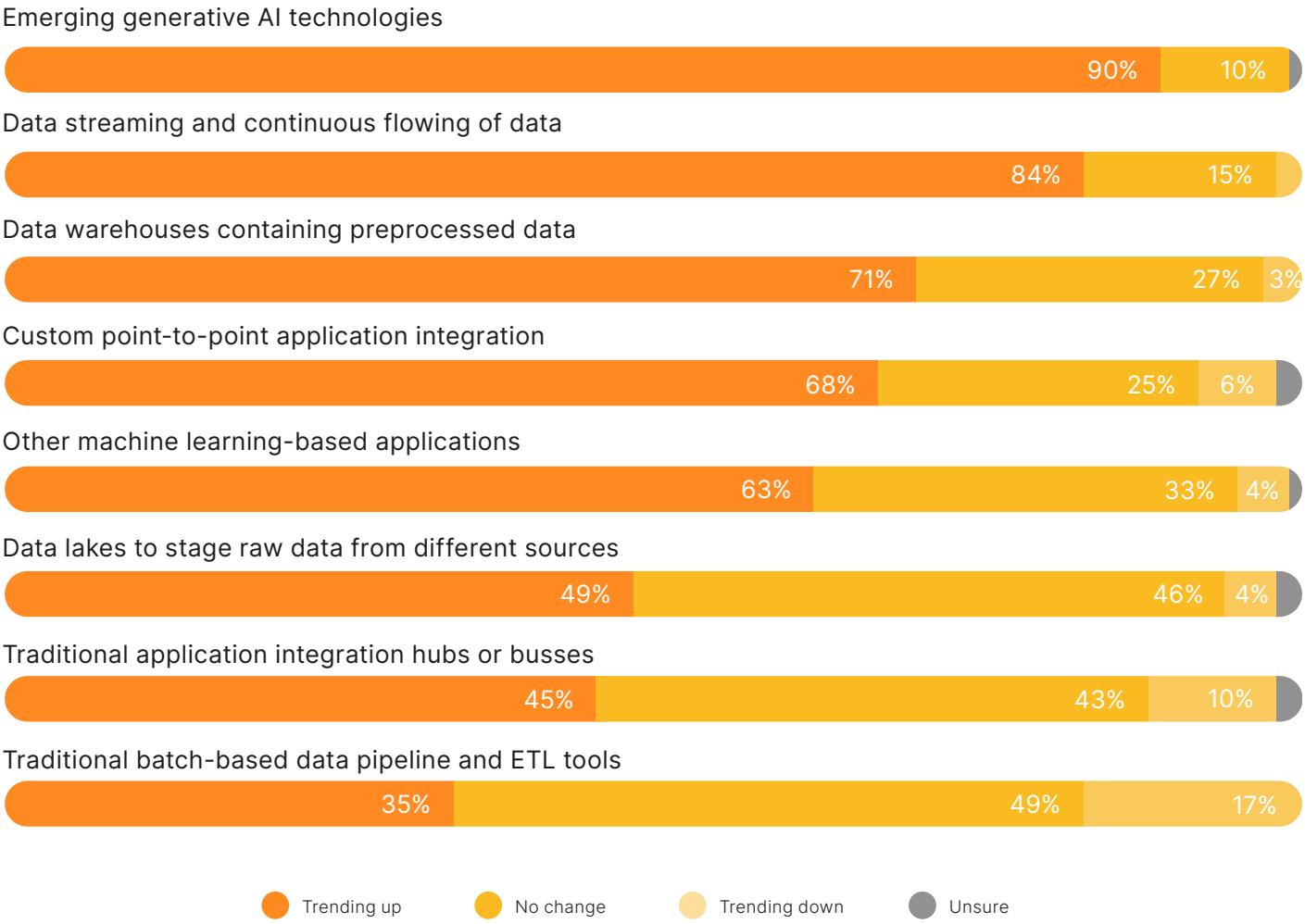
The maturity distribution for Indonesia shows a concentrated push toward advanced implementation. While 67% are at Level 3 (critical silos), a notable 18% have reached Levels 4 and 5 combined. This is the highest percentage among the countries we've examined.

## And finally, looking ahead, how does investment in the following fit into your overall agenda for 2024?



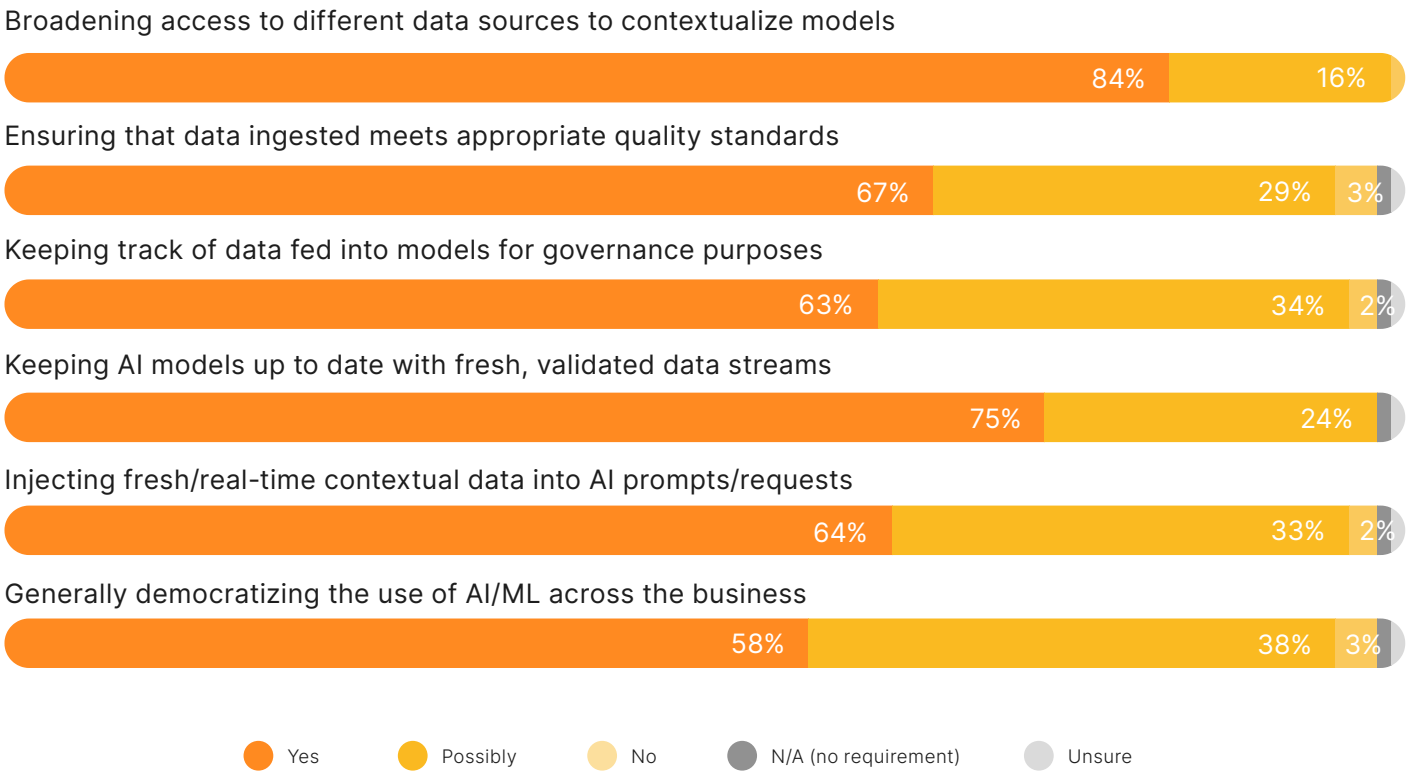

Indonesian businesses are showing a strong commitment to investing in cutting-edge technologies. While security tops the list (as it does across the region and the world), data streaming technology follows closely behind, with 72% citing it as a top strategic priority. This high prioritization of data streaming investments sets Indonesia apart from its APAC peers, possibly as a function of its historically open source commitment.

## Do you see the use of the following types of technology trending up or down over the coming two years?




Looking ahead, Indonesian organizations are extremely optimistic about emerging technologies. An astonishing 90% see generative AI trending up, with data streaming close behind at 84%. This forward-looking stance could position Indonesian businesses at the forefront of technological adoption in the region.

## Do you see DSP technology easing the path to enterprise-level AI/ML adoption in the following ways, whether building your own models or augmenting third-party foundation models?




Indonesian businesses are extremely positive about the role of DSP technology in AI/ML adoption. They show particular enthusiasm for its potential to broaden access to different data sources and keep AI models up to date. This strong alignment between data streaming and AI initiatives could be a powerful driver of innovation in Indonesian organizations.

# In Summary

Indonesia's approach to data streaming is characterized by rapid adoption and high ambitions. The enthusiasm for new technologies is palpable, potentially positioning Indonesian businesses to make significant leaps in their digital transformation journeys. However, this rapid pace of adoption may also bring challenges in terms of implementation and integration. The key for Indonesia will be to harness this enthusiasm while ensuring that the fundamentals of data management and governance keep pace with the rate of technological adoption.

> "Confluent Platform and Apache Kafka™, by enabling us to build and deploy real-time event-driven systems for credit scoring, have helped BRI become the most profitable bank in Indonesia."
>
> **~ KASPAR SITUMORANG**
>
> EXECUTIVE VICE PRESIDENT, DIGITAL CENTER OF EXCELLENCE
>
> BANK RAKYAT INDONESIA

> “At GetPlus, there are tens of thousands of transactions every day, so it is critical that we provide real-time detection and updates regarding unusual transactions and the changing customer behaviors for the best customer experience. Data streaming allows us to scale seamlessly to the demand and enables us to process and analyze transactions in real time, significantly enhancing our ability to identify and mitigate fraudulent activities, resulting in a loss prevention of more than 100 million IDR per month.”
>
> **~ CHARLES BERNARDO**
>
> HEAD OF DATA ANALYTICS
>
> GLOBAL POIN INDONESIA (GETPLUS)

COUNTRY-LEVEL PERSPECTIVE:

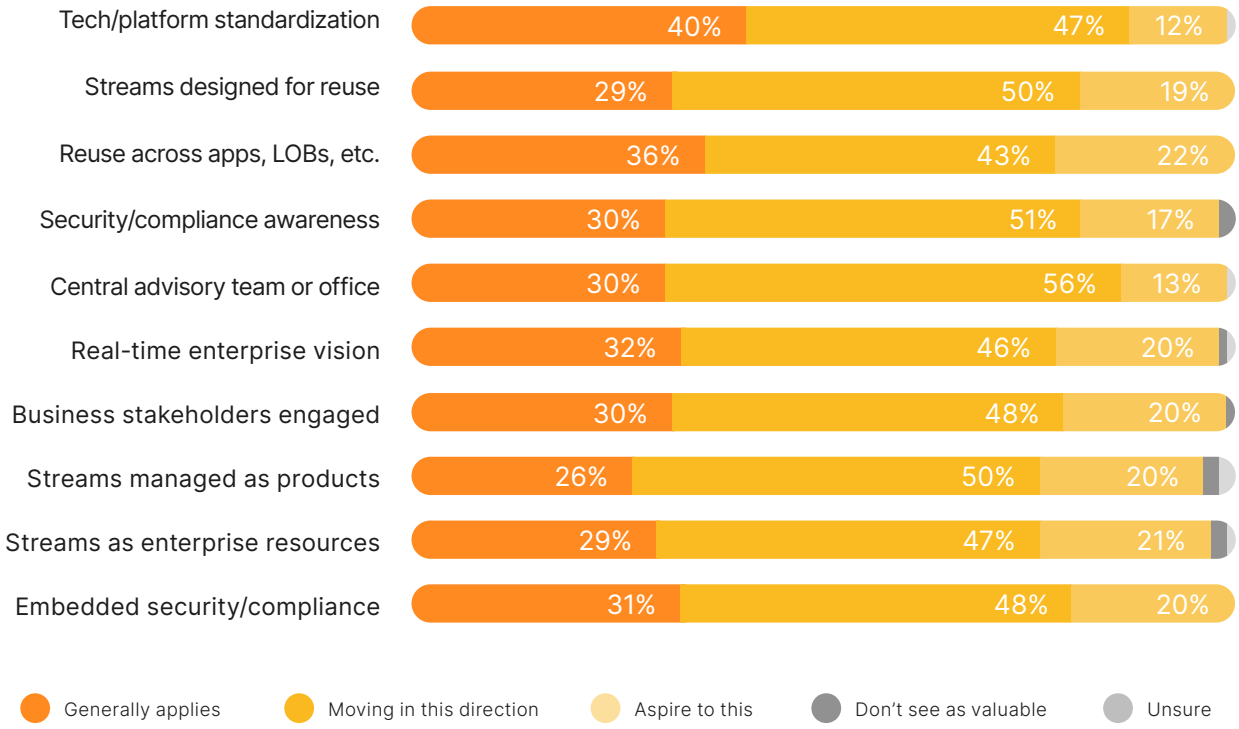
# Japan

Japan, known for its technological prowess and meticulous approach to innovation, presents a unique picture in the APAC data streaming landscape.

# Data Streaming in Japan

Japanese organizations show a more measured approach to data streaming practices.

## How much do the following apply to the use of data streaming across your organization?




Only four in 10 organizations have standardized on a select set of streaming technologies or platforms, lower than the APAC average. However, 36% are designing streams for reuse across applications and use cases, while 26% are managing streams as products. These figures suggest that while adoption may be slower, Japanese businesses are focused on quality and strategic implementation.

# 2024 Maturity Distribution Japan

**1%**

Data streaming is a strategic enabler with all qualities of Level 4, plus streams managed as a product

Level 5

**10%**

Several deployments in production for critical systems with data reuse and integrations across business units and a common operating model established

Level 4

**67%**

Deployments in production for a few critical systems with data and usage siloed across teams

Level 3

**14%**

Projects identified and deployed for noncritical application

Level 2

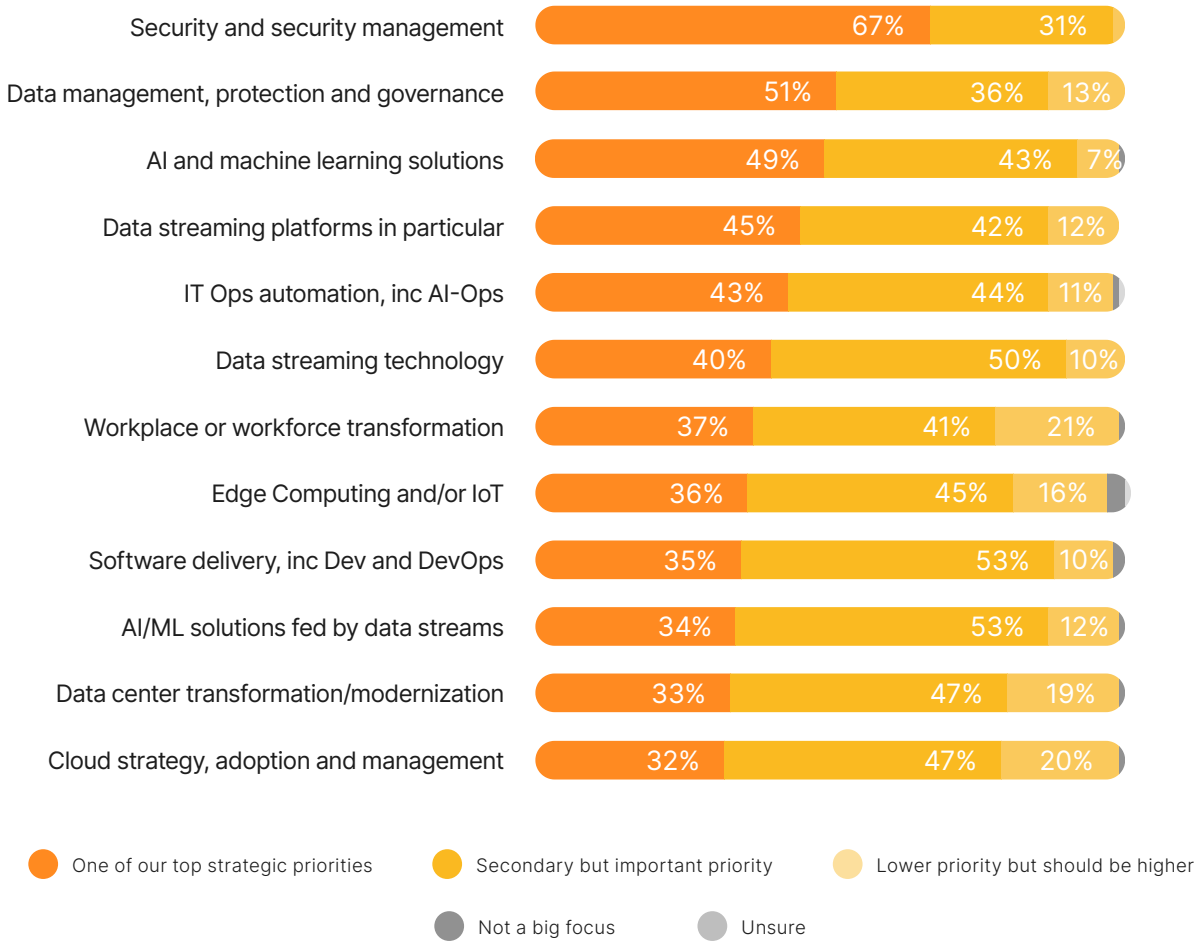
**8%**

Experiments in pre-production

Level 1

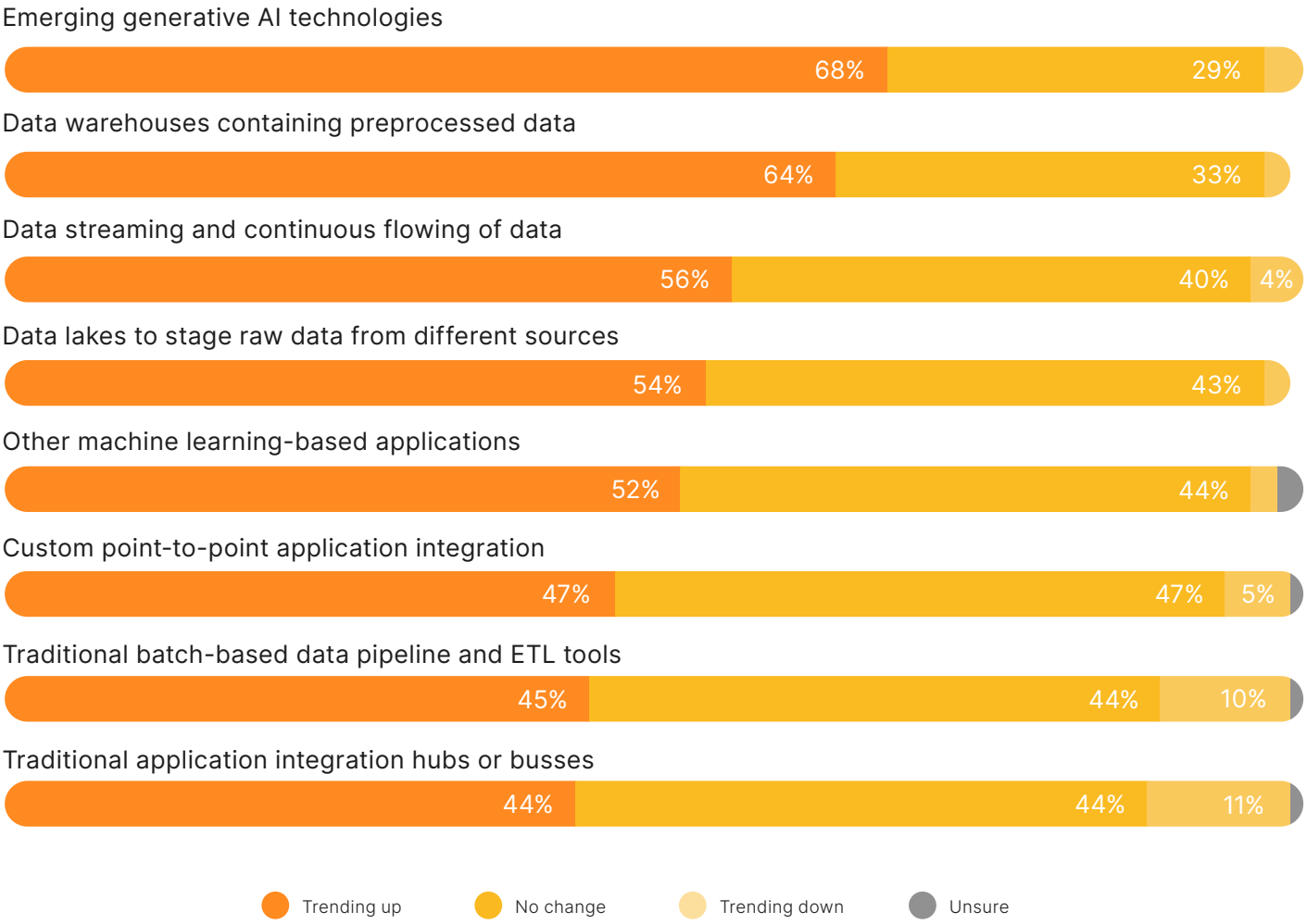
The maturity distribution for Japan aligns closely with the APAC average. 67% are at Level 3 (critical silos), with 11% reaching Levels 4 and 5 combined. This distribution indicates that while many Japanese streaming adopters have implemented data streaming for critical systems, there's still room for growth in terms of enterprise-wide integration.

## And finally, looking ahead, how does investment in the following fit into your overall agenda for 2024?



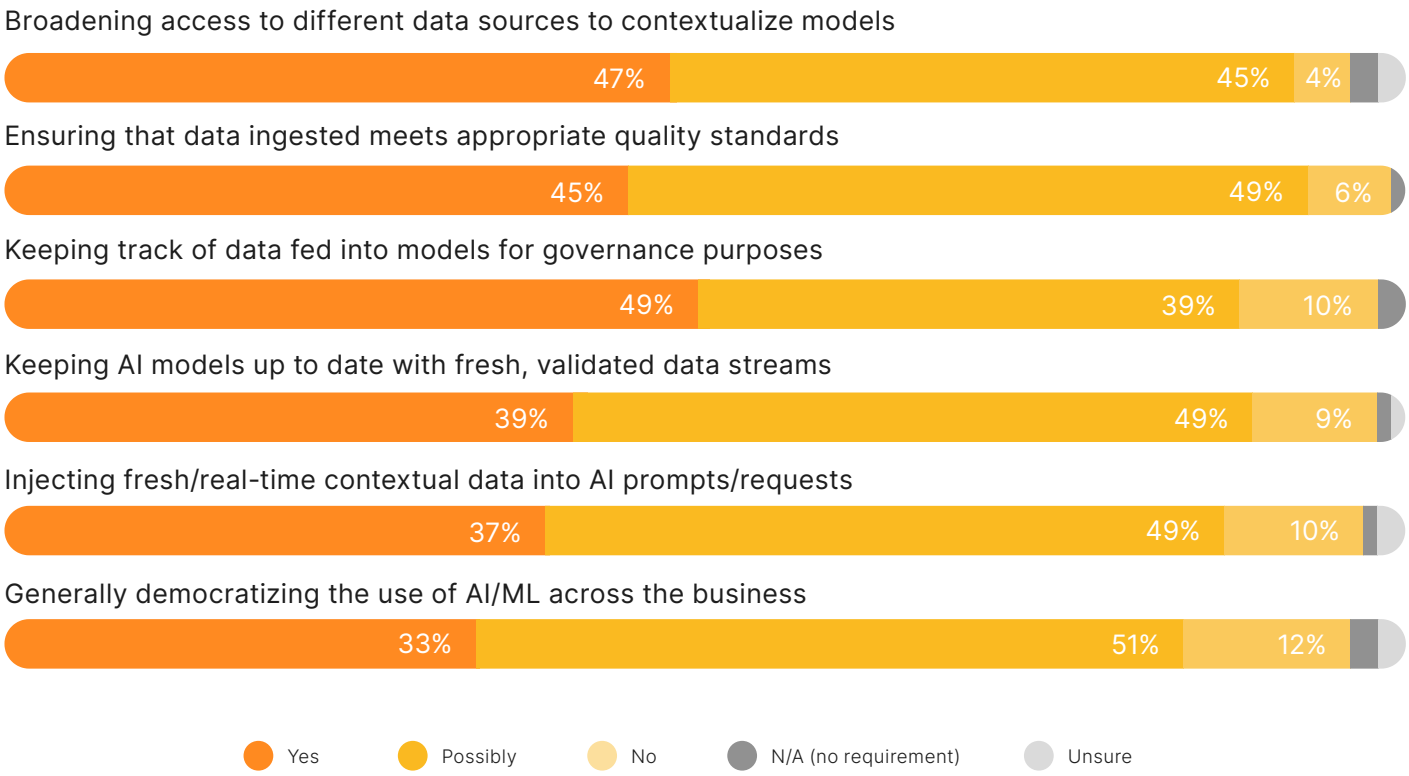

When it comes to investment priorities, Japanese businesses show a balanced approach. While security remains the top concern, there's strong interest in AI and machine learning solutions, with data streaming technology also in the top six list. This suggests a strategic view of data streaming as part of a broader technological ecosystem.

## Do you see the use of the following types of technology trending up or down over the coming two years?




Looking ahead, Japanese organizations show cautious optimism about emerging technologies. 68% see generative AI trending up, with 56% saying the same for data streaming. Also of note, there's significant interest in more traditional technologies, reflecting Japan's tendency to balance innovation with proven solutions.

## Do you see DSP technology easing the path to enterprise-level AI/ML adoption in the following ways, whether building your own models or augmenting third-party foundation models?




Japanese businesses see potential in DSP technology for AI/ML adoption, but with a degree of caution. They're particularly positive about its role in ensuring data quality and keeping track of data for governance purposes. This aligns well with Japan's strong focus on data quality and regulatory compliance.

# In Summary

Japan's approach to data streaming is characterized by careful consideration and strategic implementation. While adoption rates may be lower compared to some APAC counterparts, there's a clear focus on quality and integration with existing systems. This measured approach may result in more sustainable implementations in the long run. The challenge for Japanese businesses will be to maintain this quality-focused approach while also accelerating adoption to keep pace with global competitors.

> "Data streaming is crucial to driving digital transformation at L'Oréal, which in turn helps us increase agility to meet our consumers' rapidly changing needs for innovation and personalization. In a world where we envision having data at our fingertips, data streaming helps set our data in motion by facilitating real-time data flows between our systems and applications."
>
> **~ SINDHU PRASANNA**
>
> EVENT-DRIVEN ARCHITECTURE LEAD
>
> L'OREAL

COUNTRY-LEVEL PERSPECTIVE:

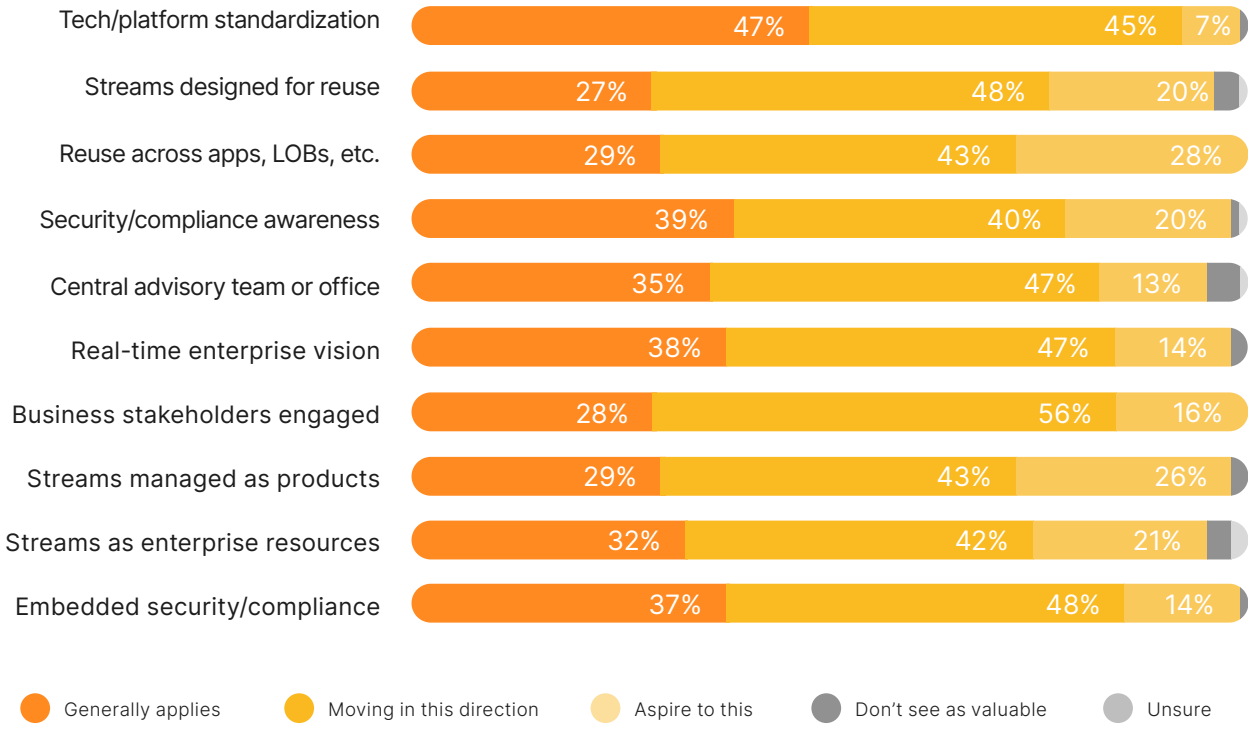
# Singapore

Singapore, known for its advanced digital infrastructure and innovation-friendly policies, offers an intriguing perspective on data streaming adoption in the APAC region.

# Data Streaming in Singapore

Singaporean organizations demonstrate a strategic approach to data streaming practices.

## How much do the following apply to the use of data streaming across your organization?




47% have standardized on a select set of streaming technologies or platforms, slightly below the APAC average. However, 29% are designing streams for reuse across applications and use cases, and the same percentage are managing streams as products. These figures suggest that while adoption is ongoing, Singaporean businesses are focusing on strategic implementation and value extraction.

# 2024 Maturity Distribution Singapore

**0%**

Data streaming is a strategic enabler with all qualities of Level 4, plus streams managed as a product

Level 5

**13%**

Several deployments in production for critical systems with data reuse and integrations across business units and a common operating model established

Level 4

**70%**

Deployments in production for a few critical systems with data and usage siloed across teams

Level 3

**14%**

Projects identified and deployed for noncritical application

Level 2

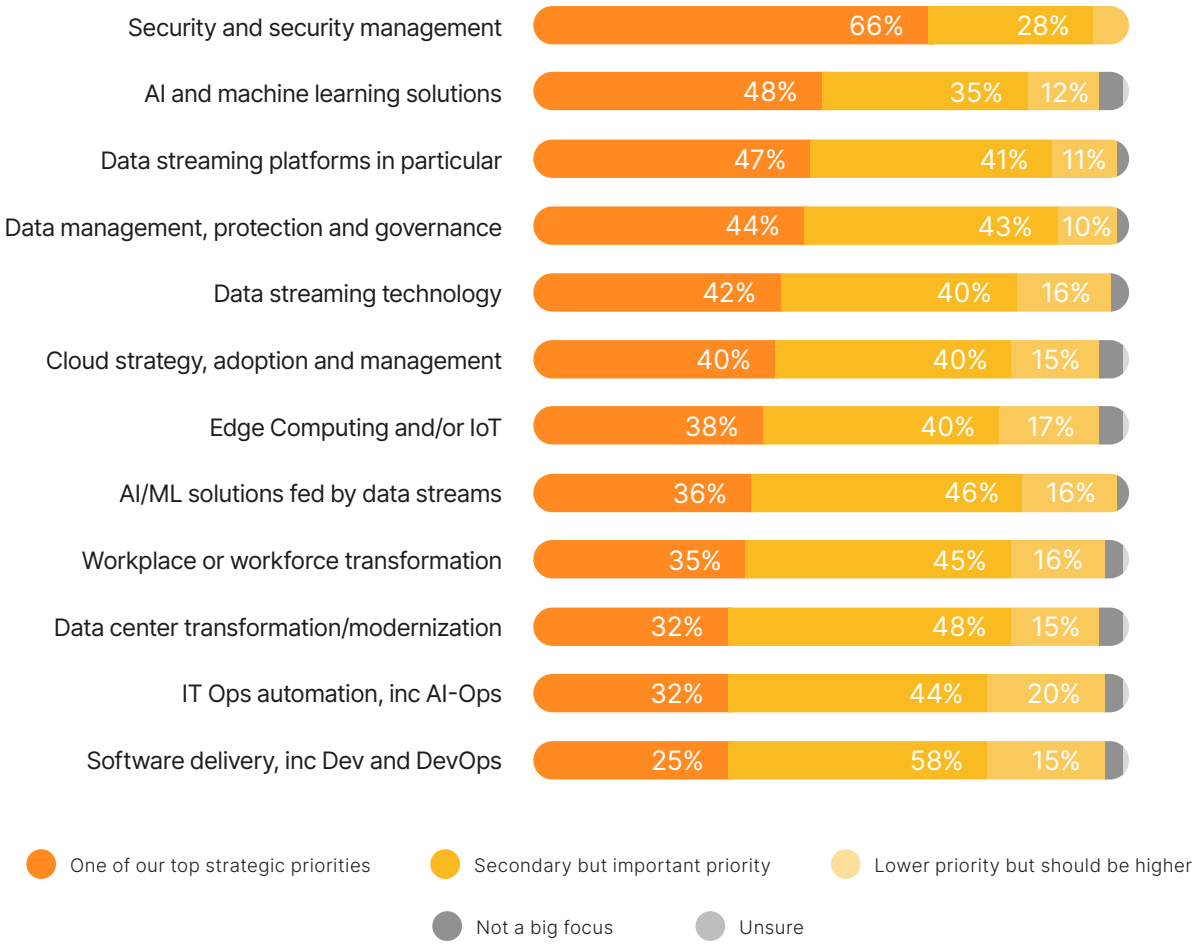
**3%**

Experiments in pre-production

Level 1

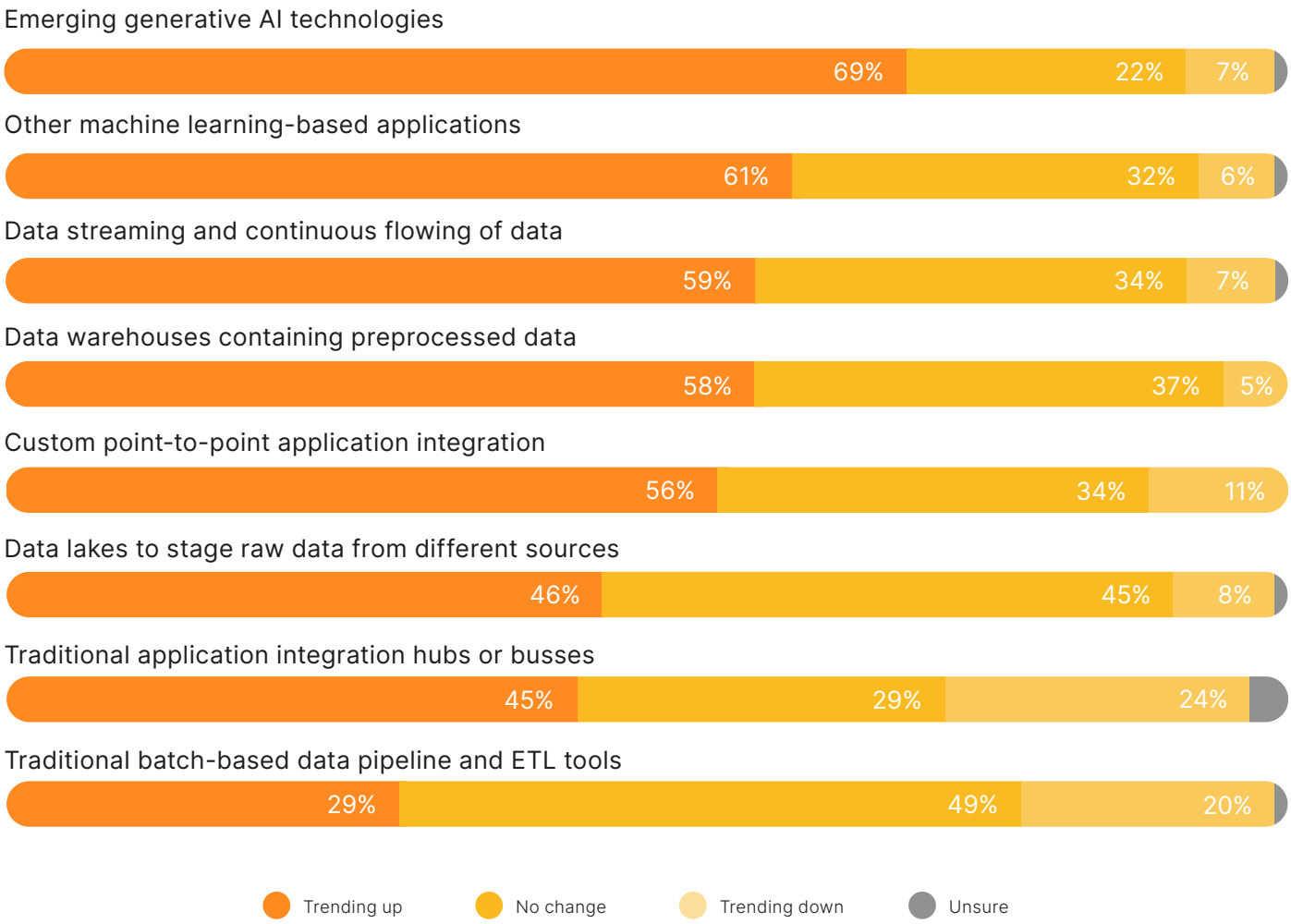
The maturity distribution for Singapore shows a concentration in the middle stages, with 70% at Level 3 (critical silos). This is slightly higher than the APAC average, indicating that many Singaporean organizations have implemented data streaming for critical systems, but are still working toward broader, cross-functional integration.

## And finally, looking ahead, how does investment in the following fit into your overall agenda for 2024?



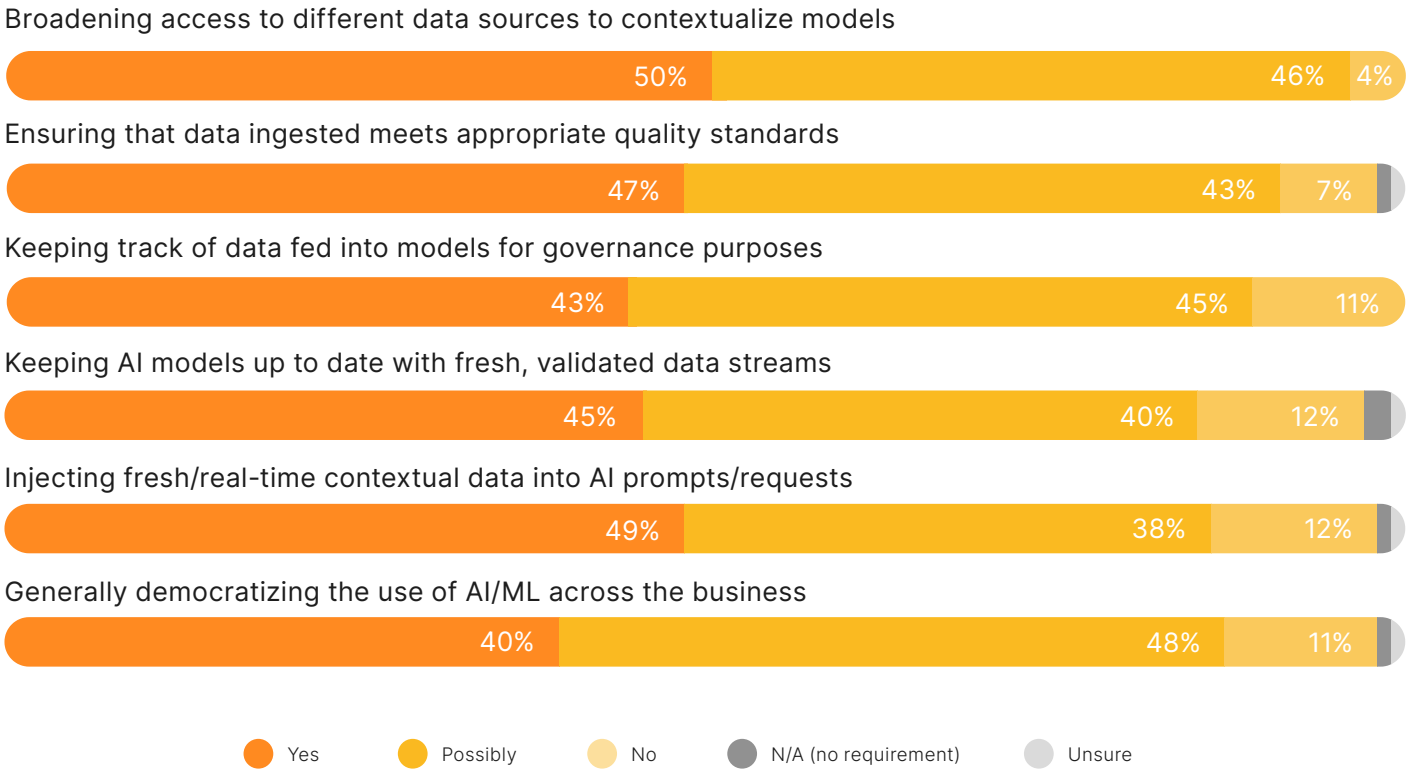

Looking at investment priorities, Singaporean businesses show a balanced approach with a lean toward cutting-edge technologies. While security tops the list, AI and machine learning solutions follow closely, with data management and data streaming technology not far behind. This suggests a strategic view of data streaming as part of a broader technological ecosystem driving innovation.

## Do you see the use of the following types of technology trending up or down over the coming two years?




Singaporean organizations are optimistic about emerging technologies, albeit slightly more cautiously than some of their APAC counterparts. 69% see generative AI trending up, with 59% saying the same for data streaming. This forward-looking stance, combined with continued investment in established technologies, reflects Singapore's balanced approach to innovation.

## Do you see DSP technology easing the path to enterprise-level AI/ML adoption in the following ways, whether building your own models or augmenting third-party foundation models?




Singaporean businesses see potential in DSP technology for AI/ML adoption, particularly in broadening access to different data sources and injecting fresh, real-time data into AI systems. However, the high number of “possibly” responses suggests a measured optimism, reflecting Singapore’s pragmatic approach to technology adoption.

# In Summary

Singapore's approach to data streaming is characterized by strategic adoption with a clear focus on innovation. While not leading in raw adoption numbers, Singaporean businesses appear to be taking a thoughtful approach, integrating data streaming into broader digital transformation initiatives. This balanced strategy could position Singapore well for sustainable, value-driven implementation of data streaming technologies. The challenge for Singaporean businesses will be to maintain this strategic approach while also ensuring they keep pace with global leaders in data streaming adoption and utilization.

“

Everything we do is in real time because batch processing is an old way of thinking. The longer your data waits, the less value it has. So, as data comes through, you need to be able to act on it, or enrich it quickly. Confluent enables this for us.”

**~ RAJAY RAI**

CHIEF INFORMATION OFFICER

TRUST BANK

# Conclusion

Across the Asia-Pacific region, businesses are adopting data streaming in ways that reflect their unique markets and priorities. From Indonesia's enthusiastic embrace to Japan's more measured implementation, we see a range of approaches. What unites them is a growing recognition that data streaming can significantly boost business agility and drive innovation.

Those already using this technology report impressive returns, citing benefits like better customer service and more efficient operations. Many APAC companies are also concluding that data streaming works hand in hand with AI, setting them up to exploit the synergies between these powerful technologies.

For APAC businesses that haven't yet started with data streaming, our research sends a clear message: now is the time to begin. As economies and technologies in the region continue to advance rapidly, data streaming offers a real chance to get ahead. Whether you're planning to start small or expand existing projects, the potential rewards are considerable. By using data streaming platforms and treating data as a valuable asset, APAC businesses can uncover new opportunities and fuel growth.

# Use Confluent to Your Advantage

No matter where you are on your data streaming journey, Confluent has you covered.

That's why organizations worldwide—including Bank BRI, Global Poin Indonesia (GetPlus), Judo Bank, Meesho, and Trust Bank—are leveraging Confluent's complete data streaming platform to unlock the full value of their data, no matter where it resides.

By empowering users to stream, connect, govern, and process data as continuous, real-time data streams everywhere, Confluent enables businesses to bring new applications to market faster, deliver exceptional customer experiences, and drive data-driven backend operations.

Interested in learning more about data streaming and how Confluent powers trustworthy data products so businesses can unlock limitless use cases? We've got you covered:

1. Explore how customers and partners are using Confluent's data streaming platform to transform IT and unlock new business outcomes.
2. Explore how you can turn data into tangible products that drive immediate value and serve a variety of use cases in your industry.
3. Learn why Forrester has named Confluent a leader in The Forrester Wave™: Streaming Data Platforms, Q4 2023.

# Methodology

**Research sample size:** For the global research study, we teamed up with Freeform Dynamics and Radma Research to gather responses from 4,110 IT leaders familiar with data streaming, and different levels of experience varying from little to significant experience.

**Respondents:** Survey respondents were in various strategic and leadership positions, including C-suite, directors, vice presidents, managers, senior contributors, and senior consultants, in companies with 500 or more employees.

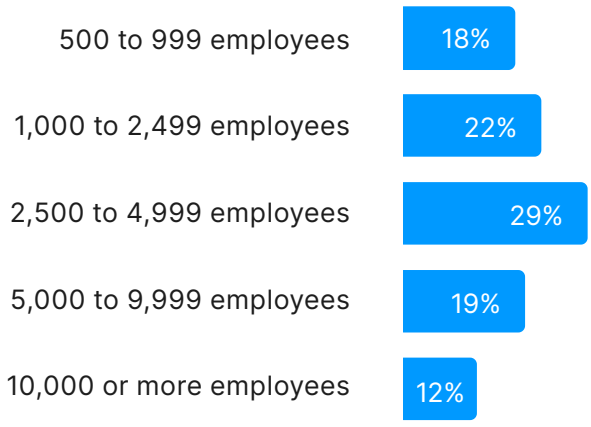
**Industries at a glance:** Respondents came from a variety of industries, including technology, financial services, government/public sector, manufacturing, healthcare, media/entertainment, nonprofit, professional services, research/education, retail, transportation/logistics, travel/hospitality, and utilities/telecom.

**Geographical distribution:** The pool of respondents spans 12 different countries, including the United States, Canada, Australia, France, Germany, India, Indonesia, Japan, Singapore, Spain, the United Arab Emirates, and the United Kingdom.

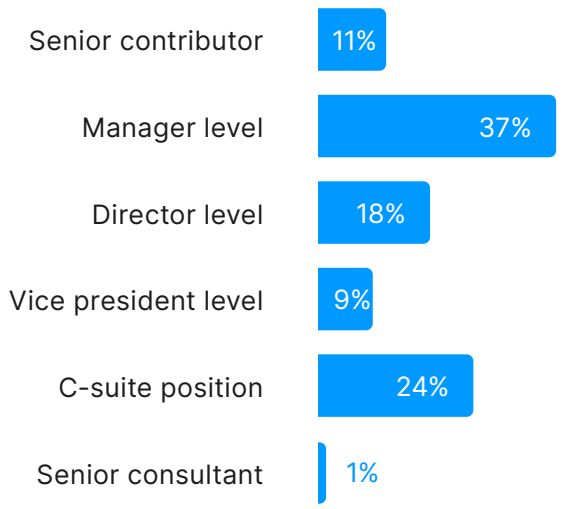
## APAC Region

From this broader research, we extracted and analyzed data specifically from 1,424 IT leaders and senior stakeholders across the APAC region, covering Australia, India, Indonesia, Japan, and Singapore and the results shared in the report are based on this analysis. The composition of the APAC sample is shown below:

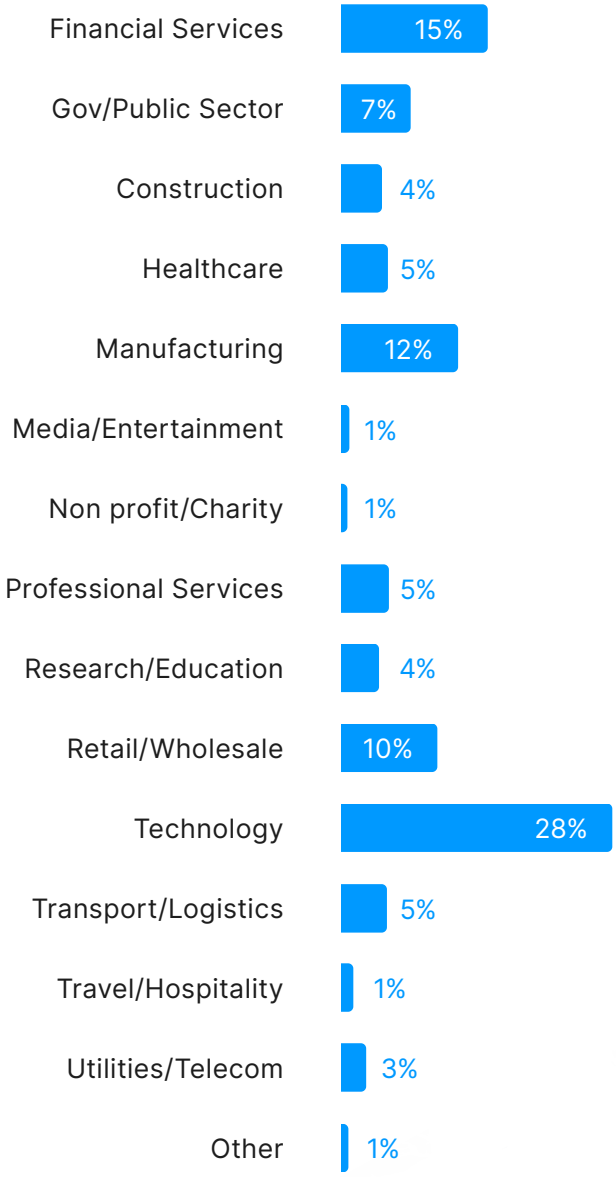
### By organization size



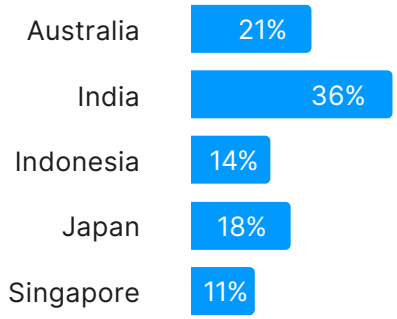

### By job level

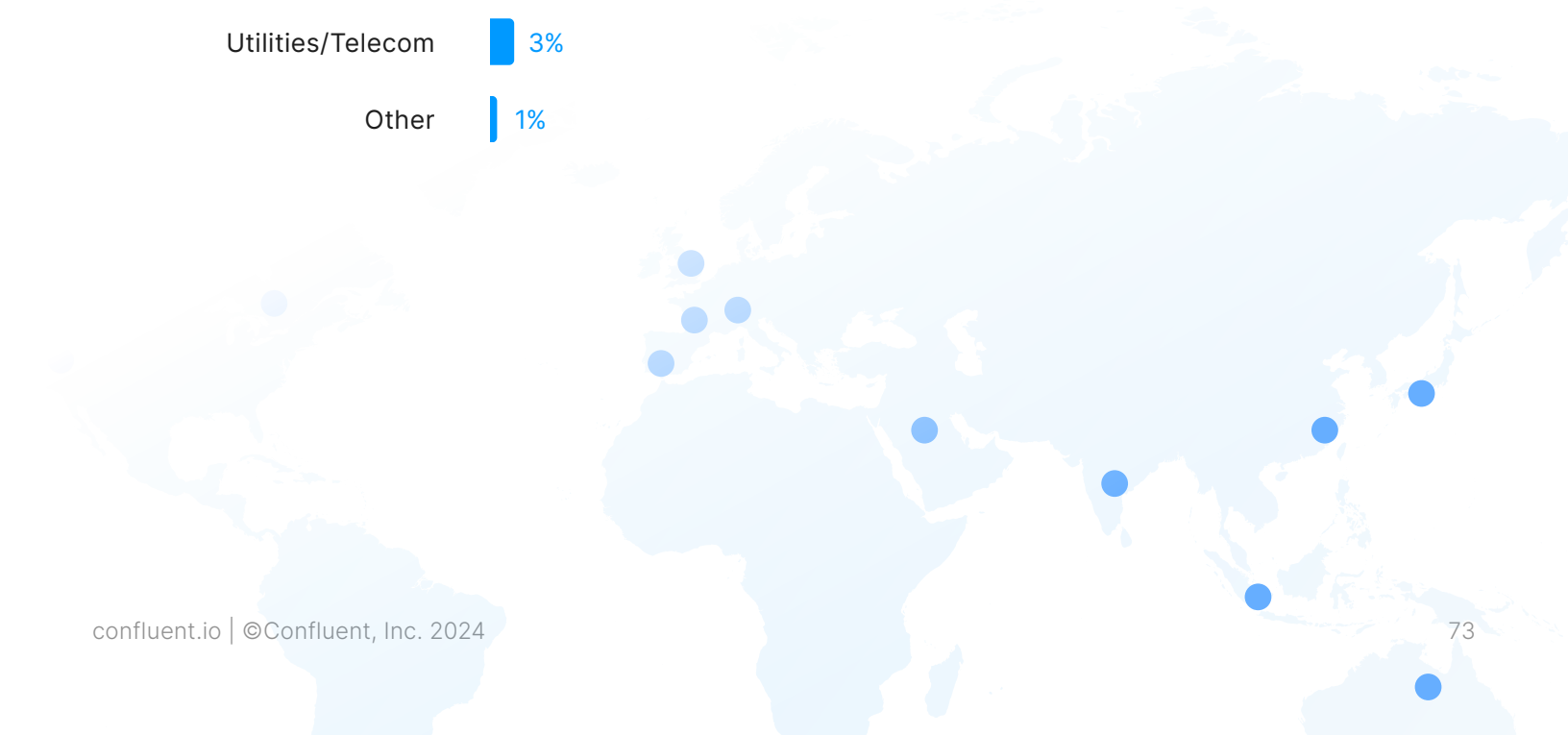


## By industry




## By country



CONFLUENT