

# Getting Ahead With AI: How APAC Companies Replicate Success by Remaining Focused

Changing market dynamics are propelling Asia-Pacific businesses to take a highly disciplined and focused approach to ensuring that their AI initiatives rapidly scale and quickly generate heightened business impact. Even though they face steep technological and skills challenges, businesses in the region appear poised to unleash the technology's potential to first grow revenue and then contain costs.

# Contents

Click a link below to jump to that section.

## 3 Introduction

AI in APAC: Seen as vital, firms seek maturity

AI adoption is at an early stage

AI deployment is strong in specific areas

Progress is being made along several fronts

## 10 The rich payoffs

Productivity, employee engagement and customer satisfaction are the top benefits realised/targeted

## 12 APAC's AI formula: It's all about making the right moves

The lessons learned by AI leaders can guide others to greater heights

APAC businesses are addressing the talent gap

APAC businesses view a holistic approach to data as business critical

## 17 Challenges ahead

Concerns accompany the AI shift

Data integrity, security and governance threaten progress

## 22 The road ahead

## 25 Methodology

# Introduction

Artificial intelligence (AI) is fast moving from an exciting technology into a critical tool of survival for businesses around the world. This was the overwhelming finding of our groundbreaking global study conducted in partnership with ESI ThoughtLab. We surveyed 1,200 senior executives around the world, including more than 370 executives from the Asia-Pacific (APAC) region, to understand how AI is being deployed in an increasingly uncertain world. The study shines a light on why organisations need to prioritise and scale AI.

Across APAC industries, a majority of respondents (71%) see AI as an essential ingredient in business success. About 45% of respondents in the region consider themselves to be either in the leaders or advancers category ([see sidebar, page 5, “Assessing Leaders vs. Laggards”](#)), suggesting the potential for sustained growth of AI adoption in the region.



The region is moving in the right direction. While businesses in the Americas tend to target larger-scale engagements, projects in APAC appear to be smaller and more discrete, enabling organisations to more quickly reap returns — relatively speaking. We believe this approach has helped businesses throughout the region gain comfort and competency with maturing AI toolsets and replicate success across the organisation — one step at a time. With smaller accomplishments under their belts, we believe the time is now right for leading organisations to shift gears to higher value, enterprise-wide projects that could potentially change the competitive landscape by delivering new products/services and ways of working.

Interestingly, the region sees a wide disparity between AI leaders and laggards when it comes to adoption of key underlying technologies such as data management (95% of leaders vs. 23% non-leaders) and machine learning (83% of leaders vs. 5% non-leaders), highlighting the fact that AI is at an early stage of mainstream adoption here, as it is elsewhere across the globe.

In the aftermath of COVID, data modernisation has emerged as a key theme as businesses realised that their data and analytics/models are highly perishable. APAC businesses are acutely aware of this and plan to diversify their sources of data over the next three years.

AI talent — or the lack thereof — is another key challenge for businesses across the region, as it is the world over. Most companies told us they rely on internal talent development and technology partners to fill the gap. This talent shortcoming is creating major implementation/project management obstacles, which is cited by nearly half of the respondents as the biggest challenge, followed by AI risks and ethics.

Increased productivity, improved customer satisfaction and employee engagement are among the biggest benefits the region's businesses are achieving. By unlocking game-changing capabilities such as faster and more accurate forecasting, intelligent machines offer businesses throughout the region the opportunity to optimise operations and perhaps even adjust for ongoing business volatility.

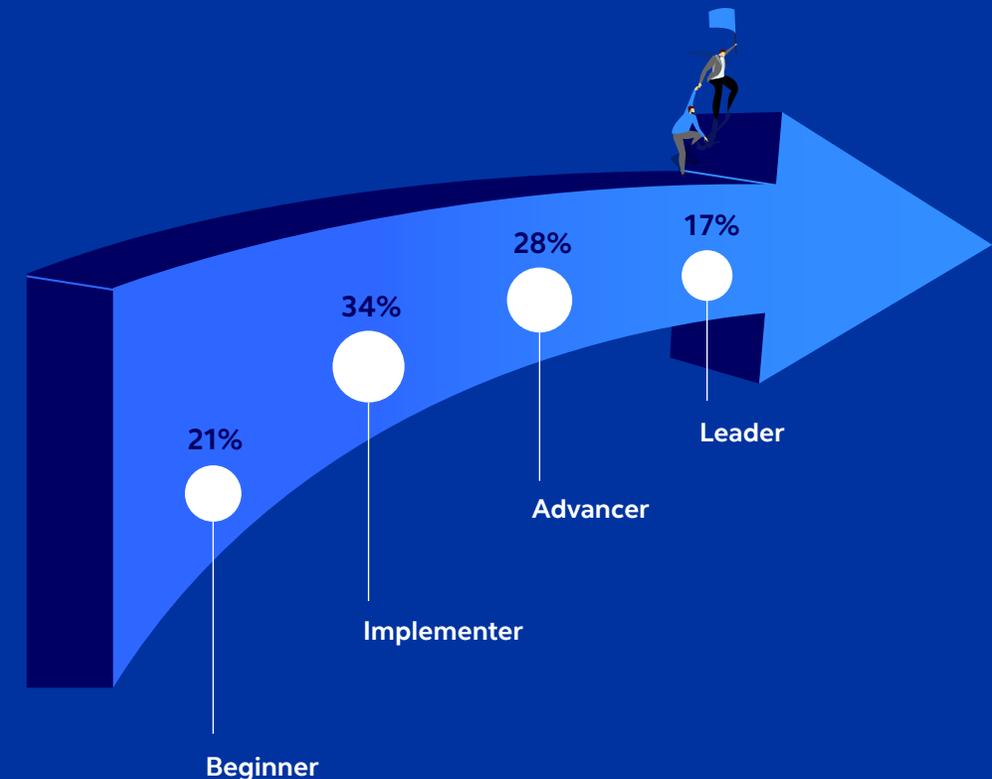
For APAC businesses, this e-book offers an evidence-based approach to making the most of their critical AI investments. We hope these insights help in finding a pathway through the chaos unleashed by the pandemic — and beyond.

# Quick Take: Assessing Leaders vs. Laggards

A prime objective of our research was to determine what constitutes an AI leader. To answer this, we assessed respondents along two key dimensions: level of AI implementation and the benefits from AI investments.

Currently, just 17% of businesses are at the highest stage of AI maturity (the leaders), while less than one-third are just behind them (advancers). Over half are in the early stages of AI development (beginner or implementer). As we see in the pages that follow, these percentages will radically shift in three years' time. Here's how we define these categories:

- **Beginner:** Developing plans and building internal support for AI.
- **Implementer:** Starting to pilot AI and use a few simple applications.
- **Advancer:** Using AI in key parts of the business and seeing gains.
- **Leader:** Widely using AI to generate many benefits and transform business.



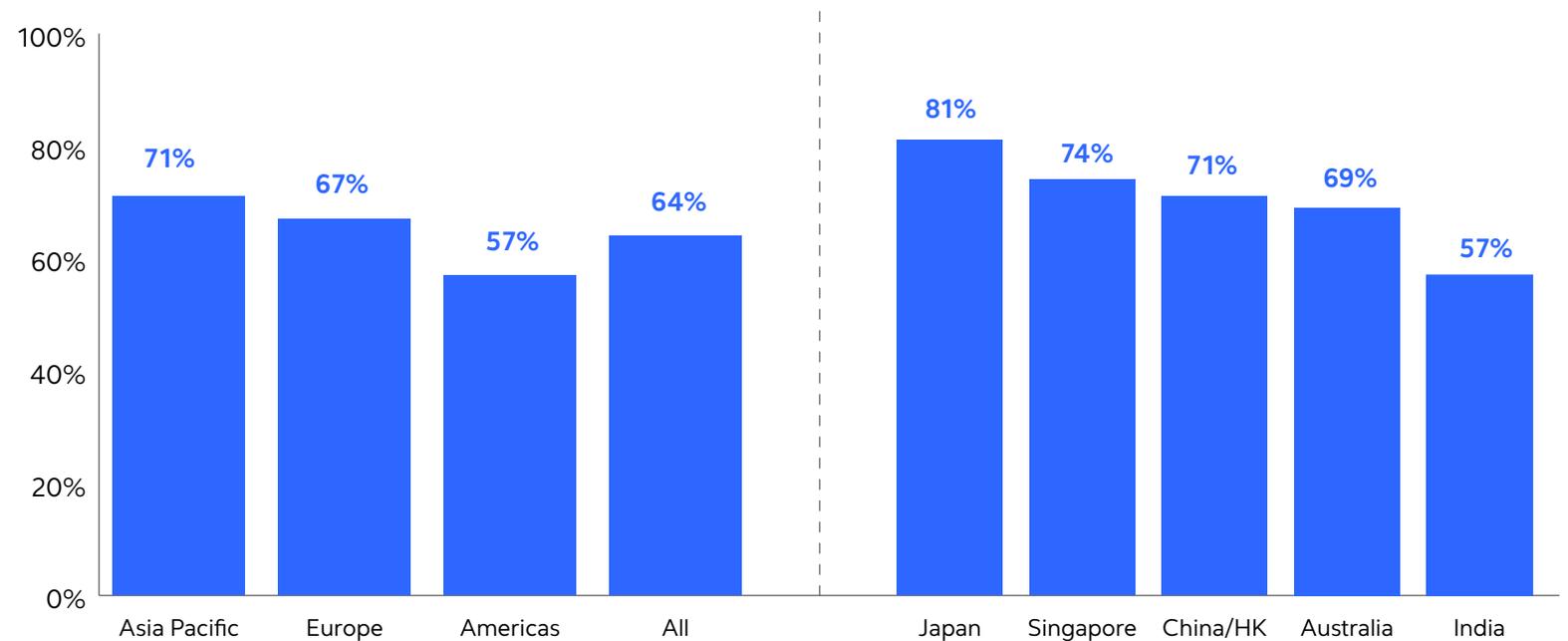
Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 1

# AI in APAC: Seen as vital, firms seek maturity

As work and commerce moved online in the wake of the pandemic, APAC organisations quickly realised the need to boost their dependence on AI across their operations. Importantly, a majority of APAC's respondents (71%) view AI as vital to their future.



## % saying AI is considerably/very important



Response base: 1,200  
Source: ESI ThoughtLab/Cognizant  
Figure 2

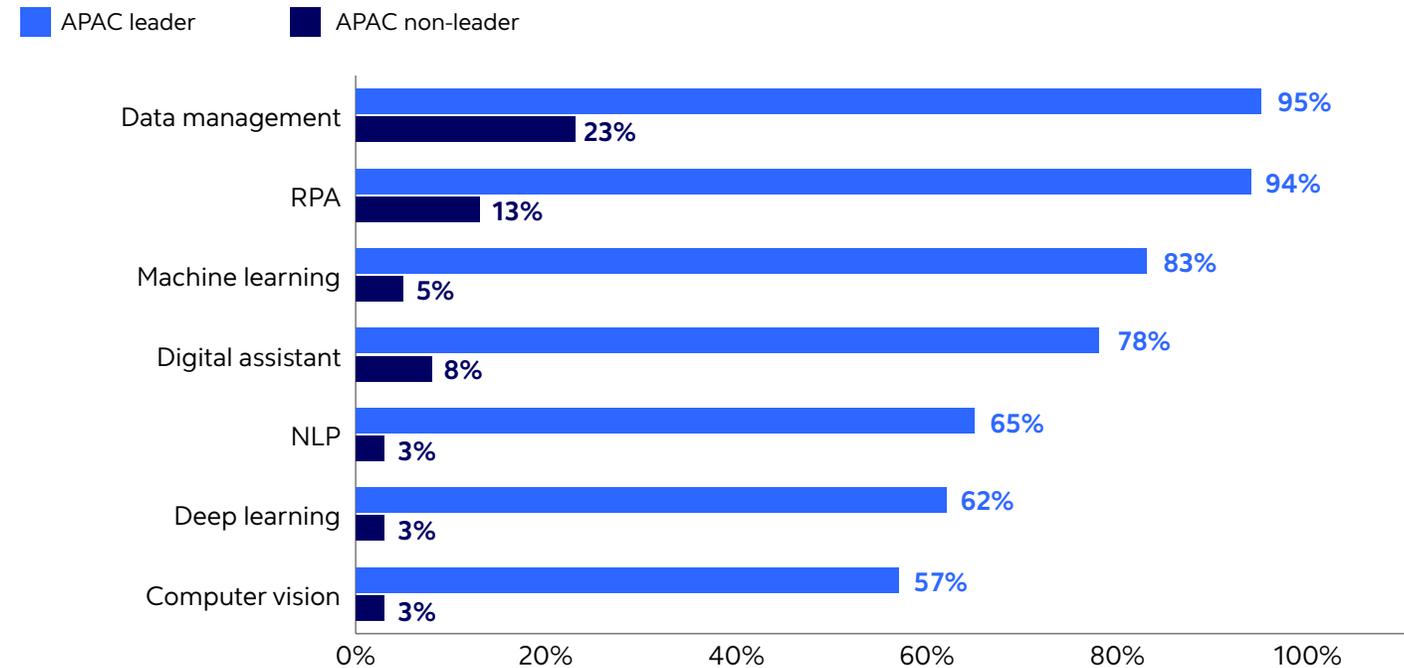
Response base: 371  
Source: ESI ThoughtLab/Cognizant

# AI adoption is at an early stage

Governments in the region have shown great interest in AI, with [China](#), [Singapore](#) and [India](#), among others, announcing ambitious national strategies. However, at the corporate level, progress is at an early stage. In fact, 55% of the region's respondents consider their companies to be "beginners" or "implementers".

Businesses are targeting a broad range of processes, helping them lay a foundation for enterprise-wide digitisation. The region's leaders exhibit a far higher level of adoption of AI and other key digital technologies. Large gaps that exist between leaders and non-leaders across technologies such as robotic process automation (RPA), machine learning and computer vision are potential opportunities.

## % maturing or advanced in technology adoption

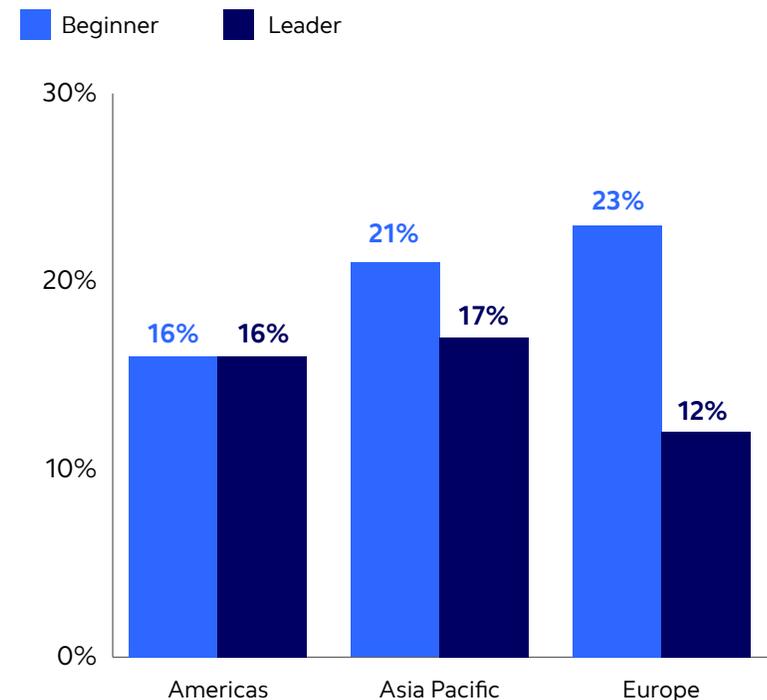


Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 3

# AI deployment is strong in specific areas

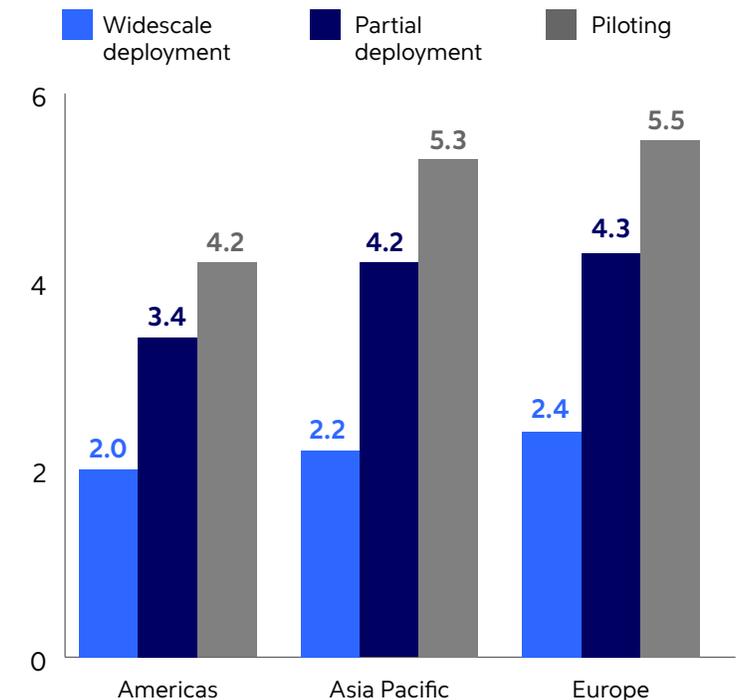
When it comes to wide-scale deployment of AI projects, APAC is keeping pace with the rest of the world. Companies here also have a large number of projects in progress, indicating that the region has a strong foundation upon which to further improve its AI efforts. The region displays high interest in machine learning (ML), and is slightly behind peers in the Americas when it comes to RPA and digital assistants. Overall, Japan has a greater share of AI leaders (24%) in the region, while China stands at 12%. Chinese organisations face deep-rooted challenges, including a [severe lack of AI talent](#); widespread [cybercriminal activity](#); regulatory obstacles; and centralised business management, which can slow innovation and scaling of AI. On the other hand, [lax privacy regulations](#) in the country allow Chinese businesses access to large data pools that can be used to train the next generation of algorithms.

## % beginners and leaders by region



Response base: 1,200  
Source: ESI ThoughtLab/Cognizant  
Figure 4

## Average number of projects in place



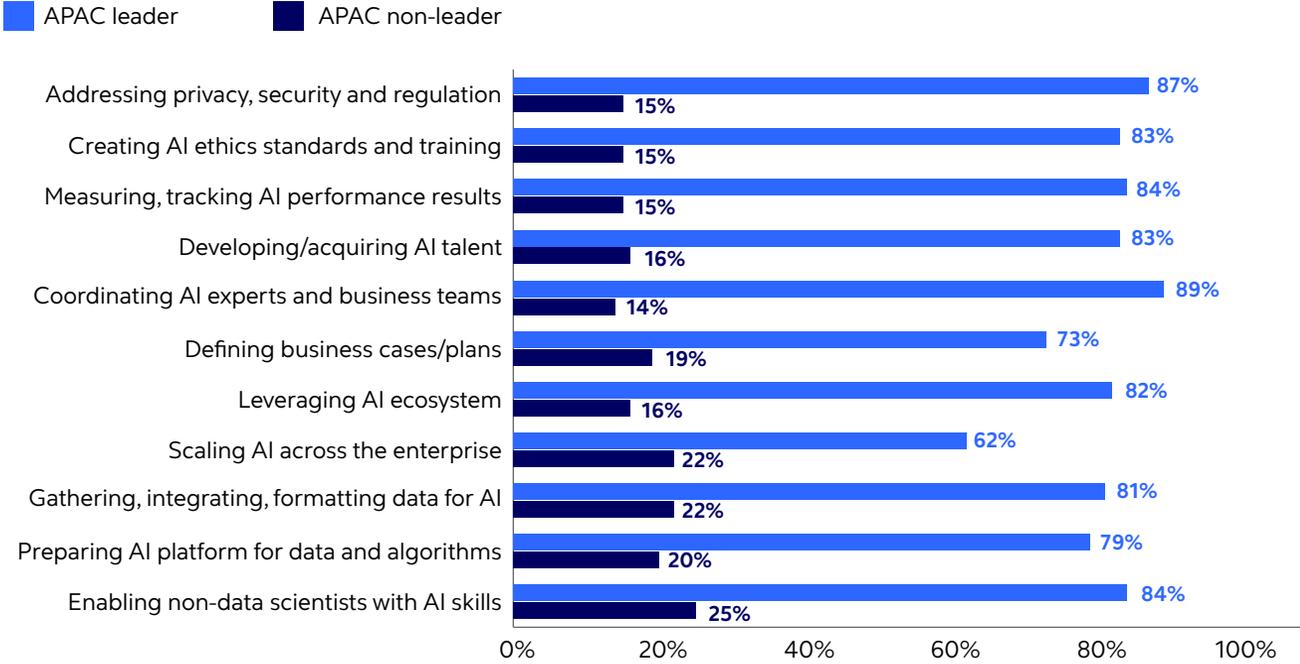
Response base: 1,200  
Source: ESI ThoughtLab/Cognizant

# Progress is being made along several fronts

APAC’s software expertise has helped businesses in the region take big strides in machine intelligence. AI leaders in the region have been able to make progress in key areas such as preparing platforms for data management, scaling machine intelligence and other people-related areas such as coordinating teams, creating ethics standards and addressing privacy/security concerns. This has resulted in a shortage of talent that needs to be addressed proactively (see more on page 14 and 15).



## % firms that have largely or fully implemented AI areas



Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 5

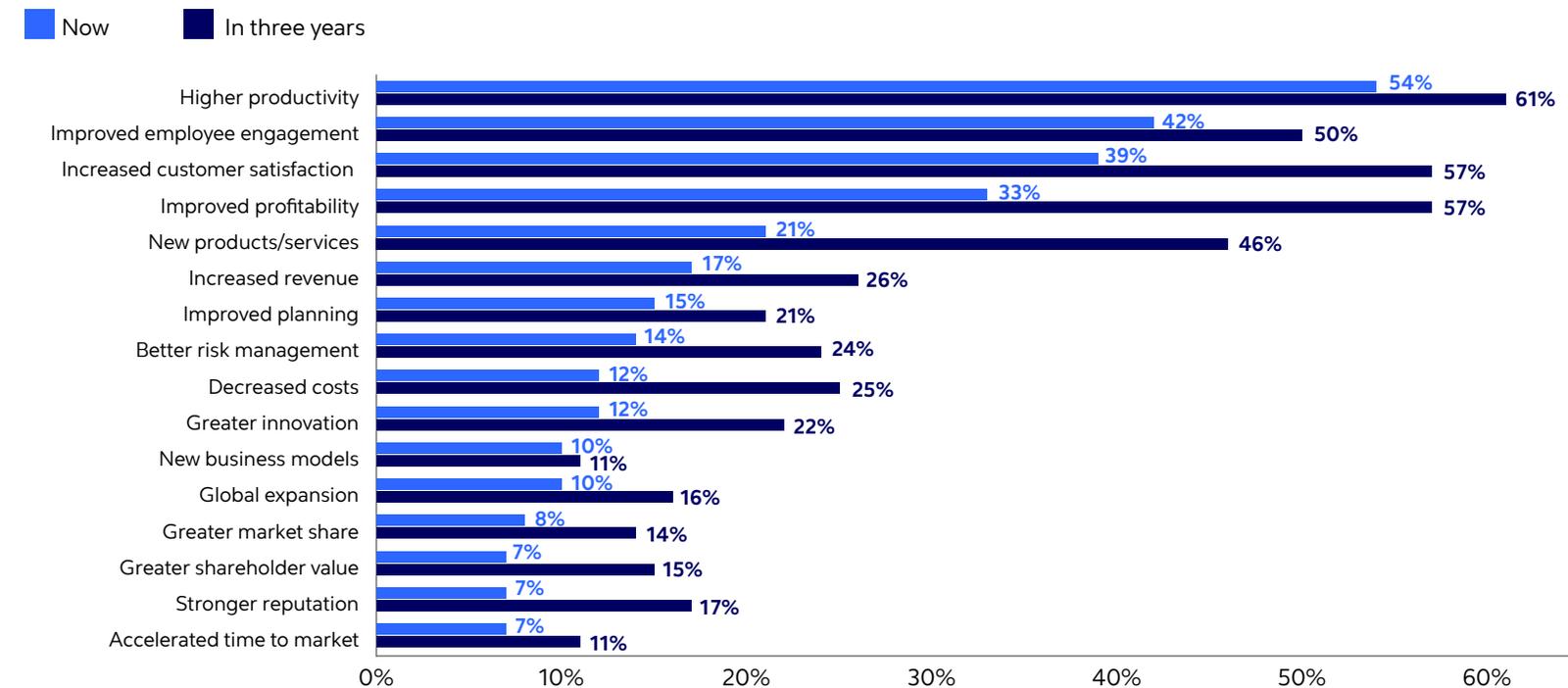
# The rich payoffs



# Productivity, employee engagement and customer satisfaction are the top benefits realised/targeted

AI is delivering strong productivity gains, APAC companies told us. This is critical as it helps address labour and talent shortages in the region. A [2019 Microsoft study](#) found that AI would almost double the rate of worker productivity in APAC by 2021. Combined with a focus on improved employee engagement, APAC companies appear focused on maintaining their initial AI gains. Going forward, new products/ services will emerge as a key area of focus — with 46% seeing it as a key benefit three years down the line.

**% Asian firms seeing value created by AI now and in three years**



Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 6

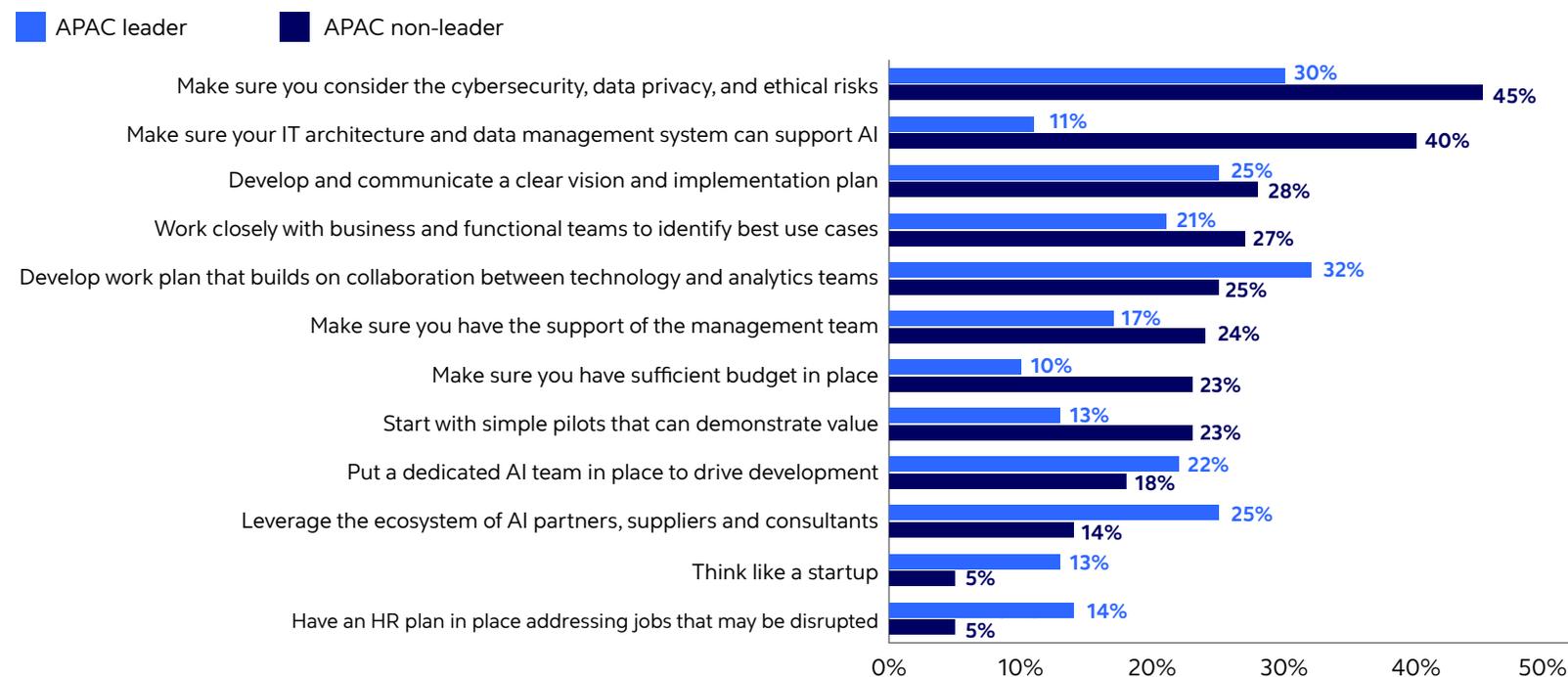
# APAC's AI formula: It's all about making the right moves



# The lessons learned by AI leaders can guide others to greater heights

For AI non-leaders, the experience of their successful peers offers important lessons on how to close the gaps in key areas. Cybersecurity, data privacy and ethical risks are the top considerations in this regard. Beyond this groundwork, the leaders emphasise collaboration between the technology and analytics teams to achieve higher efficiency and communicate a clear vision and implementation plan. CEOs need to ensure that AI budgets are allocated, while chief technology, operations and innovation officers need to prioritise IT infrastructure and data management systems.

## Most important lessons learned in implementing advanced AI

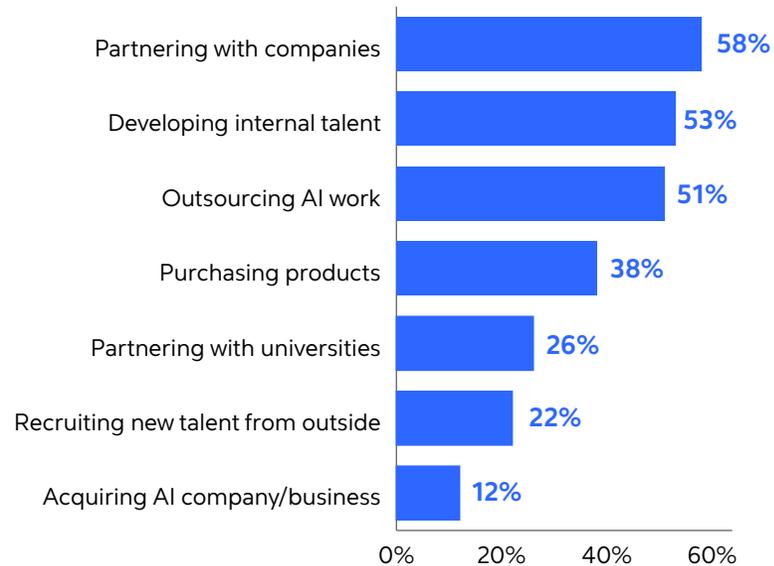


Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 7

# APAC businesses are addressing the talent gap

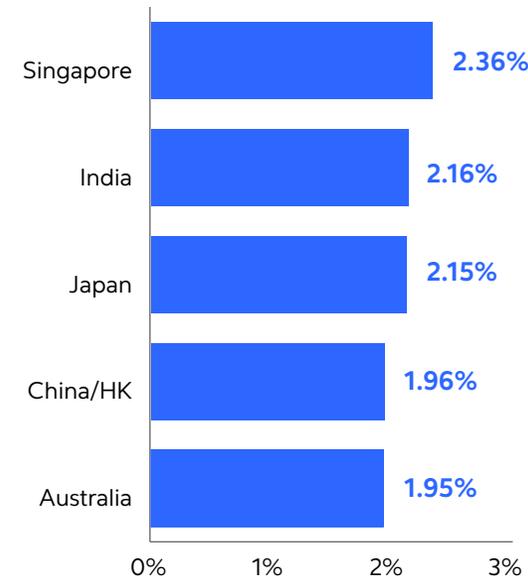
Companies in the region are using a three-pronged approach to address skills shortcomings: through upskilling programmes, partnerships and out-tasking. Companies in the region, especially in Japan, are looking to grow talent internally, rather than through M&A or outsourcing. Singapore has the highest number of AI staff as a percentage of total employees; Australia and China have the fewest. We believe working closely with academic institutions and government policymakers to boost STEM programmes could help companies in these countries to close the talent gap.

## % citing as solutions to develop talent and capabilities



Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 8

## % personnel focused on AI, per country



Response base: 371  
Source: ESI ThoughtLab/Cognizant

# Quick Take: Transforming Insurance Operations With Data Analytics and Talent

We worked with a global insurance provider that wanted to transform business operations using advanced analytics. The first, and probably the biggest, hurdle was talent — they had only one person in their data science team for APAC. We resolved this by deploying almost 30 associates across sites in APAC. The team tackled 47 different use cases in the first six months, working with multiple teams in different countries across a range of customer analytics initiatives. This meant working with thousands of variables and working with incomplete data. The team was able to generate deep customer insights — field trials estimated the impact in the tens of millions of dollars annually. Gradually, as the client ramped up its internal team, we were able to transition almost all of the data science work to them.

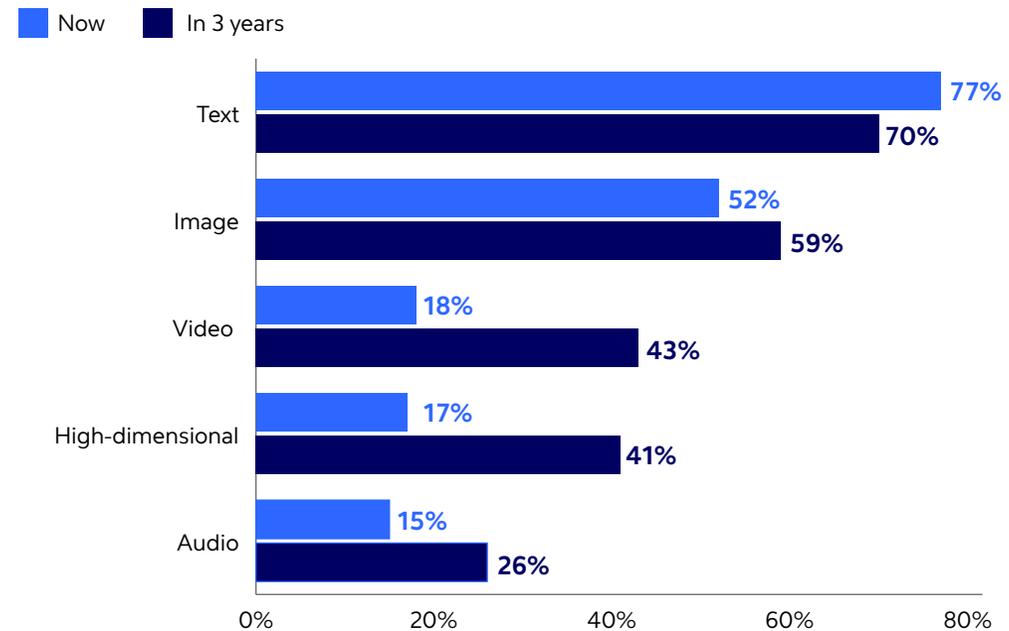
From the talent perspective, one key learning from this was that businesses need different levels of staffing at different stages of the project. When it comes to the talent pipeline, businesses need to ask: Do we want to gradually build the capability in house or can this be accelerated by bringing in external consultants who can then transition the work back in house?

# APAC businesses view a holistic approach to data as business-critical

Their holistic approach to data will help APAC companies progress on the AI front. In the post-COVID era, [this includes](#) more frequent analysis of trends, evaluating and refreshing existing analytics/models more often, and refreshing databases more regularly. While text and images are the most common form of data at present in APAC, video, high-dimensional and audio data are set to grow fastest over the next three years. AI's ability to capture different types of data from images will give data management at APAC organisations across industries an edge. In the long run, this will boost returns from their increasing AI maturity.



## % integrating data sources into AI applications

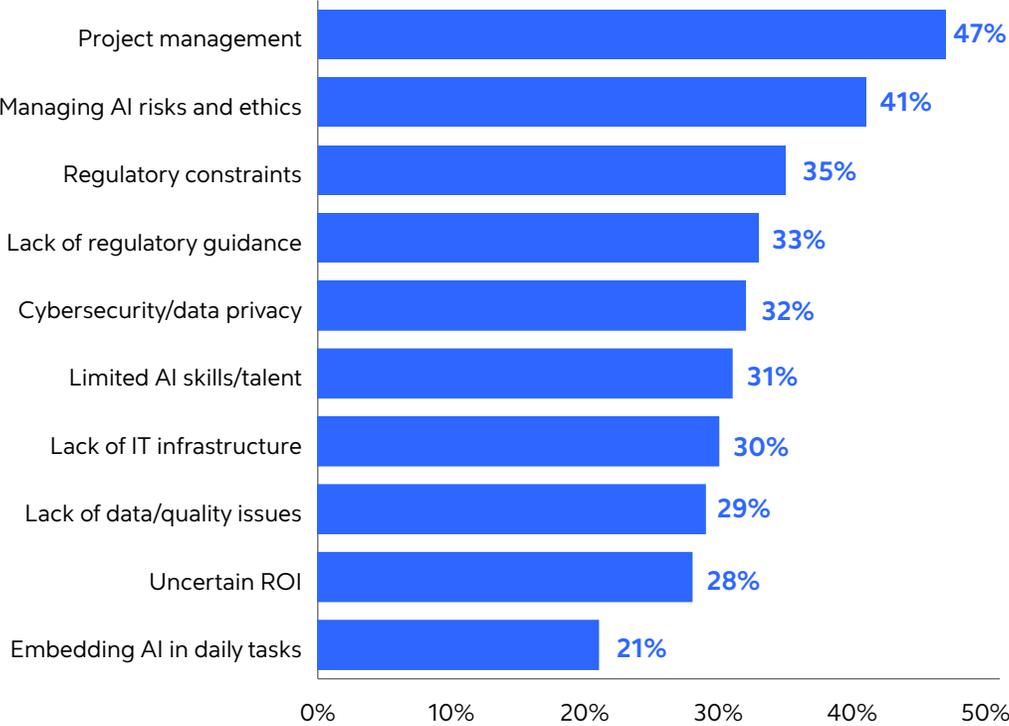


Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 9

# Challenges ahead

# Concerns accompany the AI shift

## Top 10 AI challenges for APAC organisations



Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 10

Concerns associated with the rise of AI, including job losses and privacy concerns, have emerged as the biggest challenge for AI projects in the region. While this concern is not unfounded, its repercussions are certainly overblown. AI is expected to create new jobs over the next 10 years even as repetitive tasks are automated. These jobs will be built around data and how it can be deployed to create new experiences. Some examples include AI-assisted healthcare technicians and personal data brokers. Meanwhile, worries about malicious AI, along with the ethical concerns surrounding potential AI bias and use of facial recognition technology (notably in China), are also rising.



# Quick Take: Streamlining Retail Recommendations With ML for a Consumer Health Company

We recently worked with a major consumer health company that sells its products at over one million outlets across APAC. The company has more than 3,000 sales representatives visiting the outlets but had no systematic way of determining which SKUs should be sold to each outlet. We began by building a recommendation system (using ML), starting with an initial build in one country. Our initial mandate: Resolve data issues and understand local market conditions and strategies. It took approximately six months to get the recommendations live in the first country.

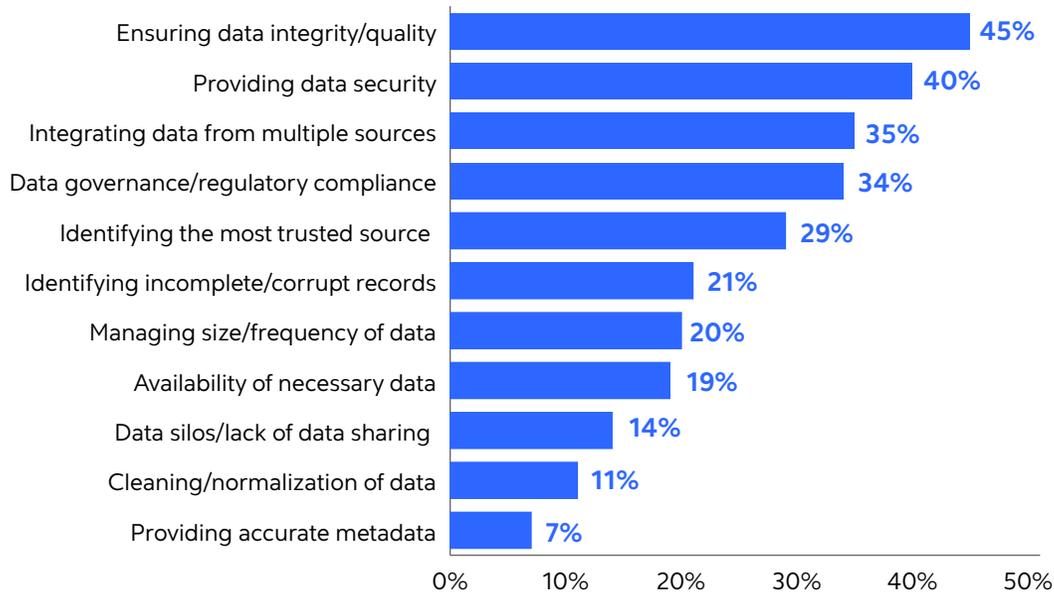
The project had a target of incremental sales to achieve in the first six months (about double the cost of the initial build), and this was achieved in the first two months of rollout. Subsequently, other countries went live in about 10 weeks each. The project measures incremental revenue very conservatively and recently clocked SG \$12 million in total incremental revenue across the region (achieving much greater than 10x return on investment.)

# Data integrity, security and governance threaten progress

Data fundamentals, such as integrity, quality and security, are a bigger concern in APAC than other regions. This could be because existing legacy systems have been unable to keep pace with the rapid rate at which enterprise data has expanded, impacting the mainstreaming of digital technologies. On top of the aforementioned talent shortage, as many as 40% of the companies studied do not have these basics in place. A **heightened pace of digital change** is one of the primary sources of these worries. With a wider variety of data types at their disposal, data and model perishability (ensuring that only the freshest information is applied to historical analysis and forecasting) could emerge as a key challenge.

With a wider variety of data types at their disposal, data and model perishability could emerge as a key challenge.

## % Asian firms citing different types of data challenges

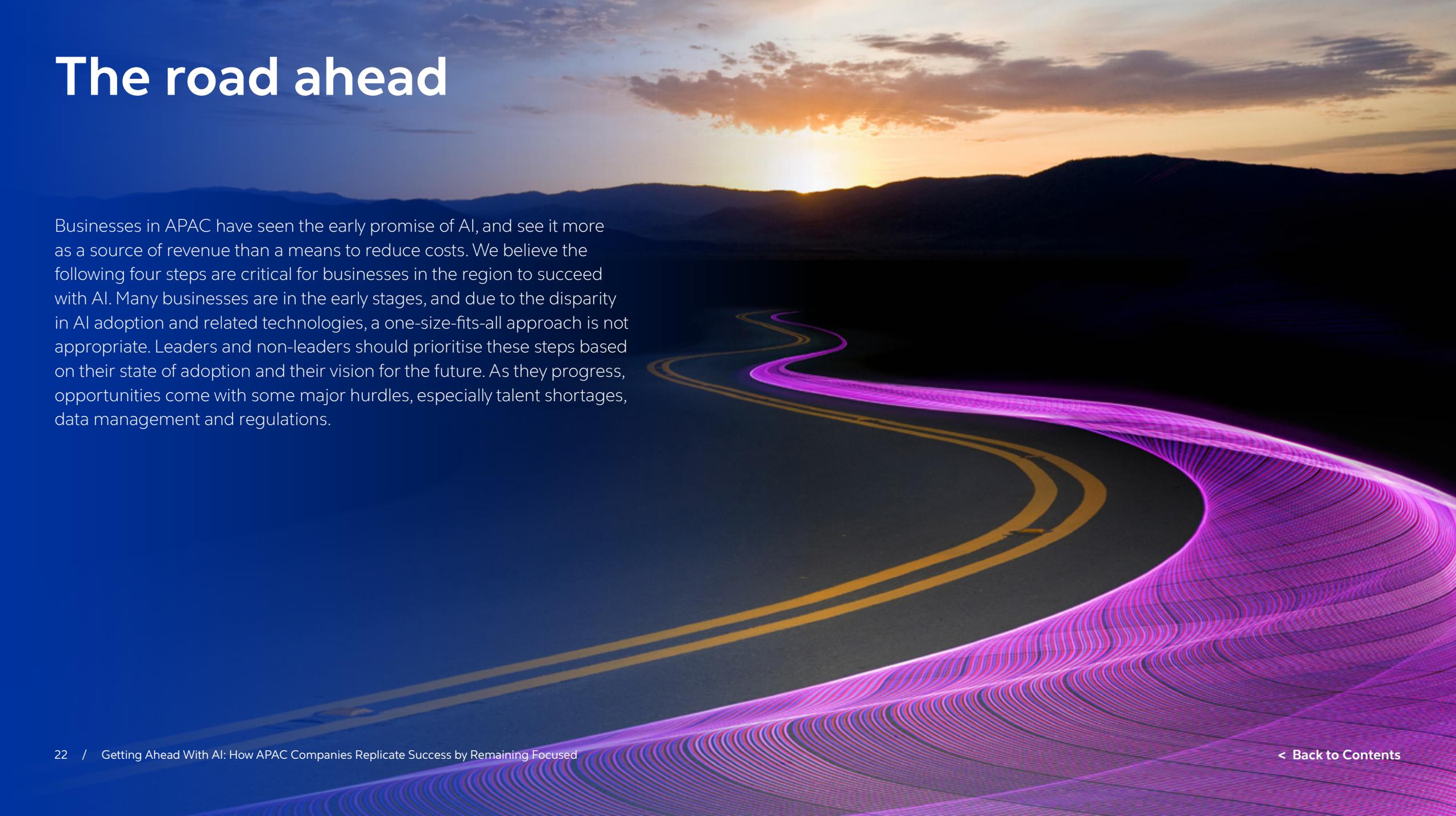


Response base: 371  
Source: ESI ThoughtLab/Cognizant  
Figure 11

Regulations in the region remain a work-in-progress. Countries are developing their own regulations while creating regional cooperation around data sharing and privacy. For example, the [Cross-Border Privacy Rules \(CBPR\)](#), a framework for setting and raising privacy standards created by Asia-Pacific Economic Cooperation (APEC), is being rolled out across member countries. Elsewhere, regulatory requirements such as “[explainability](#)” in the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) — which require businesses to explain how an algorithm arrived at its conclusions — could create compliance complexities for APAC companies. Growing data privacy and cybersecurity regulations in the region are a step in the right direction. However, if these regulations are not developed in a harmonised fashion, it could create compliance complexities for companies operating across borders.



# The road ahead

A landscape with a sunset over mountains. A road with yellow double lines curves through the scene. A second, futuristic road made of many thin, glowing purple lines branches off from the asphalt road, curving towards the right. The sky is filled with soft, colorful clouds from the setting sun.

Businesses in APAC have seen the early promise of AI, and see it more as a source of revenue than a means to reduce costs. We believe the following four steps are critical for businesses in the region to succeed with AI. Many businesses are in the early stages, and due to the disparity in AI adoption and related technologies, a one-size-fits-all approach is not appropriate. Leaders and non-leaders should prioritise these steps based on their state of adoption and their vision for the future. As they progress, opportunities come with some major hurdles, especially talent shortages, data management and regulations.



## 01 Start small; leave nothing untouched

Going hard, fast, and small right at the outset has helped businesses in the region by allowing them to keep things simple while delivering value. (See Quick Take, page 19.) But the transformational effects of AI will be truly experienced when it has a pervasive, ubiquitous presence across enterprise work. This means identifying multiple uses cases and delivering on those that generate value. As 27% of non-leaders told us, working closely with business and functional teams to identify use cases was among their key learnings so far. AI leaders in the region know this. Their implementation rates are six-to-seven times that of non-leaders in some areas. They have also prioritised collaboration and are leveraging their ecosystem of AI partners and suppliers.

Non-leaders and beginners can emulate these practices and include AI at the core of their business. The ability to scale AI models will separate winners from losers in the coming years, but for many now is the time to shift gears to higher value projects.



## 02 Best balance of human and machine = win

As automation takes off, so will human-machine interaction. Businesses, especially those in traditional industries, need to be prepared to strike a balance between the two. Integrating machines with existing processes requires leaders to understand how work is going to be impacted, what it will look like and how they will support the transition. (See Quick Take, page 15.) Not surprisingly, 84% of AI leaders in APAC said they focused on enabling non-data scientists with AI skills. Building employee skills in line with AI advancements will be necessary for businesses to win in the future. To this end, we believe businesses can focus on the **5Ts which form the key elements of human-machine interaction**: tasks, teams, talent, technology and trust. As work gets reimaged and productivity increases, retaining and attracting the right people and building trust between humans and machine will be critical in an AI-talent-deprived world.



### 03 Explore new value models

While productivity gains from targeted projects are often quick, businesses in the region need to broaden the scope of their use cases across the enterprise. Companies in APAC are looking at automated and semiautomated decision-making where routine decisions will be informed by AI, resulting from very narrow, focused use cases. Compared to this, globally, we found that 25% of leaders were prioritising improved decision-making, compared to just 16% of non-leaders. In the post-pandemic world, this improved capability will further separate leaders from the rest of the pack. Businesses in APAC should create new value models based around data-enhanced products and services.



### 04 Data modernisation as a continuous loop

Data remains the region's biggest challenge by far. We believe AI maturity goes hand-in-hand with data modernization — and even more so in the post-COVID-19 world where the **shelf-life of data is very short**. However, just over one-third of APAC organisations are maturing or advanced in the basics of data management, and even fewer in RPA and digital assistants. Strengthening of data fundamentals will be critical to close this gap and allow businesses to begin a virtuous data modernisation loop based around keeping data and analytical models fresh. Proliferation of data types that can deliver greater insights (images and videos) can drive enhancements in products and services leading to improved customer satisfaction.

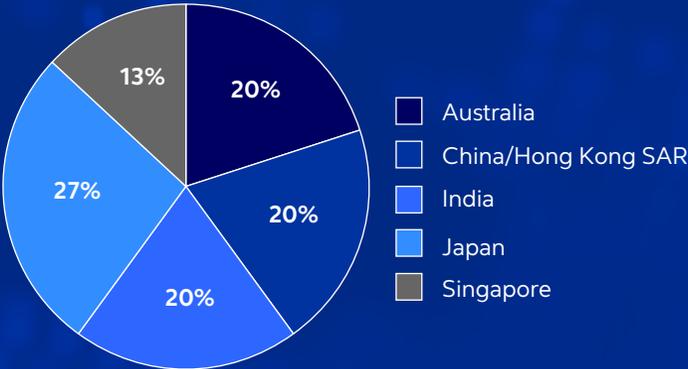
# Methodology

To understand how companies use AI and how it can help to drive growth and performance, ESI ThoughtLab conducted a comprehensive benchmarking survey in 2020 of executives at 1,200 companies across 12 industries and 15 countries. Of the sample, 31% of respondents were from the Asia-Pacific companies.

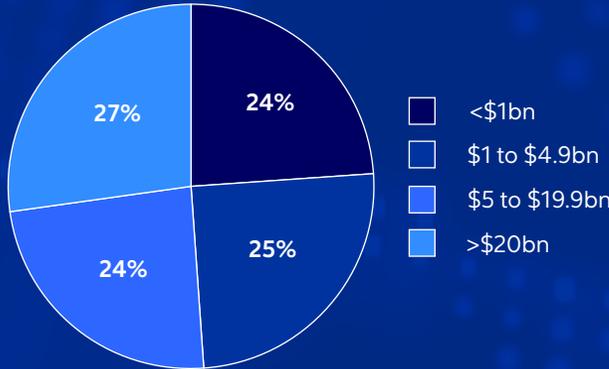
Respondents reported superior or excellent knowledge of the use of AI in their organisations. A full 84% in APAC were C-level executives, and the rest reported into the C-suite. The average revenue for the Asian firms was \$14.1bn.

The survey examined AI investments, plans, practices and performance results at a wide array of firms. It included questions to allow ESI ThoughtLab economists to develop a robust AI maturity framework, analyse performance results and benchmark practices.

**Asia-Pacific respondents by country**



**Asia-Pacific respondents by revenue size**



## About the authors



### Michael Camarri

**Head, Cognizant Data Science Team, APAC**

Michael Camarri leads Cognizant's Data Science Team across the APAC region and has 22 years of experience consulting in data science

(a.k.a., decision science). At marketRx (which Cognizant acquired in 2007), Michael developed and designed the mathematics, consulting processes and tools that enabled the company to grow from six employees to over 500 in seven years. Michael has had a number of global roles at Cognizant, focusing on building repeatable analytical processes for major global corporations across a wide range of industries. He is currently based in Melbourne and has a PhD in statistics from the University of California, Berkeley, and an honours degree in pure mathematics, statistics and computer science from the University of Western Australia. He can be reached at [Michael.Camarri@cognizant.com](mailto:Michael.Camarri@cognizant.com) | [www.linkedin.com/in/michael-camarri/](http://www.linkedin.com/in/michael-camarri/).



### Jeff Olson

**Associate Vice President — Projects, Artificial Intelligence & Analytics Practice, Cognizant Digital Business & Technology**

Jeff Olson leads the Applied AI and Analytics Practice

for Cognizant Australia. In this role, he creates business value for organizations using our human-centered, agile approach to deliver superior customer experiences, more intelligent products and smarter business operations in the shortest amount of time. Prior to joining Cognizant, Jeff was head of big data and analytics for Oracle, head of business intelligence at IAG and Executive Director, IT industry, at Ernst & Young. Jeff has a BA in management from St. John's University in New York. He can be reached at [Jeff.Olson@cognizant.com](mailto:Jeff.Olson@cognizant.com) | [www.linkedin.com/in/jeffrey-c-olson/](http://www.linkedin.com/in/jeffrey-c-olson/).



### Newton Smith

**Digital Business Leader, Asia Pacific, Cognizant**

Newton Smith is our Cognizant Digital Business Leader for Asia Pacific. He is a leader in helping transform companies through the implementation of

digital strategies across all aspects of the digital spectrum, in particular, experience design, software engineering, data and analytics. Newton has over 20 years of sustained and proven success delivering high-value consulting and technology engagements across multiple industries developing innovative solutions; leading large and diverse teams; and closing multimillion-dollar deals. He has a strong international background with both regional and global companies, including the last 12 years working in Asia. Prior to joining Cognizant, Newton has held roles in Asia Pacific Digital, IBM, PricewaterhouseCoopers and Optus Communications. He can be reached at [Newton.Smith@cognizant.com](mailto:Newton.Smith@cognizant.com) | [www.linkedin.com/in/newtonsmith/](http://www.linkedin.com/in/newtonsmith/).

## Acknowledgments

*The authors would like to thank Kaustubh Laturkar, Service Line Sales Manager, India, as well as Rajeshwer Chigullapalli and Akhil Tandulwadikar from Cognizant's Global Thought Leadership team, for their valuable contributions to this e-book.*

# Learn More

For more information,  
visit [www.cognizant.com](http://www.cognizant.com)

## About Cognizant's Artificial Intelligence Practice

As part of Cognizant Digital Business & Technology, Cognizant's Artificial Intelligence Practice provides advanced data collection and management expertise, as well as artificial intelligence and analytics capabilities that help clients create highly personalized digital experiences, products and services at every touch point of the customer journey. Our AI solutions glean insights from data to inform decision-making, improve operations efficiencies and reduce costs. We apply Evolutionary AI, Conversational AI and decision support solutions built on machine learning, deep learning and advanced analytics techniques to help our clients optimize their business/IT strategy, identify new growth areas and outperform the competition. To learn more, visit us at [www.cognizant.com/ai](http://www.cognizant.com/ai).

## About Cognizant

Cognizant (Nasdaq-100: CTSI) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 194 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at [www.cognizant.com](http://www.cognizant.com) or follow us [@Cognizant](https://twitter.com/Cognizant).



### World Headquarters

300 Frank W. Burr Blvd. Suite 600  
Teaneck, NJ 07666 USA  
Phone: +1 201 801 0233  
Fax: +1 201 801 0243  
Toll Free: +1 888 937 3277

### European Headquarters

1 Kingdom Street  
Paddington Central  
London W2 6BD England  
Phone: +44 (0) 20 7297 7600  
Fax: +44 (0) 20 7121 0102

### India Operations Headquarters

#5/535 Old Mahabalipuram Road  
Okkiyam Pettai, Thoraipakkam  
Chennai, 600 096 India  
Phone: +91 (0) 44 4209 6000  
Fax: +91 (0) 44 4209 6060

### APAC Headquarters

1 Changi Business Park Crescent,  
Plaza 8@CBP # 07-04/05/06,  
Tower A, Singapore 486025  
Phone: + 65 6812 4051  
Fax: + 65 6324 4051

### Australian Headquarters

Level 37, International Tower Two,  
200 Barangaroo Avenue,  
Barangaroo, Sydney NSW 2000  
Phone: +61 2 9223 3988