

STRICTLY UNDER EMBARGO UNTIL 15 MARCH 2018

AUSTRALIAN BUSINESS IN ASEAN

S U R V E Y 2 0 1 8

ASEAN - AUSTRALIA SPECIAL SUMMIT EDITION



**AustCham
ASEAN**

Australia-ASEAN Chamber of Commerce

A MESSAGE FROM

Minister for Trade, Tourism and Investment

ASEAN embodies opportunity. It is a region that is experiencing unprecedented economic growth, innovation and progress. From the financial powerhouse of Singapore, to the rapidly emerging markets such as Indonesia and Vietnam – ASEAN is a diverse and exciting regional economy.

Five of Australia's top fifteen bilateral trading relationships are with Southeast Asian countries, and trade between Australia and ASEAN amounted to almost \$100 billion in 2016.

Meanwhile, two-way investment between Australia and ASEAN was \$224.4 billion – greater than the two-way investment between Australia and China.

More than 12,000 Australian businesses already export to ASEAN, which remains the major source of revenue for our small and medium-sized exporters.

Over 1.3 million people from ASEAN took holidays, did business, studied or worked in Australia in the past year.

The Turnbull Coalition Government is strengthening Australia's trade and investment relationship with ASEAN. Our existing free trade agreements with the region deliver our businesses a competitive edge. Looking forward, the Regional Comprehensive Economic Partnership Agreement and a future bilateral trade agreement with Indonesia will better enable Australian business to pursue new commercial opportunities in South East Asia.

The region's economic growth is expected to outpace the global average over the next decade, which is set to make ASEAN equivalent to the world's fourth largest economy by 2030. By then, the size of the region's middle class is set to grow to 334 million people. They will live healthier and longer lives, enjoy more spending power and they will be digitally connected like never before. They will be living in large cities, hungry to build

infrastructure. Australia is well-placed to be a partner of choice for ASEAN on this journey.

I am pleased that 87 per cent of Australian businesses surveyed plan to increase their trade and investment in ASEAN over the next five years. These businesses can see the benefits of serving the region's growing consumer class, ASEAN's focus on economic integration, and region-wide advances in infrastructure.

The Turnbull Coalition Government is proud to support this Survey by the Australia-ASEAN Chamber of Commerce and its release during the historic 2018 ASEAN-Australia Special Summit. The Survey is an example of leadership from Australia's business community to identify and pursue new trade and investment opportunities across the ASEAN region. The Summit reinforces our Strategic Partnership with ASEAN as we advance shared interests. It demonstrates Australia's elevated commitment to ASEAN and our enduring ties with the countries of Southeast Asia. Lifting our trade and commercial links is fundamental to our mutual success and this Survey helps drive that momentum forward.

**THE HON STEVEN CIOBO MP
MINISTER FOR TRADE, TOURISM AND
INVESTMENT**

THE ASEAN OPPORTUNITY FOR AUSTRALIAN BUSINESSES

ASEAN is emerging as a key market for Australian exporters. Due to strong demand growth, rising standards of living and sizable infrastructure deficit, the potential for Australia-ASEAN trade and investment is expected to exceed USD210 billion by 2025.

THE NEW FACTORY OF ASIA

ASEAN's many competitive advantages such as its large, young workforce and strategic location make the region an attractive production base. This combined with productivity improvements, labour force expansion, increased regional trade fragmentation and production synergies across ASEAN member countries will continue to drive ASEAN growth.

THE WORLD'S NEW MIDDLE-CLASS

By 2030, over half of the 650 million people in Southeast Asia will be under the age of 30, many of whom are expected to be part of an emerging middle class with high rates of consumption. This is expected to increase demand for higher quality food and beverages, tourism, education, energy and hard commodities.

GOLDEN INFRASTRUCTURE OPPORTUNITY

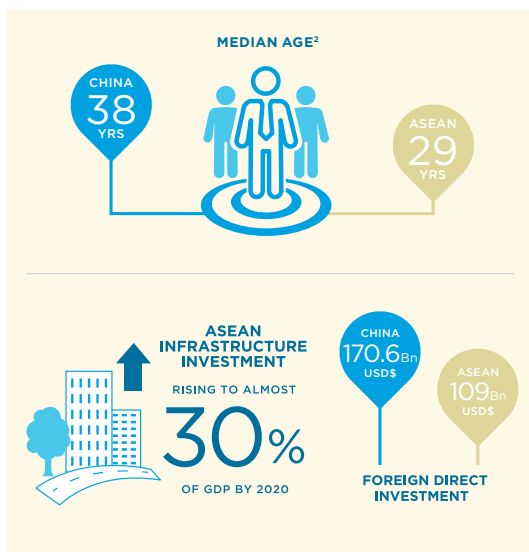
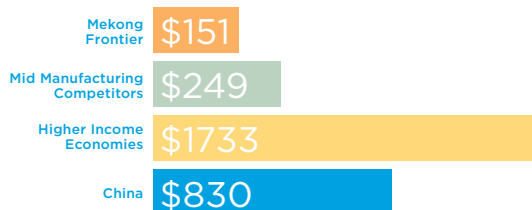
According to the Asian Development Bank, ASEAN's infrastructure needs from 2016 to 2030 is estimated to total up to USD2.8 trillion. This works out to be an annual investment need of USD184 billion. At the current pace, public investments can bridge only 40% of the shortfall. Intra-regional cooperation and more participation from the private sector will be essential to closing this gap.

HELPING YOUR BUSINESS GROW

With a presence in 34 markets worldwide, including 15 Asian markets, ANZ supports businesses in more markets than any other Australian bank - including key trading destinations such as New Zealand, Singapore, Hong Kong and China. We are dedicated to helping businesses grow internationally. Visit betradeready.anz.com to learn more about our global capabilities.

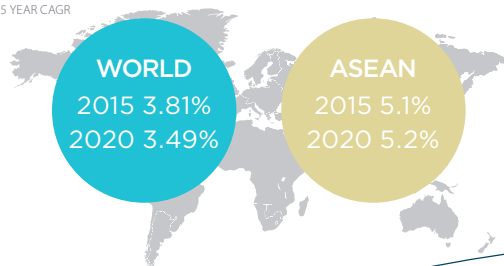
ASEAN: COMPETITIVE LABOUR COSTS¹

(Average Monthly Salary - USD)



GDP GROWTH³

5 YEAR CAGR



¹ Source: International Labour Organisation.
Note: For Myanmar, date for average monthly salary is not available.

² Source: UNPOP

³ Source: IMF - World Economic Outlook

A MESSAGE FROM

The Australian Ambassador to ASEAN

When Australian business succeeds in Asia, so does our country. More than the income they generate and the vital jobs they create, their products and services represent Australia to the region.

They are showing the region's consumers and their business partners that Australia is playing an important role in ASEAN's economic success story.

AustCham ASEAN's 2018 business survey doesn't only reflect the views of Australian businesses, it targets new opportunities to deepen collaboration.

Coinciding with the first ASEAN-Australia Special Summit, the survey comes at a historic moment in Australia's engagement with Southeast Asia.

The Special Summit is an opportunity to further strengthen Australia's partnership with ASEAN, unlock new opportunities for trade and investment, and address common security challenges.

ASEAN and Australia share a commitment to peace and prosperity. ASEAN's objectives of building trust, promoting cooperation and supporting inclusive economic growth are good for the region, and good for Australia.

As a group, ASEAN is one of Australia's top three trading partners, accounting for 14% of Australia's total trade. Australia is ASEAN's 7th largest trading partner. Two-way trade is now more than A\$30 billion greater than it was a decade ago.

The ASEAN region's dynamism complements Australia's. ASEAN's large youthful population, growing middle class, and strong urbanisation point to further growth over the long term.

Meanwhile, whether in logistics, mining services and infrastructure, professional services, quality agricultural

production or digital technology, Australian expertise can serve ASEAN's demand.

Our businesses are supported by a suite of free trade agreements with ASEAN countries to help them make the most of these opportunities.

This year's Australian Business in ASEAN survey reinforces the region's vast economic potential. It shows that Australian firms are bullish on their prospects in ASEAN. The region's growing consumer class and its regional integration agenda are proving attractive. A significant number of respondents say they want to learn more about the ASEAN region.

I commend AustCham ASEAN for their good work on behalf of Australian businesses in ASEAN. After Prime Minister Turnbull officially launched AustCham ASEAN in June last year, I was pleased to participate in panels with business leaders in Singapore, Malaysia and Thailand to discuss opportunities for Australian business in the region.

AustCham ASEAN also hosted roundtables in the lead-up to the ASEAN-Australia Special Summit on the priority themes of agri-business, infrastructure, digital transformation, energy, tourism and aviation. The Special Summit will have a substantial business component including a CEO Forum, SME Conference and Women in Business Breakfast.

This is an impressive record of collaboration. Building on that, the Australian Business in ASEAN Survey 2018 is a valuable resource for understanding the ASEAN business environment. I commend it to all Australian firms and advisers with interests in the region.

H.E. JANE DUKE
AUSTRALIAN AMBASSADOR TO ASEAN



James Cook University (JCU) is Australia's leading university for the tropics. Offering excellence in teaching and research, JCU is a vibrant university operating across two countries and three tropical campuses, with locations in the North Queensland cities of Cairns and Townsville and in the city-state of Singapore.



Top 2% worldwide
The Academic Ranking of World Universities, Shanghai Jiao Tong University, 2017



No.1 in the world for Marine and Freshwater Biology and No. 2 for Biodiversity Conservation
The Centre for World University Rankings 2017



Five stars for graduate outcomes
The Good Universities Guide 2018

Times Higher Education World University Rankings 2018
GLOBAL RANK
201 - 250

In the top 201-250 of the world universities
The Times Higher Education World Rankings 2018



Innovative Research Universities
A member of Innovative Research Universities Australia (IRUA)

To find out more about our Singapore campus, visit www.jcu.edu.sg

f [jcu.singapore.fanpage](https://www.facebook.com/jcu.singapore.fanpage) |  [jcusingaporevideo](https://www.youtube.com/jcusingaporevideo) |  [@jcu_singapore](https://twitter.com/jcu_singapore) |  [jcusingapore](https://www.instagram.com/jcusingapore)

A MESSAGE FROM

AustCham ASEAN

ASEAN is the fifth largest economy and the second largest recipient of Foreign Direct Investment (FDI) in the world. As one of Australia's leading trading partners, the region also plays a significant role for the economy down under and is home to many active Australian businesses. However, there is clearly room to deepen this relationship. This is why the ASEAN-Australia Special Summit in Sydney in March 2018 represents such a significant event. It provides an opportunity for SMEs, large corporations, and government leaders from ASEAN and Australia to discuss how the current collaboration can be accelerated in a practical way.

The Australia-ASEAN Chamber of Commerce (AustCham ASEAN) is proud to be supporting the Summit, which is anchored around five major areas of opportunity for collaboration:

1. Tourism destination development and aviation
2. Preparing for digital transformation and Industry 4.0
3. Agri-food and supply chain logistics
4. Future energy and supply chains
5. Infrastructure

In preparation for the Summit, AustCham ASEAN explored the views of businesses in Australia and ASEAN Member States. It conducted this survey to identify which opportunities and actions business leaders would prioritise to accelerate the Australia-ASEAN collaboration in the five thematic areas. AustCham ASEAN also led several business roundtables across ASEAN Member States to better understand these opportunities.

The results from the survey make for an interesting read. While businesses see broad opportunities for deepening the Australia-ASEAN collaboration in each of these five areas, they also list a number of practical barriers – from information gaps to restrictions on

ownership and service offerings. AustCham ASEAN will continue to work with Australian firms in each of these thematic areas (as well as other relevant areas such as education, health, and finance) to provide better information on emerging business opportunities. AustCham ASEAN will also continue its advocacy efforts with the ASEAN Secretariat to tackle the barriers identified in the survey.

As a member organisation, AustCham ASEAN enjoys strong Australian corporate support to achieve outcomes. To any Australian corporates interested in ASEAN: we encourage you to join us.

We are very thankful for the support from our Gold Business Survey partners ANZ, James Cook University, and the NSW Government, and our Silver Business Survey partner Linfox.

We would like to express our gratitude to our Foundation Members, the ASEAN-based Australian Business Councils and Chambers, as well as the Australia Indonesia Business Council (AIBC), the Australian Chamber of Commerce and Industry (ACCI), the Business Council of Australia (BCA), and the Export Council of Australia (ECA) for their support with the survey.

Finally, we would also like to acknowledge the financial support from the Australia-ASEAN Council (AAC) and the Department of Prime Minister and Cabinet, which enabled AustCham ASEAN to conduct both the survey and the business roundtables.

AustCham ASEAN is looking forward to a robust discussion at the Summit and we hope that this business survey provides participants with substantial data to enhance this discussion.

DR. FRASER THOMPSON
PRESIDENT, AUSTCHAM ASEAN



Supply chain excellence across Asia Pacific

When customers entrust Linfox to manage their supply chain, they understand the importance of protecting their product, brand and reputation. Our total commitment to safety and compliance ensures our customers' ongoing success.

Cutting-edge supply chain technology

Innovative warehousing and distribution services

Experienced people with deep industry and market expertise

AUSTRALIA. NEW ZEALAND. THAILAND. VIETNAM. LAOS. MALAYSIA. INDONESIA. INDIA. CHINA. HONG KONG.

Talk to us about how we can optimise your supply chain.
Visit www.linfox.com/about-us/international-group or call +66 2257 0220.



CONTENT

10 Executive Summary

11 Current Landscape in ASEAN

13 Business Expansion in ASEAN

16 Tourism Destination Development and Aviation

20 Preparing for Digital Transformation and Industry 4.0

24 Agri-food and Supply Chain Logistics

28 Future Energy and Supply Chains

32 Infrastructure

EXECUTIVE SUMMARY

Australian businesses continue to make a strong economic contribution across ASEAN and are generally positive about their ability to prosper in the region. The third iteration of the Australian Business in ASEAN survey reveals that, while challenges remain, many Australian firms continue to enter the region. Encouraged by the tremendous opportunities inherent in ASEAN's emergence, many firms are also actively planning to tap into new markets in the next few years. They can build on the decades of experience the Australian business community has in the region.

ASEAN's business community is diverse. While the professional services sector accounts for the largest proportion of Australian firms in ASEAN, many are also active in manufacturing, travel and hospitality, and education and training. Australian businesses in ASEAN come in all shapes and sizes, but the number of smaller firms is particularly large (41 per cent of firms report annual revenues of less than A\$5 million). At the other end of the spectrum, more than 15 per cent of Australian firms in ASEAN have annual revenues over A\$100 million.

Australian firms are bullish about the region. In the survey, about 87 per cent of Australian firms state they plan to increase their trade and/or investment in ASEAN over the next five years, and 44 per cent say they plan to increase their presence significantly. Compared with the results of our 2016 survey, the share of Australian firms planning to increase their presence significantly has almost doubled.

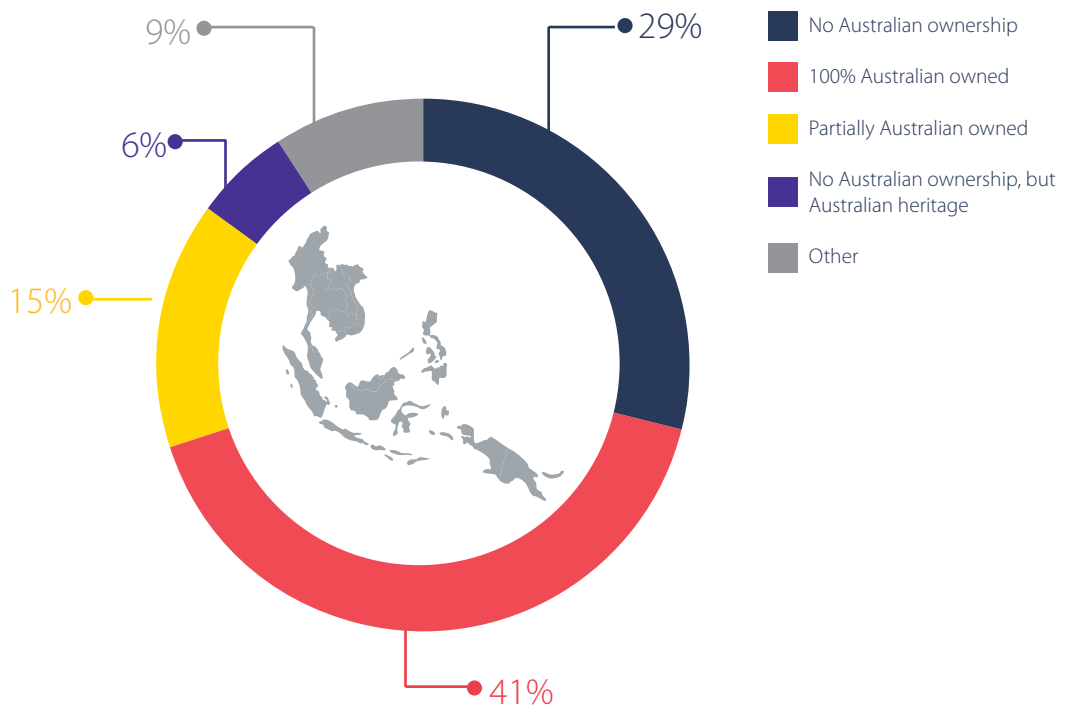
What is attracting Australian firms to ASEAN? The three biggest reasons are the growing consumer class, regional economic integration, and improvements in infrastructure. Still, our survey shows that barriers to business remain. Corruption, restrictions on ownership and investment, and access to skilled labour rank as the top three issues for Australian firms. Many Australian businesses also say they require further information about ASEAN markets, most notably, Vietnam, Myanmar, Malaysia and Thailand. Interestingly, currency volatility – a common concern in the region since the Asian Financial Crisis in the late 1990s – is no longer seen as a major issue, reflecting the growing macroeconomic stability in the region.

The survey unearthed several specific opportunities that Australian and ASEAN businesses consider worth exploring to deepen the collaboration in each of the five thematic areas: (1) Tourism destination development and aviation; (2) Preparing for the digital transformation and Industry 4.0; (3) Agri-food and supply chain logistics; (4) Future energy and supply chains; and (5) Infrastructure. Some hurdles exist that may prevent firms from fully harnessing these opportunities. However, the good news is that surveyed firms have identified practical ways to overcome these hurdles.

CURRENT LANDSCAPE IN ASEAN

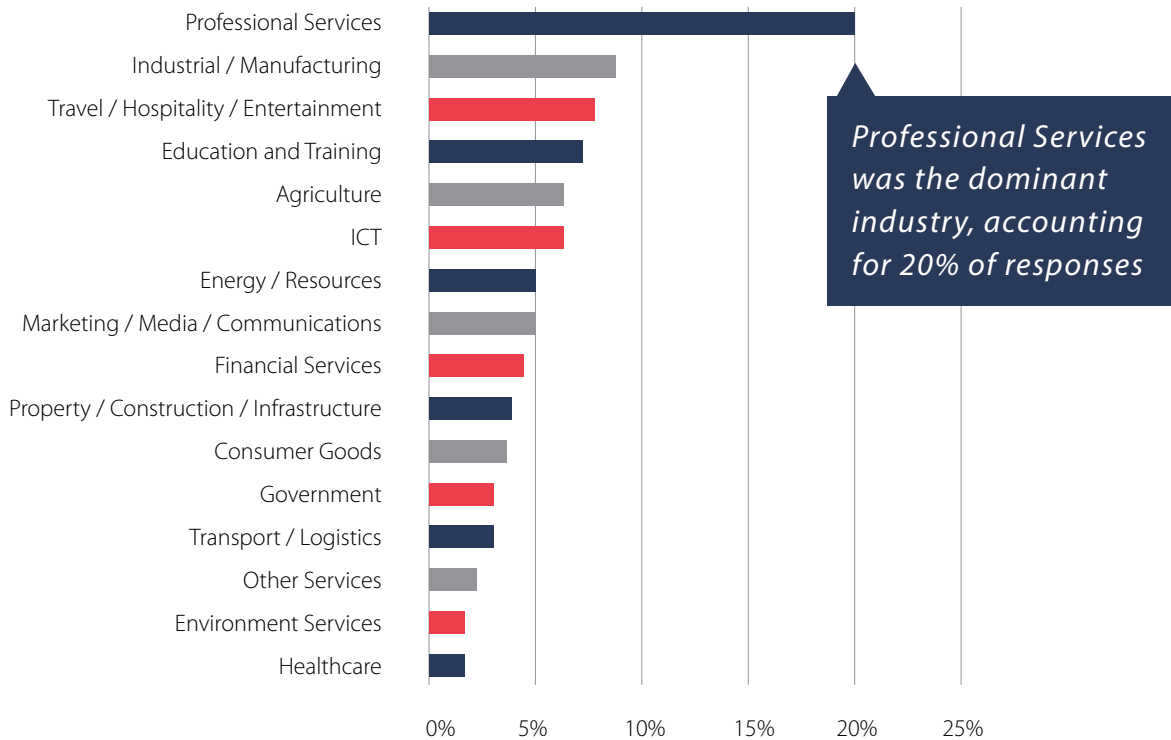
OWNERSHIP

The majority of surveyed businesses have some form of Australian ownership structure. 41 per cent are entirely Australian-owned. Over a quarter (29 per cent) of respondents come from businesses with no current or past Australian ownership.



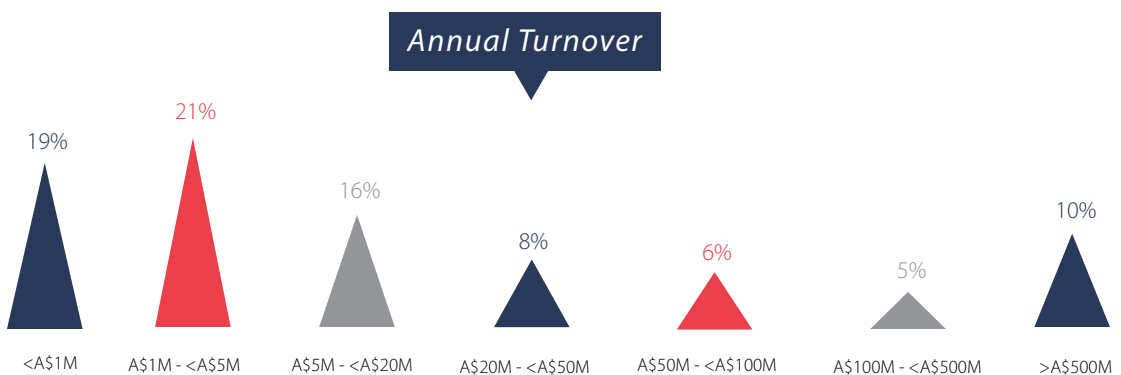
INDUSTRIES OF OPERATIONS

Firms participating in the survey are predominantly from service industries, most commonly from the Professional Services sector (one-fifth of businesses list themselves in that category). A large number of Australian firms surveyed also identify their primary industry of operations as Industrial and Manufacturing, Travel / Hospitality / Entertainment, and Education and Training. 13 per cent of businesses classify themselves as “other”, including research organisations, industry associations, and not-for-profits.



SIZE OF BUSINESS

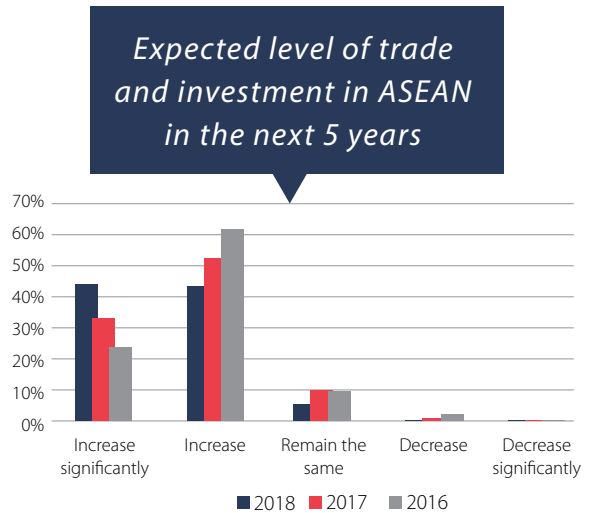
Survey participants represent firms of various sizes. 40 per cent report an annual revenue of less than A\$5 million. Just over 15 per cent report annual revenue of more than A\$100 million.



BUSINESS EXPANSION IN ASEAN

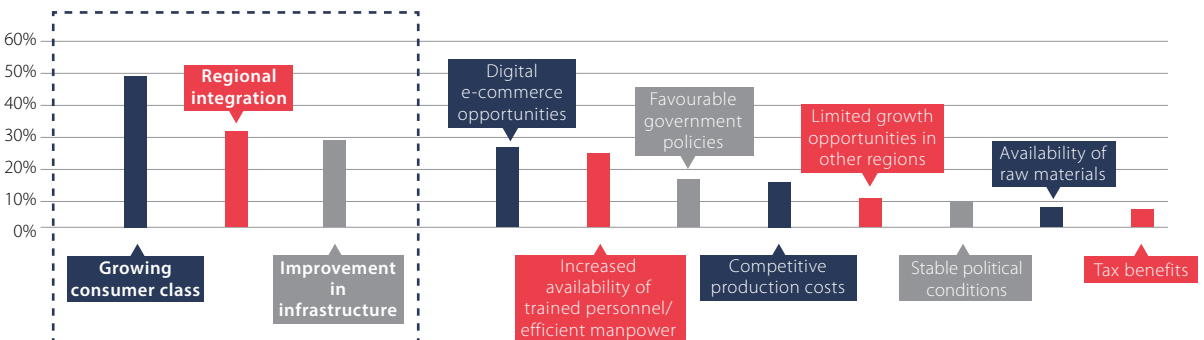
GROWTH PLANS

About 87 per cent of firms surveyed plan to increase their investment and/or trade in the ASEAN region over the next five years, while almost none plan to reduce their presence in the region. Firms are more bullish about expanding in ASEAN than in the past: almost 44 per cent of respondents expect their trade and investment in ASEAN to increase significantly over the next five years, up from 34 per cent in the 2017 survey and almost double the 25 per cent who expected such an increase in 2016.



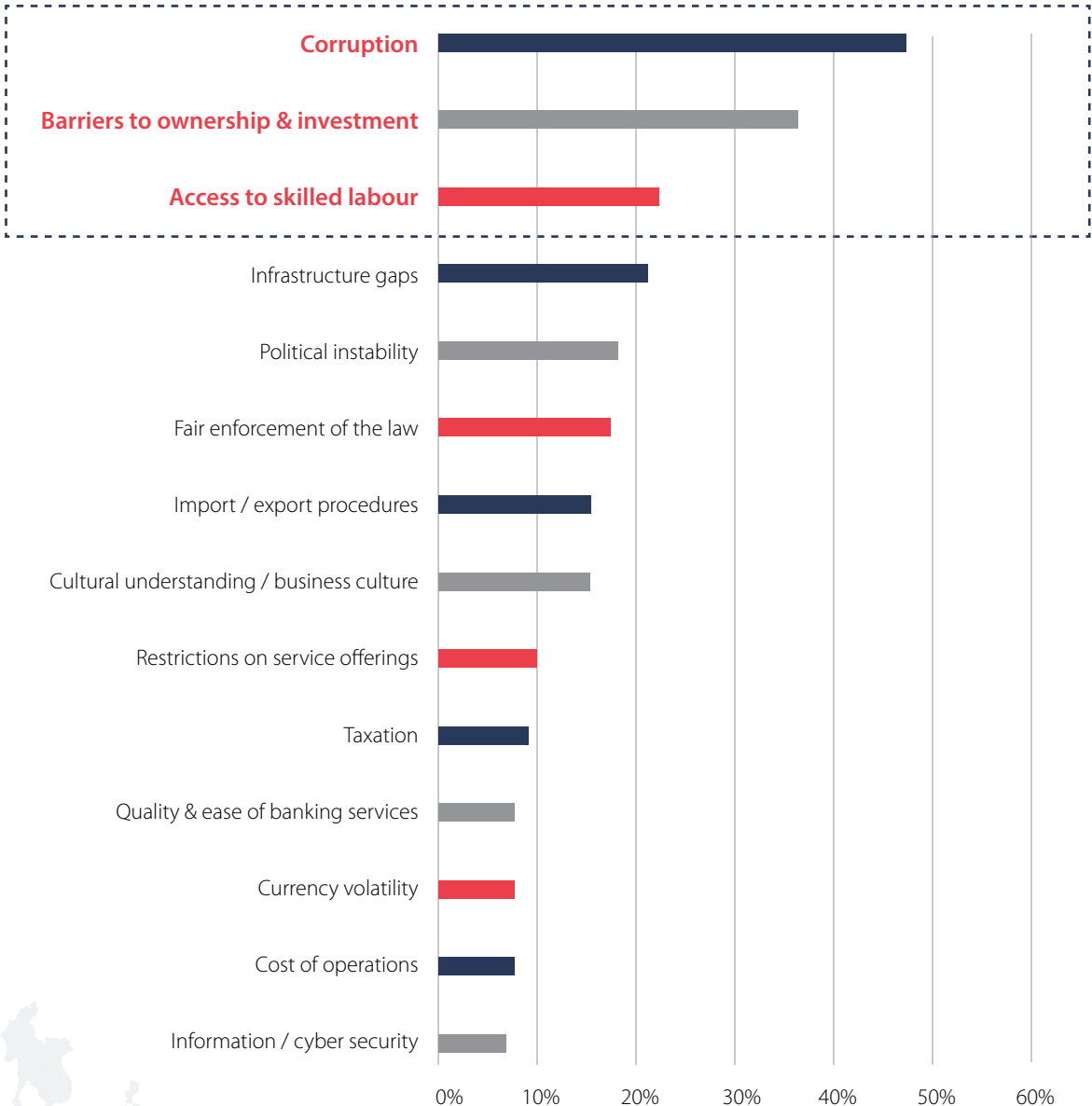
TOP THREE REASONS FOR EXPANDING TRADE AND INVESTMENT IN ASEAN

Respondents were asked to identify up to three main reasons for expanding trade and investment in ASEAN. While favourable demographics and strong economic growth in Southeast Asia are a magnet for foreign direct investment in the region, the prospect of greater ASEAN economic integration is also a significant driver for the strong business desire to invest more in the region. Infrastructure improvements rank as the third major reason for a planned expansion, accounting for almost 30 per cent of responses. E-commerce opportunities, included for the first time in this survey, count for more than one-quarter (27 per cent) of firms as a top-three driver to increase investment in ASEAN.



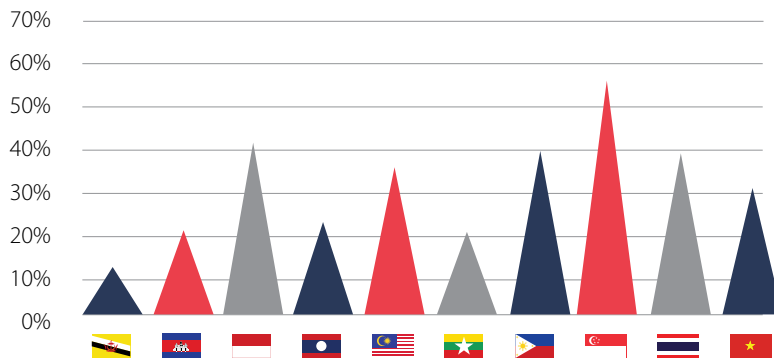
TOP THREE CHALLENGES OF OPERATING IN ASEAN

Like in previous surveys, Australian firms consider corruption, barriers to ownership, and lack of access to skilled labour as the most substantial roadblocks for operating in ASEAN. However, Australian firms in ASEAN seem to be able to find skilled workers more easily than in the past. While more than 40 per cent of businesses in the 2016 survey listed lack of access to skills as one of their top three challenges, the share has dropped to just over half (22 per cent) in this year's survey.

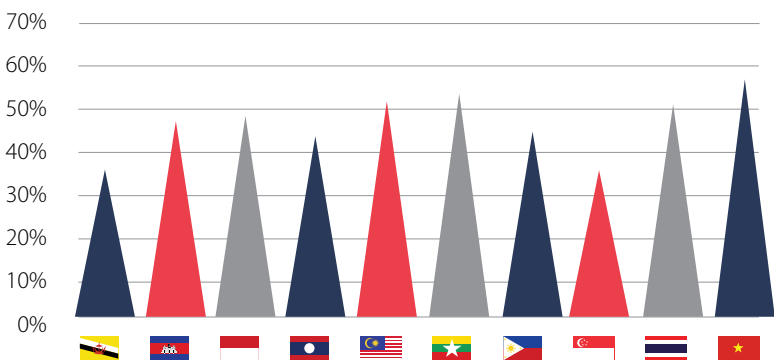


KNOWLEDGE OF ASEAN MARKETS

Australian based survey respondents indicate they are interested in ASEAN markets, but need more information. Key information gaps exist for Vietnam, Myanmar, Malaysia and Thailand. More than 50 per cent of survey respondents state they are interested in these countries, but would require more information before considering any investment or expansion. Not surprisingly, there are differences between firms. Australian firms who are already operating in ASEAN typically feel better informed about ASEAN markets than firms who are not operating in the region. Australia-based survey respondents show the biggest interest and need for information in Malaysia (68 per cent), followed by Vietnam (61 per cent), Thailand (59 per cent), Indonesia (58 per cent), and the Philippines (57 per cent).



Interested but have sufficient information



Interested but need more information

Singapore, Indonesia, Thailand, and Philippines were the markets most familiar to respondents seeking to expand, with a majority of firms interested in learning more about Vietnam, Myanmar, Malaysia, and Thailand.

TOURISM DESTINATION DEVELOPMENT AND AVIATION

THE OPPORTUNITY

Australia and ASEAN countries share a focus on developing world-class tourism capabilities as the industry continues to flourish globally. More and more people are travelling – 2016 was the seventh consecutive year of sustained growth in international tourism – and this trend is increasing the size of the tourism and aviation pie.¹ The rich cultural heritage and natural attractions in ASEAN Member States are significant strengths and suggest considerable potential in tourism.

There is an opportunity for ASEAN countries to attract more tourists from Australia. In 2016, Australians made over 2.5 million trips to the six most popular ASEAN destination countries – Thailand, Vietnam, Indonesia, Malaysia, Philippines, and Singapore.² But Bali alone drew 1.14 million of these tourists.³ And while Australia is one of ASEAN's fastest growing markets for inbound tourists – up 8 per cent over 2010-13 – it accounts for less than 4 per cent of the total.⁴

The growing consumer class in ASEAN and other parts of Asia is set to bolster the regional tourism industry

further. McKinsey Global Institute estimates that Asian tourists will make 525 million trips within the region by 2030, of which 200 million will originate from China alone.⁵ The World Travel and Tourism Council (WTTC) forecasts that the tourism industry in Southeast Asia will almost double to over US\$200 billion in the decade through 2025.⁶

Additional support will come from the gradual removal of visa requirements for ASEAN citizens travelling short term across Member States, and from the entrance of a number of low-cost airlines such as Lion Air, AirAsia, Jetstar, and Tiger Airways.⁷ ASEAN and Australia are now better serviced by air than ever before. More than 64,000 flights per year (or 17 million seats) connected Australian and ASEAN destinations in the fiscal year 2016-17, up from 35,000 flights and 10 million seats a decade earlier.⁸

There is still enormous scope for growth in the aviation market. Strategic tourism network distribution, including increased seat capacity and incentives for travellers to stop off in ASEAN, could potentially result in more

¹ World Tourism Organisation press release, 17 January 2017. Accessed at: <http://www2.unwto.org/press-release/2017-01-17/sustained-growth-international-tourism-despite-challenges>

² Short-Term Resident Departures, Australian Bureau of Statistics.

³ Statistics - Dina Pariwisata, Bali Government Tourism Office.

⁴ Tourist Arrivals in ASEAN by selected partner country region, ASEAN Secretariat.

⁵ Myanmar's moment: Unique opportunities, major challenges, McKinsey Global Institute, June 2013.

⁶ Travel & Tourism Economic Impact 2015: Southeast Asia, World Travel and Tourism Council, 2015.

⁷ The impact of visa facilitation in ASEAN member states, World Travel and Tourism Council, January 2014.

⁸ Aviation Statistics, Bureau of Infrastructure, Transport and Regional Economics, Department of Infrastructure and Regional Development.

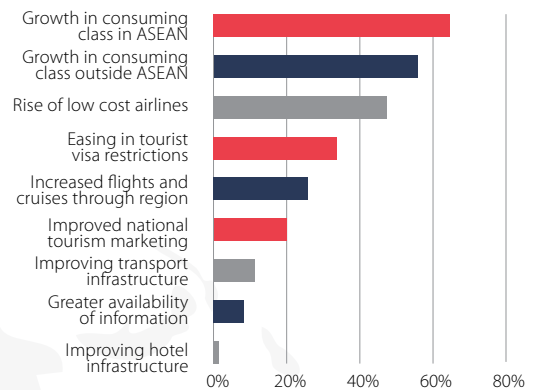
visits to both Australia and ASEAN. Qantas' decision to reinstate Singapore as the stopover on its flagship Sydney-London route is one such example – at least partly in response to Australian traveller preferences. Expanded and modernised regional airports, particularly in Northern Australia, could also increase visitor numbers. As a collective, ASEAN is now Australia's largest source of visitors (1.358 million in 2016-17), just ahead of New Zealand (1.355 million) and China (1.2 million).⁹The bulk of these visitors to Australia came from Singapore (fifth largest visitor source overall), Malaysia (seventh largest) and Indonesia (12th largest).

Businesses surveyed by AustCham ASEAN consider the growing consumer class, both inside ASEAN and in nearby countries, to be the largest driver of tourism potential in ASEAN. Almost half (49 per cent) of all survey respondents also expect the emergence of low cost airlines to fuel tourism growth within ASEAN, while more than a quarter (27 per cent) of respondents see the rising number of flights and cruises as a major driver. Roughly one-third of respondents say the growing ease of travel in response to more relaxed tourist visa restrictions will bolster tourism growth.

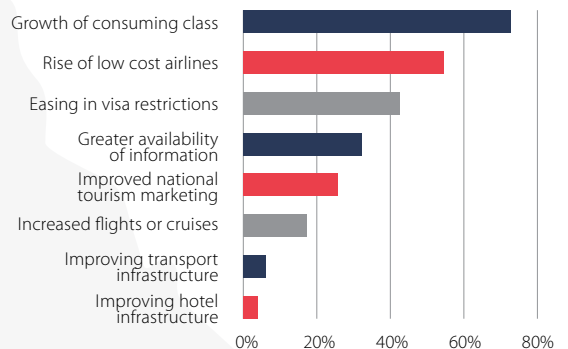
Australia's tourism industry is considered a key beneficiary of the growth in Asia's consumer class, with almost three-quarters (72 per cent) of survey respondents listing this trend as a main driver of outbound ASEAN tourism into Australia. Improvements in the cost and ease of getting to Australia on cheap flights (56 per cent) and as a result of relaxed visa restrictions (42 per cent) are also seen as major factors for ASEAN-related tourism growth in Australia.



What do you consider are the MAIN drivers of tourism growth within ASEAN? (Select up to three responses)



What do you consider are the MAIN drivers of outbound ASEAN tourists coming to Australia? (Select up to three responses)



⁹ Aviation Statistics, Bureau of Infrastructure, Transport and Regional Economics, Department of Infrastructure and Regional Development.

THE CHALLENGES

Under the *ASEAN Tourism Strategic Plan 2016-2025*, ASEAN countries are working to enhance the competitiveness of ASEAN as a single tourism destination. Their goals include creating mutual recognition systems for professionals and developing an ASEAN-wide marketing strategy. Under Tourism 2020, the Australian Government is working to reduce red tape, help develop tourism infrastructure and support coordinated international tourism marketing campaigns.

However, the survey and our roundtable discussions with Australian businesses reveal a number of challenges:

Skills. Large skills gaps persist in ASEAN's tourism industry, even as several programs exist to increase the supply of talented workers, including post-graduate scholarship schemes offered by the Singapore-Myanmar Vocational Training Institute and the ASEAN Tourism Research Association (ATRA). The difficulty of finding skilled workers in tourism is the most pressing issue for businesses in ASEAN: 40 per cent of survey respondents say access to local skilled labour is a major roadblock. Interestingly, no firm identifies access to skilled labour as a challenge in the Australian market.

Infrastructure gaps. With the exception of Singapore and Malaysia, aviation and port infrastructure is largely insufficient in ASEAN. Many of the region's airports are chronically running over capacity, leading to delays and traveller frustrations. Airports also often lack effective rail and highway links, which reduces their utility and efficiency further. For 38 per cent of businesses surveyed, transport infrastructure gaps are a major hurdle to realising ASEAN's tourism potential.

Visas. ASEAN citizens can largely go on short-term travels across the region without needing a visa. Institutions including the World Economic Forum have called for ASEAN to follow the Schengen visa example

in Europe and enable a single tourism visa for access to the entire region.¹⁰ However, accomplishing such an ambitious target will likely take some time. Almost one-quarter of respondents view the cost and complexity of traveller visas as a major barrier to tourism growth in ASEAN. Even more (42 per cent) identify visa issues as a key challenge that could hamper the ability of Australia's tourism industry to attract more travellers from ASEAN.

Foreign ownership restrictions. Almost one-quarter of businesses surveyed say restrictions on foreign direct investment in the hospitality and aviation sectors across ASEAN remain a challenge, even as Member States have already begun to relax these restrictions in recent years.

Gaps in the single aviation market. More than one-fifth of respondents consider the slow progress toward a single aviation market in ASEAN a key challenge for tourism growth in the region. The ASEAN Open Skies agreement, which came into effect in 2015 and intends to increase regional connectivity by creating a single aviation market for ASEAN, is still very much a work in progress. Domestic routes are open only to national carriers. Current regulations force operators to set up separate, partially owned subsidiaries in different ASEAN countries in order to gain access to a local market. Indonesia grants free access for passenger flights to just five cities – Jakarta, Surabaya, Medan, Denpasar, and Makassar.¹¹

While the ASEAN Multilateral Agreement on Air Services and the ASEAN Multilateral Agreement on the Full Liberalisation of Passenger Air Services allow air carriers to serve any international route within ASEAN, they do not apply to domestic routes and have yet to be ratified by all member countries.¹² This is still short of Europe's progress toward an "open skies" model and limits the potential for competition and tourism options in ASEAN.

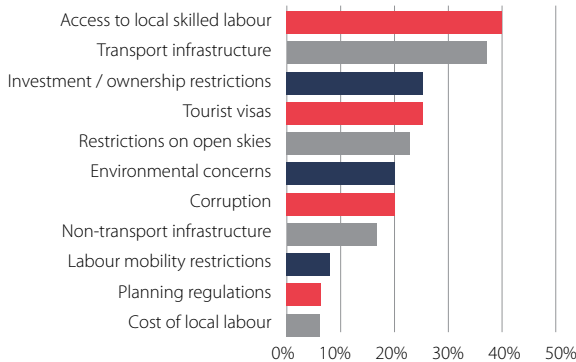
¹⁰ "ASEAN may have 10 nations but it should only have one visa", World Economic Forum, June 2016. Accessed at: <https://www.weforum.org/agenda/2016/06/asean-one-visa-travel-destination>

¹¹ "Blue skies ahead for ASEAN airlines with more flight options, transfers", Strait Times, October 25 2017. Accessed at: <http://www.straitstimes.com/singapore/blue-skies-ahead-for-asean-airlines-with-more-flight-options-transfers>

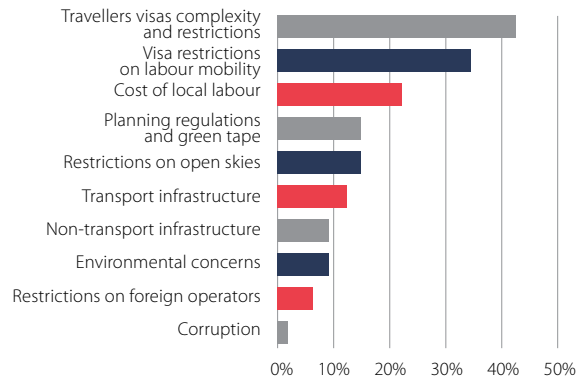
¹² ASEAN 2030: Toward a borderless economic community, Asian Development Bank, July 2014.



What are the major business environment challenges for the tourism sector in ASEAN? (Select up to three responses)



What are the major challenges for Australian tourism capturing the potential from ASEAN outbound tourists? (Select up to three responses)



POTENTIAL ACTIONS TO ADDRESS THE CHALLENGES AND CAPTURE THE OPPORTUNITY

The survey and business roundtables identified some potential actions to help address the most pressing challenges. These include:

Prioritise the development of the ASEAN (tourism) infrastructure project database.

The ASEAN Connectivity Master Plan 2025 has called for the establishment of a comprehensive online database listing all ASEAN infrastructure projects (including ports and airports) and key investor information, such as project size and key contact persons. There is a potential opportunity for Australia to support the development of this database, and to encourage the inclusion of infrastructure projects relevant to the Australian tourism industry.

Address FDI and other restrictions. Tourism operators and related service providers in both Australia and ASEAN stand to benefit from infrastructure improvements, higher destination quality and increased labour mobility – factors that support the growth of the regional tourism and aviation industries. Australia’s Free Trade Agreements offer scope for a closer cooperation on aviation and tourism destination development. For example, the Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA) will

likely help to reduce restrictions on foreign business ownership, which will make it easier for Australians to own businesses in Indonesia and vice versa.

Establish an ASEAN and Australia Cruise network.

Cruises are an area of recent growth and offer largely untapped potential for ASEAN’s tourism industry. More Australians than ever are going on cruises, but few travel to Asia (85,000 people, or less than 10 per cent of all Australian cruise passengers in 2016).¹³ For now, Australians firmly favour the South Pacific. To attract more Australian cruise tourists, ASEAN Tourism Ministers recently committed to turning Southeast Asia into a “vibrant cruising destination”. Several countries are already taking concrete steps by developing ports and streamlining immigration processes.

Create an ASEAN-Australia single visa.

Australia could serve as a pilot country for a single online visa that would allow tourists in ASEAN free travel across the region. Further opportunities exist for Australian tourism authorities to support ASEAN as it develops its tourism website as a source of information on itineraries and (eventually) a single point for applying for tourism visas.

¹³ “Ocean Cruise Passengers, Australia 2016: Cruise Industry Source Market Report”, Cruise Lines International Association Australasia, 2017. Accessed at: <https://cruising.org/docs/default-source/research/australia-market-report-2016.pdf?sfvrsn=0>

PREPARING FOR DIGITAL TRANSFORMATION AND INDUSTRY 4.0

THE OPPORTUNITY

Digital technologies and big data analytics can improve the productivity of businesses. They have also begun to fuel new business models – from retail platforms like Lazada to car-hailing apps like GrabTaxi and Uber – and level the playing field for large and small businesses.

However, there are signs that more can be done to increase Australia's digital competitiveness and learn from other countries.¹⁴ Australia currently ranks 18th out of 139 countries on the World Economic Forum's Networked Readiness Index.¹⁵ Research suggests that digital technology could boost Australia's GDP by an estimated A\$140-A\$250 billion over the 10 years from 2015 to 2025.¹⁶

Digitisation in most ASEAN Member States is advancing rapidly from a low base. The number of internet users in the region grew, on average, at a brisk rate of 16 per cent annually between 2008 and 2013.¹⁷ If the region can put the necessary backbone infrastructure in place, it could harness the power of technology to drive productivity improvements. The low starting point of infrastructure development across the region implies that ASEAN has a larger opportunity for technology-driven growth and "digital leapfrogging" than more developed regions.

For example, most countries across the region have a low penetration of landline phones and fixed-line broadband internet, but they are bypassing interim technology altogether as a growing number of people can now use mobile devices to access the internet. E-commerce is also becoming more widespread, allowing consumers in remote regions with few traditional brick-and-mortar stores to meet their shopping needs. According to the McKinsey Global Institute (MGI), disruptive technologies (particularly mobile internet, big data, cloud technology, the Internet of Things, and the automation of knowledge work) could unleash some US\$220 billion to US\$625 billion in annual economic impact in ASEAN by 2030.¹⁸

Survey respondents suggest that this rapid annual growth in internet users is the main driver of digital innovation potential in ASEAN – a key factor cited by almost half (49 per cent) of respondents. The rise of e-commerce is the second most significant driver of digital potential in ASEAN, cited by 45 per cent of firms. In the Australian market, survey respondents regard the growth in digital adoption (44 per cent) and the availability of affordable digital talent (38 per cent) as the two most important drivers of digital growth and innovation.

¹⁴ Australian Department of Industry, Innovation, and Science statistics.

¹⁵ The Networked Readiness Index 2016, Baller, S et al, World Economic Forum, 2016. Accessed at: http://www3.weforum.org/docs/GITR2016/WEF_GITR_Chapter1.1_2016.pdf

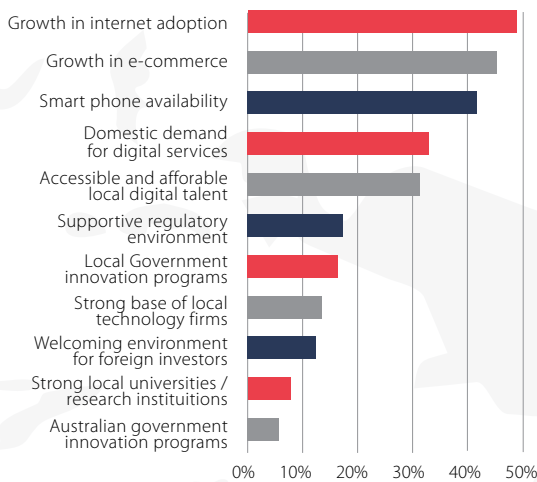
¹⁶ Digital Australia: Seizing opportunities from the Fourth Industrial Revolution, McKinsey & Company, May 2017.

¹⁷ World development indicators, World Bank, 2014.

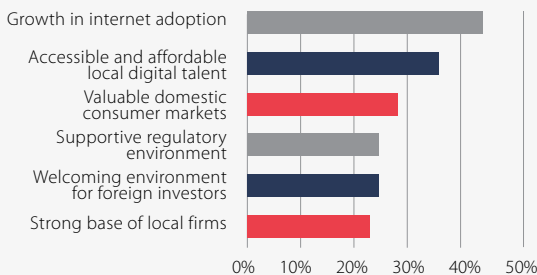
¹⁸ Southeast Asia at the crossroads: Three paths to prosperity, McKinsey Global Institute, November 2014.



What do you consider are the MAIN drivers of digital innovation potential within ASEAN? (Select up to three responses)



What are the MAIN reasons you are excited by the digital innovation potential within Australia?



THE CHALLENGES

Within ASEAN, key challenges for businesses include weak infrastructure, regulatory hurdles around information and communications technology (such as intermediate liability, copyright laws, cross-border data restrictions), and a lack of local talent. In the Australian market, businesses regard the cost of local talent and tax regulation as the two most important barriers.

In the roundtable discussions, participants explored some of these concerns in greater depth, for example:

Limited internet access. Access to broadband infrastructure still varies significantly among ASEAN Member States. It is particularly low in Lao PDR, Cambodia, and Myanmar. Expanding the internet access across the region is a key goal of the ASEAN ICT Master Plan 2020. Almost half of the firms surveyed (48 per cent) say weak ICT infrastructure is a key challenge for effectively capturing the digital opportunity in ASEAN.

Data sharing and online privacy. To capture the full value of big data, the IoT, and cloud technology, a safe and predictable environment for data collection, storage, and usage across business entities and country borders (particularly within ASEAN) is needed. Many ASEAN Member States (and also Australia) have introduced data privacy laws and regulations in recent years to facilitate data sharing, but many areas of uncertainty remain. More clarity is needed around the type of data that can be shared, the boundaries of sharing, and the required consumer consent. Indeed, almost half (47 per cent) of firms surveyed state that ICT regulation is a key emerging challenge in ASEAN.

Low adoption rates by MSMEs. The digitisation of businesses across ASEAN lags that of other countries. For example, only Singapore and Malaysia rank in the

top 50 countries globally in terms of business internet usage, according to the World Economic Forum Networked Readiness Index. Micro and Small and Medium Enterprises (MSMEs) are particularly slow to adopt new technology. While comprehensive figures of technology adoption by MSMEs in ASEAN are not readily available, there is considerable anecdotal evidence for the challenges of MSMEs in taking up new technology. For example, a mere 27 per cent of MSMEs in Malaysia are using ICT, and no more than 5 per cent of MSMEs in Indonesia and Vietnam understand cloud services.¹⁹

Nascent development of open data. ASEAN Member States are at different levels of maturity in terms of data production as well as open data development, which suggests a large potential for growth. A key factor undermining the civil society's access to open data is that Freedom of Information laws are often missing. Gaps in the data quality present further challenges.

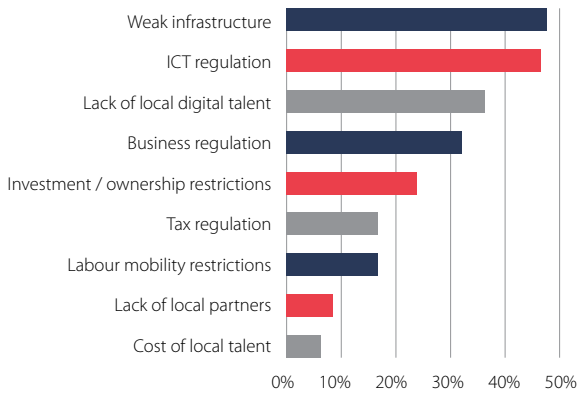
Indonesia, for example, publishes conflicting versions of map and land use data. In Vietnam, varying data collection systems across government agencies and a lack of standards frequently cause inaccuracies in environmental data. In Myanmar, state-level data often contains significant gaps.²⁰

Cybersecurity. The threat from cybercrime is real and growing for consumers and businesses alike. Cybercrime is estimated to cost the global economy some US\$400 billion in annual losses caused by consumer data breaches, financial crimes, market manipulation, and theft of intellectual property.²¹ Countries including Indonesia, Malaysia, the Philippines, and Thailand have already experienced cyberattacks.²² It will be crucial for ASEAN countries to establish governance structures for addressing cybercrime, particularly related to cross-border data.

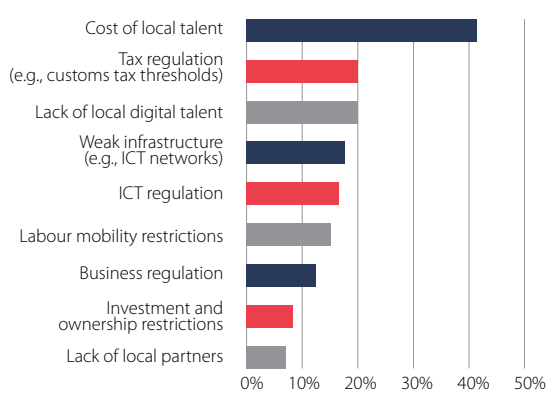
The business survey indicates that capturing the digital opportunity in ASEAN remains a challenge.



What are the major business environment challenges for the digital sector in ASEAN? (Select up to three responses)



What are the major business environment challenges for the digital sector in Australia? (Select up to three responses)



¹⁹ Asia Cloud Computing Association.

²⁰ Open Data Barometer: Third Edition, World Wide Web Foundation, May 2016.

²¹ Net losses: Estimating the global cost of cybercrime, Center for Strategic and International Studies and McAfee, June 2014.

²² Measured by the percentage of PCs that experienced a malware attack, whether successful or failed, over a three-month period. See Security threat report 2013: New platforms and changing threats, Sophos, 2013.

POTENTIAL ACTIONS TO ADDRESS THE CHALLENGES AND CAPTURE THE OPPORTUNITY

According to survey respondents and roundtable participants, the following initiatives could promote the digitisation in ASEAN and Australia:

Create a digital marketplace for Australian and ASEAN SMEs. Firms surveyed see an opportunity to expand the existing ASEAN SME portal to include issues such as business expansion and technology adoption. ConnectAmericas is a good example of how this can be achieved. ConnectAmericas is the first interactive social network to help small and medium enterprises (SMEs) in Latin America and the Caribbean expand internationally. The online platform offers information (for example, on financing or export markets), services and networking opportunities to help MSMEs scale their operations. There is a potential for Australian firms to join this online network.

ASEAN data sharing network. The ASEAN Connectivity Master Plan 2025 has called for the creation of an ASEAN digital data governance framework to support the harmonisation of cross-border data regulation. There is an opportunity for Australia to support the development of this important framework and help to identify practical ways for the sharing of non-sensitive information across Australia and ASEAN.

Australian-ASEAN “hackathon”. The ASEAN Connectivity Master Plan 2025 calls for the creation of an “ASEAN open data dictionary” as a publicly available online source. Such a dictionary would include data sets and related information, including on the collection and calculation method, frequency of collection, and responsible agencies. As ASEAN develops this initiative, Australia could contribute its open data expertise and work with ASEAN Member States to create “hackathons” with the goal of educating MSMEs on the best ways to use open data to create innovative business models and solutions.

Cybersecurity. Australia has developed a new industry growth centre focused on capturing the growth opportunities associated with cybersecurity. There is an opportunity for Australia to export its expertise and support ASEAN Member States in their efforts to develop effective cybersecurity strategies and foster innovation (for example, by creating networks of Australian and ASEAN firms engaged in cybersecurity).

Financial inclusion framework. The ASEAN Connectivity Master Plan 2025 calls for the creation of a digital financial inclusion framework. The goal of such a framework would be to outline the elements of a successful digital financial inclusion scheme by drawing on existing best practice, recommendations, and expertise. Components of this framework could cover backbone infrastructure (such as biometrics, income proof, and digital records), regulatory support (including regulations for new financial-services players and consumer protection for digital financial services), and usage enhancement (such as government e-invoicing, and online tax or welfare payments). Australia could support the development of this framework, and establish forums where leading firms with emerging technologies in this area can interact with regulators.

Australia-ASEAN collaboration between large firms and SMEs. Many smaller firms face difficulties when trying to enter new markets. There is a potential opportunity for larger firms in ASEAN and Australia to collaborate with SMEs and help them bring their innovations to overseas markets. For example, TelkomTelstra, a joint venture between Telstra in Australia and Telkom Indonesia, has facilitated the growth of a number of promising Australian start-ups into Indonesia.

AGRI-FOOD AND SUPPLY CHAIN LOGISTICS

THE OPPORTUNITY

Australia and the ASEAN region are natural partners for a cooperation on agriculture and food production, and the range of value-adding activities across the agri-food sector and supply chain. Agri-food trade has accelerated since the ASEAN-Australia-New Zealand Free Trade Agreement (AANZFTA) entered into force in 2010. The Agreement sets consistent trade and investment rules across our region and improves market access.

More than 630 million people live across ASEAN and their appetite for “clean and green” food is growing. This provides a valuable opportunity for Australia to export its fresh produce to the region. Between 2014 and 2016, Australia’s agricultural exports to ASEAN countries exceeded an annual average of A\$8 billion, accounting for 21 per cent of our total agricultural exports.²³ In turn, many ASEAN businesses are investing in the Australian agri-food sector, integrating products and knowhow into their value chains.

The potential for partnership goes deeper than the agricultural goods trade. In the ASEAN Economic Community (AEC) Blueprint 2025, ASEAN Member Countries commit to the shared vision of creating a competitive, inclusive, resilient, and sustainable agri-food sector by:

- Strengthening cooperation and capacity for sustainable production,
- Enhancing agricultural productivity, and
- Increasing investment in agricultural science and technology.

As the Australian agri-food sector works collaboratively to boost its competitiveness, productivity, and innovative strength, it is well-placed to invest and work with ASEAN partners to achieve the vision outlined in the Blueprint. Under the Agricultural Competitiveness White Paper, the Australian Government is investing in efficient infrastructure and research development. It is also working with agribusinesses to help them export and access premium agricultural markets globally. Australia is home to several innovative agri-food businesses. Some of these firms help to reduce food waste in the value chain. Others focus on energy efficient food production, sustainable aquaculture, or precision agriculture.

For agri-food manufacturers in ASEAN to remain competitive as wages rise across the region, supply chains and logistics need to improve. Such improvements could lift the economic growth in ASEAN Member States significantly.²⁴ Recent steps to enhance conditions for manufacturers include lower trade tariffs and point in the right direction. However, the region’s

²³ Australian Department of Foreign Affairs and Trade and Investment Statistics.

²⁴ Itakura, K. Impact of Liberalization and Improved Connectivity and Facilitation in ASEAN for the ASEAN Economic Community Mid Term Review. Jakarta: ERIA, 2012.

customs and logistics costs remain higher on average than international benchmarks. The ASEAN Economic Community Blueprint 2025 and the ASEAN Strategic Transport Plan 2016-2025 call for the construction of a database covering the ASEAN land transport network. They also propose studies to measure how long goods vehicles take to cross borders in a bid to shorten delivery times.

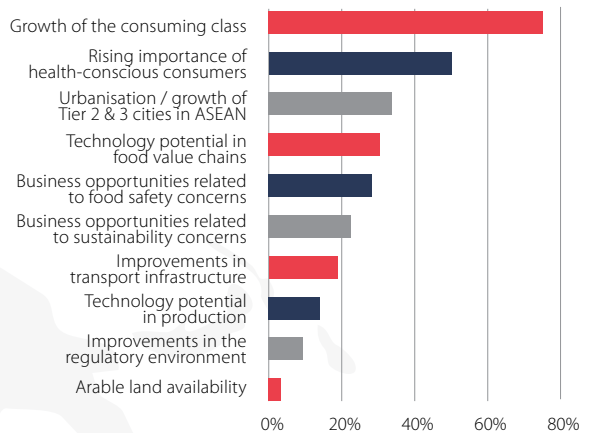
A related effort is the Global Value Chain (GVC) initiative under the ASEAN Economic Community (AEC), which seeks to increase regional integration as a stepping stone for agri-food businesses to participate in global value chains. The initiative also covers skills policy, R&D and other broader topics. Australia, with world-class operators such as Linfox and Toll, has valuable expertise to contribute to these efforts.

Three-quarters of survey respondents consider ASEAN's expanding consumer class the most important driver of growth in the agri-food and supply chain. Half of the businesses surveyed see opportunities for agri-food producers and suppliers in ASEAN to service the region's increasingly health-conscious consumers; one-third of survey respondents ranks the intensifying urbanisation in ASEAN as one of the top three factors influencing growth in the agri-food market.

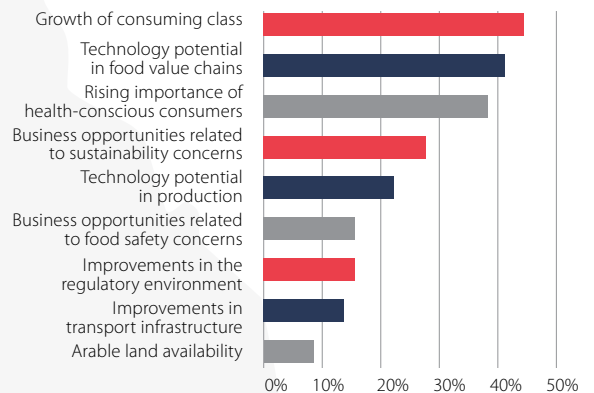
A substantial share of survey respondents view changing consumer preferences, such as greater consciousness of food safety (28 per cent) and sustainability (22 per cent), as main drivers of ASEAN's potential agri-food industry growth. These trends are also expected to influence the Australian agri-food market growth, with 39 per cent of respondents saying the growing health-consciousness is a key driver, while food safety (17 per cent) and sustainability concerns (28 per cent) also rank highly among survey respondents. Just under one-third (31 per cent) of firms expect new growth opportunities to emerge around technological progress in food production in ASEAN; 42 per cent of respondents say this about the Australian agri-food market.



What do you consider are the main drivers of agri-food and supply chain potential within ASEAN? (Select up to three responses)



What are the main reasons you are excited by the agri-food and supply chain potential in Australia? (Select up to three responses)

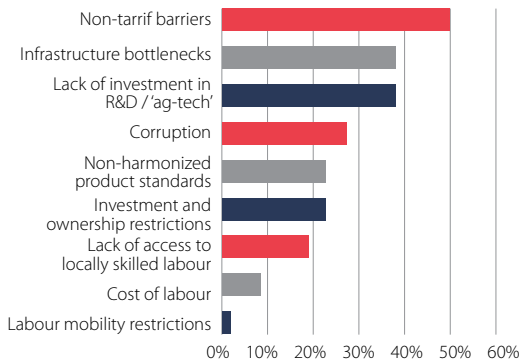


THE CHALLENGES

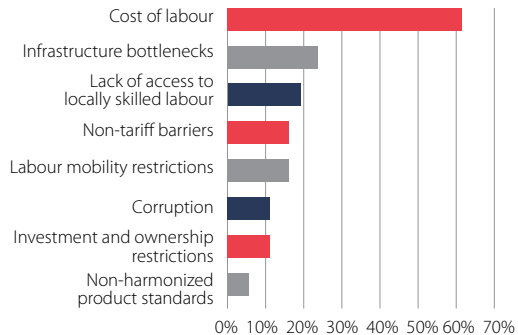
The business survey and roundtables show that several challenges may hamper businesses in ASEAN and Australia to capture opportunities in the agri-food industry:



What are the major business environment challenges for the agri-food and supply chain sector in ASEAN? (Select up to three responses)



What are the major business environment challenges for the agri-food and supply chain sector in Australia? (Select up to three responses)



Regulatory bottlenecks. While tariff barriers in ASEAN’s agriculture sector have largely been addressed in recent years, more work remains on lowering non-tariff barriers and harmonising standards. Publicly available ASEAN data show that the number of non-tariff measures (NTMs) is highest in Indonesia and Malaysia and lowest in Singapore and Cambodia. Many ASEAN Member States make extensive use of non-automatic import licensing, as well as sanitary and phytosanitary measures in the agriculture and transport sectors.²⁵ Half of all survey respondents consider non-tariff barriers a major obstacle to creating a conducive environment for agri-food businesses.

Missing infrastructure. The agriculture sector in many parts of ASEAN suffers from a lack of investment, particularly in critical infrastructure such as cold storage systems. For example, it is estimated that Indonesia lost about 20 per cent (close to 30 million tons) of its agriculture crops and about 30 per cent (almost 1.8 million tons) of fisheries products in 2011 due to a lack of critical infrastructure.²⁶ Food losses occur both at the post-harvest stage and along the value chain. Losses are highest (around 50 per cent) for perishable

commodities such as fruit and vegetables, often linked to a lack of cold storage facilities. Almost 40 per cent of survey respondents cite infrastructure challenges as a major hurdle for growth in ASEAN’s agri-food market.

Government department coordination. Several bottlenecks – including burdensome document requirements to customs’ clearance procedures – hamper the efficiency of agri-food supply chains in the region. While the ASEAN Economic Community (AEC) has made an effort to address these coordination challenges (for example, by forming cross-departmental logistics councils), initiatives remain relatively nascent and their impact is yet to be seen. More than 20 per cent of firms surveyed consider non-harmonised product standards a key challenge in ASEAN.

Ownership restrictions. Significant restrictions on foreign direct investment exist in many ASEAN Member States. The majority of restrictions target not only the agriculture sector but also food-related activities and services in the manufacturing sector (for example, food processing). Foreign participation is restricted by quotas and export requirements around foreign equity.²⁷ These

²⁵ Economic Research Institute for ASEAN and East Asia (ERIA), ASEAN Rising: ASEAN and AEC Beyond 2015, 2014.

²⁶ Jenny Gustavsson et al., Global food losses and food waste, Food and Agriculture Organization, 2011.

²⁷ Paul Teng and Jurise Athena Oliveros, “AEC2015: Implications for Investment in ASEAN Agriculture”, July 2015.

investment and ownership restrictions are a concern for more than 20 per cent of survey respondents in ASEAN.

Skill gaps. ASEAN's demographics are generally more favourable than those in most other parts of the world. The region also has the third largest labour force in the world, behind only China and India. Yet many issues remain. Today, 11 per cent of ASEAN's population has no access to education, and roughly 60 per cent of ASEAN's citizens never acquired any education beyond primary school, if at all. In Indonesia and Myanmar alone, there is a projected undersupply of nine million skilled and 13 million semi-skilled workers by 2030.²⁸

Agriculture could be particularly impacted as 90 million people across ASEAN are expected to move into cities by 2030.²⁹ In the survey, almost 40 per cent of firms say the lack of investment in R&D and 'ag-tech' within ASEAN is a key challenge, indicating that the required know-how may be missing to make the most out of technological progress in the sector. Almost 20 per cent of firms regard the lack of local access to skilled labour as a roadblock limiting growth in the agri-food industry. In the Australian market, more than 60 per cent of respondents see the cost of skilled labour as the greatest hurdle.

POTENTIAL ACTIONS TO ADDRESS THE CHALLENGES AND CAPTURE THE OPPORTUNITY

The survey respondents and business roundtables identified several potential actions to capture the growth opportunities in the agri-food industry:

Technology collaboration. Given the overlap in interests in some agri-business areas (food waste, responsible packaging, precision agriculture, aquaculture), there could be opportunities for various research institutions to collaborate more closely in the development of new technologies. They could leverage the strength of existing R&D institutions such as CSIRO and A*Star, and potentially also involve private-sector players via "hackathons". For example, global innovation competitions in Jakarta have helped crowdsource ideas for food waste reduction projects.³⁰

Tackle FDI restrictions. There is an opportunity for ASEAN to review the exclusionary list of FDI in a bid to attract more investment into certain agriculture and food industries. Pilot programs could be set up in certain areas (for example, food waste) before expanding.

Tackle non-tariff measures and standards harmonisation. While ASEAN has made significant progress in reducing tariff-related barriers, significant non-tariff barriers remain in the food and agriculture sector. There is also a lack of harmonised standards. Australian industry and policymakers could work with their ASEAN counterparts to prioritise a set of agriculture products, then identify critical barriers, and explore mutually-beneficial ways in which they can be addressed.

Trade route collaboration. The ASEAN Connectivity Master Plan 2025 calls for studies on the time and cost of transport in several land-based and maritime corridors. Findings would help to identify unnecessary regulatory barriers. There is an opportunity for Australia to support this effort, not only with government support, but also with leading Australian logistics operators.

²⁸ For further details, see McKinsey Global Institute's reports: on Indonesia, The archipelago economy: Unleashing Indonesia's potential, September 2012; and Myanmar, Myanmar's moment: Unique opportunities, major challenges, June 2013.

²⁹ McKinsey Global Institute, Three paths to sustained economic growth in Southeast Asia, November 2014.

³⁰ Information obtained from Embassy of Sweden, May 26, 2015. Accessed at: <http://www.swedenabroad.com/en-GB/Embassies/Jakarta/Current-affairs/News/Indonesian-talents-find-ideas-to-tackle-food-waste-sys/>

FUTURE ENERGY AND SUPPLY CHAINS

THE OPPORTUNITY

ASEAN is one of the world's fastest growing regions. Accompanying this economic dynamism is a strong and growing demand for energy. The region's current average annual electricity consumption per capita is about 1,287 kWh, less than half the world average. Electricity demand in ASEAN is expected to grow by 5 to 6 per cent per year to 2020. Demand for energy is forecast to increase through 2035 by around 80 per cent, a rise equivalent to Japan's current total energy demand.³¹

Over the next two decades, many energy-exporting countries in ASEAN will likely become net energy importers. The growing electricity demand in ASEAN means the region will need to generate an additional 800 terawatt hours (TWh) of electricity each year between 2020 and 2035. Developing this capability will require a significant capital investment of between US\$180 and \$773 billion, depending on the energy mix.

In addition, many ASEAN Member States require significant investments in distribution networks. In 2015, an estimated 107 million people were living without grid-connected electricity. However, Australian investment funds have so far shown greater interest in European and North American energy assets than in Asian energy assets. A larger effort is needed to improve the 'readiness for finance' in key ASEAN markets, which in turn may attract more Australian funding.

Under the ASEAN Plan of Action for Energy Cooperation (APAEC), countries agree to key ASEAN energy initiatives, including:

- Establishment of an ASEAN power grid and a trans-ASEAN gas pipeline (13 bilateral gas pipeline projects connecting six countries had been commissioned in 2015),
- Achieving a reduction in energy intensity by 20 per cent in 2020 (based on 2005 levels) and an aspirational target to increase the component of renewable energy to 23 per cent by 2025 in ASEAN's energy mix,
- Regional energy policy and planning, and
- Building capability in policy, technology, and regulation of nuclear energy.

Australia is also transitioning to a new energy future and has committed to the COP21 target of reducing greenhouse gas emissions by 26 to 28 per cent below 2005 levels by 2030. The new National Energy Guarantee, announced by the Australian Government in 2017, calls for:

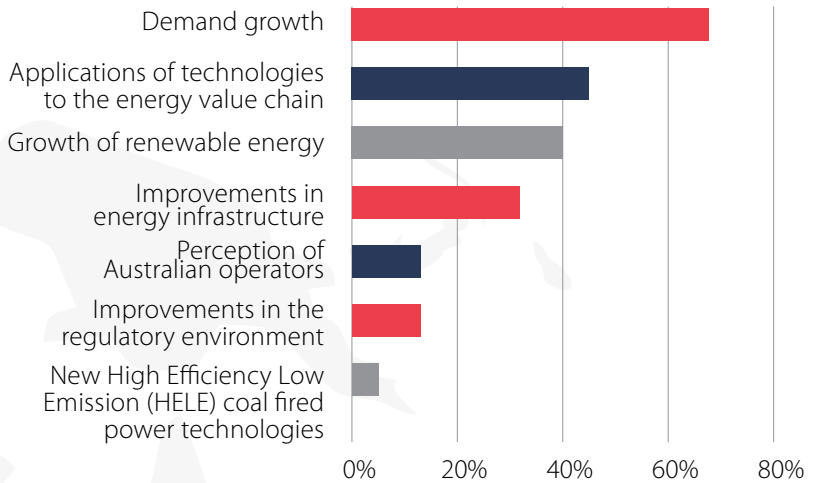
- A reliability guarantee to deliver the right level of dispatchable energy (from ready-to-use sources such as coal, gas, pumped hydro and batteries); and
- An emissions guarantee to contribute to Australia's international commitments.

³¹ World energy outlook special report: Southeast Asia energy outlook, International Energy Agency and ERIA, September 2013.

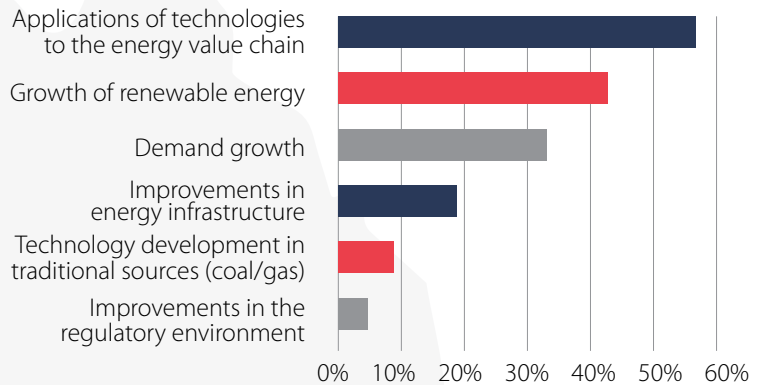
Not surprisingly, more than two-thirds of survey respondents (68 per cent) see this dramatic growth in demand as a key driver of ASEAN's energy market potential. Meanwhile, more than 40 per cent of firms are excited by the growth in renewables. Furthermore, 45 per cent of respondents within ASEAN are excited by the potential applications of new technologies to meet ASEAN's growing energy demand. In Australia, survey respondents say the prospect of new technology applications to meet electricity demand (57 per cent), and the growth in renewable energy (43 per cent) are the two most exciting drivers of growth.



What are the top reasons you are excited by the energy market potential within ASEAN?



What are the top reasons you are excited by the energy market potential in Australia? (Select up to three responses)



THE CHALLENGES

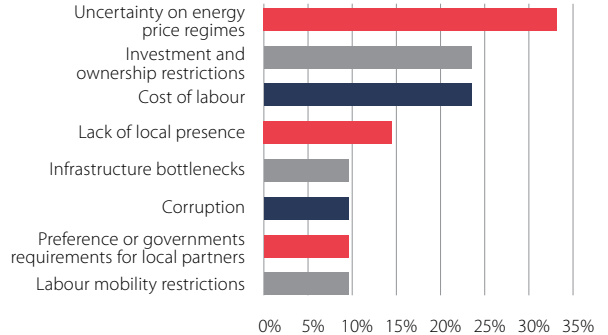
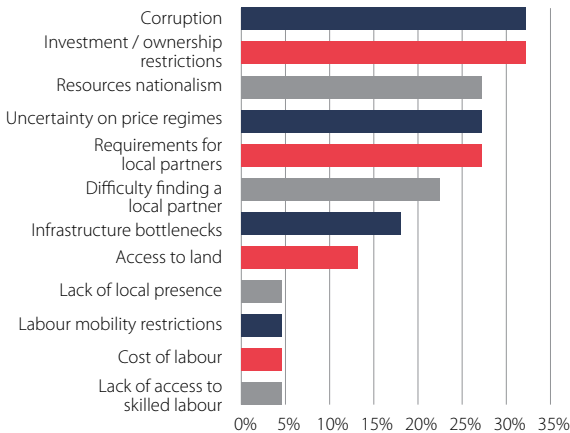
There are several underlying barriers to support energy and supply chain collaboration:



What are the major business environment challenges for the energy sector in ASEAN? (Select up to three responses)



What are the major business challenges for the energy sector in Australia? (Select up to three responses)



Corruption, and restricted access to investment and ownership in the energy sector are key challenges for one-third of survey respondents in ASEAN. A significantly lower number of firms (10 per cent) worry about corruption in the Australian energy market. Other issues cited by survey respondents in ASEAN include resource nationalism, uncertainty on price regimes, and requirements for local partners. For the Australian market, respondents view uncertainty on energy price regimes as the largest challenge. Almost one-quarter of respondents name the cost of labour, and investment and ownership restrictions as additional challenges. Roundtable discussions unearthed some of the underlying barriers for businesses in ASEAN's energy sector. These include:

Lack of pipeline of projects. There is currently no database covering the entire pipeline of priority energy projects across ASEAN. This can make it difficult for firms to mobilise finance.

Regulatory bottlenecks. Streamlining project delivery can save up to 15 per cent of total investment

annually while accelerating timelines materially.³² Some of the major barriers in ASEAN Member States include bureaucratic delays in approving projects (partly due to well-intentioned efforts to increase transparency and reduce corruption) and unspecific local content requirements that do not match the capabilities of local producers. Other challenges include negotiating how to split the costs and benefits for cross-border power projects, and land acquisition issues. Tender processes in some ASEAN Member States lack efficiency. For example, Independent Power Producers (IPPs) seeking approval for the construction of a power plant often face extensive due diligence and other requirements – such as site surveys, soil investigation, and environmental impact assessments – which can lead to inefficiencies and cause investors to demand higher risk premiums due to lack of information. Excessive bureaucracy can drag out the tender process and cause bidders to duplicate efforts.

Limited development of PPP frameworks. Despite recent progress in many ASEAN Member States,

³² Infrastructure productivity: How to save \$1 trillion a year, McKinsey Global Institute, January 2013.

significant gaps remain in getting Public Private Partnerships (PPPs) off the ground. For example, a review commissioned by the Asian Development Bank of the business and regulatory environment for PPPs across the Asia-Pacific region finds that the concept of PPPs as a risk-sharing mechanism has not fully taken root in ASEAN Member States. The regulatory bidding frameworks in some ASEAN Member States are also patchwork – for instance, some laws do not specify the circumstances for direct negotiation, omit requirements to publicise tenders, and set no limits on contract adjustments.³³

POTENTIAL ACTIONS TO ADDRESS THE CHALLENGES AND CAPTURE THE OPPORTUNITY

A review of ideas by survey respondents and business roundtable participants reveals the following potential initiatives to help firms seize opportunities in ASEAN's energy sector:

Prioritise the development of the ASEAN energy project database. The ASEAN Connectivity Master Plan 2025 calls for the establishment of a comprehensive online database of all ASEAN infrastructure projects (including energy) with key investor information (such as project size, contact person). There is a potential opportunity for Australia to support the development of this database, and to encourage the inclusion of Australian energy projects. .

Technology collaboration. Given the overlap in some areas of interest in the energy sector (such as distributed energy), there could be opportunities to pursue research collaborations on new energy technologies. Further opportunities exist in increasing two-way investments to finance the integration of the energy grid and unlock new energy reserves.

Support the development of PPP frameworks. Australia could leverage its expertise in PPP frameworks to help support a harmonised approach to PPPs across ASEAN in the energy space.

³³ Evaluating the environment for public-private partnerships in Asia-Pacific, The Economist, April 2015.

INFRASTRUCTURE

THE OPPORTUNITY

To keep pace with the rapid growth of cities and the expansion of the digital economy, ASEAN Member States will need to invest heavily in new infrastructure. It is estimated that more than US\$110 billion of infrastructure investment each year are required over the decade through 2025 to meet the infrastructure needs of ASEAN Member States.³⁴ A number of factors are driving this infrastructure opportunity in ASEAN:

Historical underinvestment in infrastructure.

A significant infrastructure deficit emerged after the Asian Financial Crisis of 1997-98, as ASEAN Member States sought to rein in current account deficits and foreign investment. As a result, investment as a share of GDP has not returned to pre-1997 levels in most ASEAN economies.³⁵ This historical shortfall in investment has since led ASEAN Member States to prioritise infrastructure spending in their development plans – providing new opportunities for businesses to support the expected infrastructure spending boom. More than two-thirds of survey respondents (69 per cent) consider the shift in government priorities the most important driver of ASEAN's infrastructure potential.

Urbanisation and growth of “middleweight” regions. ASEAN is rapidly urbanising. 47 per cent of its

population now live in cities. Another 90 million people are expected to follow this trend by 2030.³⁶ According to the consultancy firm AlphaBeta, the fastest growth is no longer happening in the region's mega-cities (such as Bangkok, Jakarta, and Manila), but increasingly in “middleweight” regions, with populations of 500,000 to 5 million.³⁷ While these middleweight regions have historically had difficulty accessing financial markets, recent reforms (with support from the World Bank) have made it easier for these fast-growing regions to fund their investment plans. More than half of all survey respondents consider the growth of middleweight urban areas a main driver of ASEAN's infrastructure potential.

New funding vehicles. New funding vehicles are emerging that could support infrastructure development. These include the Asia Bond Fund (ABF); the Asian Bond Market Initiative (ABMI); the ASEAN Infrastructure Fund (AIF); the Asian Infrastructure Investment Bank (AIIB); the New Development Bank (NDB); and the Partnership for Quality Infrastructure, which has pledged to provide about US\$110 billion for infrastructure investment in Asia over the next five years. The increased focus on “One Belt, One Road” initiatives (cited by 31 per cent of survey respondents)

³⁴ ASEAN Investment Report 2015 and McKinsey Global Institute's Southeast Asia at the Crossroads: Three Paths to Prosperity (2014) estimated infrastructure investment needs amounting to USD 110 billion (for the period of 2015-2025) and USD 196 billion (for the period of 2014-2030) respectively.

³⁵ ASEAN: The Next Horizon, ANZ Economics Research, 24 April 2015.

³⁶ McKinsey Global Institute, Southeast Asia at the Crossroads: Three Paths to Prosperity, 2014.

³⁷ AlphaBeta and Nielsen, Rethinking ASEAN: Dispelling 8 myths about consumer markets, July 2017.

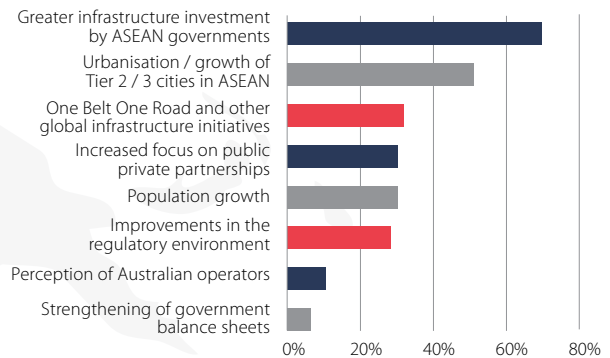
and Public Private Partnerships (cited by 29 per cent of respondents) are viewed as important drivers of the region’s infrastructure potential.

Supportive regulatory environment. ASEAN Member States spend roughly US\$50 billion on energy subsidies (IEA) annually, according to the International Energy Agency. These subsidies are sizeable government investments – in some countries they even surpass combined public spending on health and education. Indonesia, Malaysia, and Thailand have already begun to reform their subsidy policies to free up money for infrastructure investment. Other ASEAN Member States have launched other reforms to facilitate infrastructure investments, improve the prioritisation of projects and address long-running bottlenecks around land acquisition rules. More than one-quarter (27 per cent) of firms consider such regulatory reforms in ASEAN a key reason for their excitement over the region’s infrastructure potential.

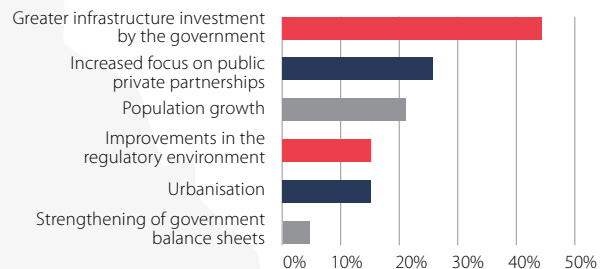
Large untapped opportunity on infrastructure productivity. Multiple infrastructure needs are now competing for scarce resources in ASEAN Member States. This requires a more mindful financing approach: governments need to find ways to reduce the time and cost of building new infrastructure, while increasing the efficiency of existing infrastructure to maximise the impact of every dollar they invest. Research shows that a greater focus on productivity can lower the cost of infrastructure investment by around 40 per cent.³⁸ Productivity-focused investing would entail better project selection, more efficient delivery and greater accountability, an emphasis on maximising the life span and capacity of existing assets, strong infrastructure governance, and a robust financing framework.



What are the main reasons you are excited by the infrastructure potential within ASEAN? (Select up to three responses)



What are the main reasons you are excited by the infrastructure potential in Australia? (Select up to three responses)

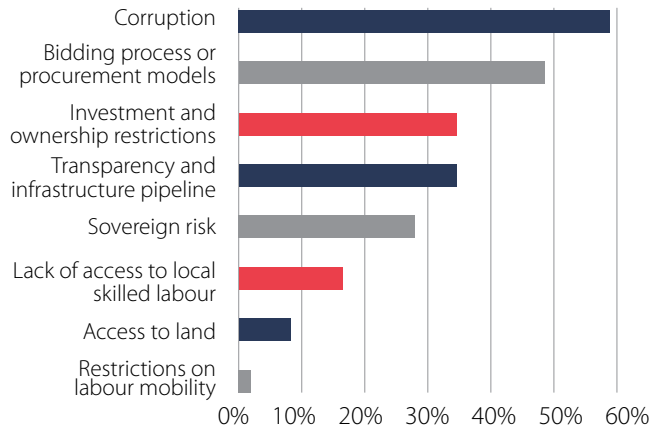


³⁸ Infrastructure productivity: How to save \$1 trillion a year, McKinsey Global Institute, January 2013.

THE CHALLENGES



What are the major business environment challenges for the infrastructure sector in ASEAN? (Select up to three responses)



The business survey reveals that corruption remains the greatest concern of firms operating in the infrastructure sector in ASEAN. However, survey respondents and participants of our roundtable discussions mention several other underlying barriers to accelerating infrastructure growth in ASEAN:

Lack of information for governments. Many ASEAN governments – particularly local governments in fast-growing middleweight regions – lack information related to the planning and development of infrastructure projects, including around sustainability and financing options. While institutions like Singapore's Centre for Liveable Cities (CLC), the IMT-GT Green Cities initiative, and the ASEAN-German Technical Cooperation Programme on Cities, Environment and Transport have moved to broaden access to information, networking opportunities for officials to share lessons on sustainable urbanisation models are still limited, and robust data to assess their performance is scarce.

Lack of a pipeline of projects. While ASEAN countries have committed an estimated US\$690 billion to build several infrastructure megaprojects over the decade through 2023, their investment is still far short of what is required to catalyse economic connectivity across region.³⁹ It is difficult to gauge how many additional projects may be coming up, as there is currently no comprehensive database that lists the entire pipeline of priority infrastructure projects in ASEAN. This lack of transparency over ASEAN's infrastructure project

pipeline can make it difficult to mobilise finance. More than one-third of surveyed firms (35 per cent) consider it a roadblock for the sector's growth.

Limited development of PPP frameworks.

ASEAN Member States have made some progress in recent years to promote Public Private Partnerships. But there are signs that the concept of PPPs as a risk-sharing, rather than risk-shedding, mechanism has not fully taken root in ASEAN. Asian Development Bank research shows ASEAN Member States lag other countries in creating a sound business and regulatory environment for PPPs. For example, the regulatory bidding frameworks in some ASEAN Member States still contain gaps: in some cases laws do not specify which circumstances would allow direct negotiation, others omit requirements to publicise tenders or set no limits on contract adjustments.⁴⁰ Nearly half the survey respondents (49 per cent) find bidding processes or procurement models to be a major obstacle to scaling up infrastructure in ASEAN, second only to corruption (59 per cent).

Regulatory bottlenecks.

Restrictions to foreign investment and foreign ownership of infrastructure continues to be a challenge for businesses in ASEAN. More than one-third of survey respondents consider such limitations a major challenge. Some of the key barriers in ASEAN Member States include bureaucratic delays in approving projects (in part due to well-intentioned efforts to increase transparency and reduce corruption), local content requirements that

³⁹ Infrastructure, power, and utilities + lifting-the-barriers roundtables, McKinsey & Company and CIMB ASEAN Research Institute, 2014.

⁴⁰ Evaluating the environment for public-private partnerships in Asia-Pacific, The Economist, April 2015.

are not tailored to the capabilities of the local production base, and land acquisition issues. Streamlining these requirements can materially speed up the completion of projects and save up to 15 per cent of total investment costs annually.⁴¹ Yet in some ASEAN Member States, minority land owners can hold up the land acquisition process. Media coverage of new infrastructure developments can also drive up land prices. Malaysia and Singapore have created compulsory acquisition laws that allow governments to acquire land for projects deemed to be in the public interest. Other countries have attempted to devise similar laws, but with mixed success.

Coordination challenges. The coordination of infrastructure projects can be difficult and lead to delays if a large number of government entities is involved. For example, the average urban transit project in ASEAN often involves more than 15 different decision-making entities, with limited mechanisms to attain consensus.⁴²

POTENTIAL ACTIONS TO ADDRESS THE CHALLENGES AND CAPTURE THE OPPORTUNITY

Survey respondents and business roundtable participants have identified several potential actions that could enable firms to better seize existing opportunities in ASEAN's infrastructure sector:

Prioritise the development of the ASEAN infrastructure project database. The ASEAN Connectivity Master Plan 2025 calls for the establishment of a comprehensive online database of all ASEAN infrastructure projects with key investor information (such as project size, contact person). The Sydney-based Global Infrastructure Hub (GIH) could potentially help to support this initiative, as it has a mandate to grow the global pipeline of quality, bankable infrastructure projects by increasing the flow of private and public infrastructure investment opportunities, by facilitating knowledge sharing and by connecting sectors. For example, the Australian Government has committed more than A\$75 billion over the next ten years through 2027 to build new transport infrastructure under the Infrastructure Investment Program.⁴³ It has also designed a Foreign Direct Investment Strategy to attract private investment. Other initiatives, including Macquarie Bank's Asian Infrastructure Fund, with total assets under management worth US\$2.3 billion in 2016, also involve the private sector.⁴⁴ A closer cooperation in this space would be beneficial for both ASEAN Member States and Australia.

Establish a forum on infrastructure productivity. The ASEAN Connectivity Master Plan 2025 calls for the creation of an annual forum in which government officials could share insights on how to maximise infrastructure productivity and how to tackle key project bottlenecks. The significant expertise of Australian governments and firms in this area offers an opportunity to launch a targeted Australian-ASEAN infrastructure productivity forum. Such a forum should enable investors, construction firms, and government officials to exchange information on major new infrastructure projects and on ways to overcome project hurdles.

Create an Australia-ASEAN sustainable cities network. The ASEAN Strategic Transport Plan 2016-2025 calls for enhanced sharing and adoption of experiences, projects, and knowledge related to sustainable transport. Further, the ASEAN Connectivity Master Plan 2025 calls for the creation of a sustainable cities network. Australia, with its expertise on sustainable development issues (including energy efficiency and smart urban design) may help to establish a joint forum, which could be supported by comprehensive research measuring urbanisation performance (potential topics range from adequate access to affordable housing to environmental management such as waste and energy efficiency) and economic issues (such as transport efficiency, tourism).

⁴¹ Infrastructure productivity: How to save \$1 trillion a year, McKinsey Global Institute, January 2013.

⁴² Infrastructure, power and utilities + lifting-the-barriers roundtables, McKinsey & Company and CIMB ASEAN Research Institute, 2014.

⁴³ Australian Government Department of Infrastructure and Regional Development, 'Infrastructure Investment Program', URL: <<http://investment.infrastructure.gov.au/>>

⁴⁴ Sarah Thompson, Anthony Macdonald, Joyce Moullakis, "Macquarie Group plots latest infrastructure fund", Financial Review, URL: <<http://www.afr.com/street-talk/macquarie-group-plots-latest-infrastructure-fund-20170515-gw510q>> 16 May 2017.

AUSTCHAM ASEAN

The Australia-ASEAN Chamber of Commerce (AustCham ASEAN) aims to deepen Australia's business engagement in ASEAN by serving as an umbrella organisation for advocacy on issues impacting Australian business operating in ASEAN. AustCham ASEAN was officially launched by the Australian Prime Minister, the Hon Malcolm Turnbull MP, in Singapore on June 3, 2017. AustCham ASEAN is a "Chamber of Chambers" whose membership base consists of the following "Foundation Members" from each country in ASEAN:

Each Foundation Member appoints a board member to represent it on the board of AustCham ASEAN:

- Cambodia – Australian Chamber of Commerce, Cambodia - Ashley Irving
- Indonesia - Indonesia Australia Business Council – Peter Fanning
- Lao PDR - The Australia Chamber of Commerce Lao PDR – Chris Smithies
- Malaysia - Malaysia-Australia Business Council – Leigh Howard
- Philippines - The Australia-New Zealand Chamber of Commerce (Philippines) Inc – Chris Ward
- Singapore - Australian Chamber of Commerce, Singapore – Fraser Thompson
- Thailand - Australian-Thai Chamber of Commerce – Brenton Mauriello
- Vietnam - The Australian Chamber of Commerce in Vietnam – Thi Tuyet Chua Ta

With these additional board members:

- Philip Forrest- Honorary Secretary
- John Dick - Honorary Treasurer
- Annette Tilbrook - Director

It is expected that Myanmar will join shortly.

AustCham ASEAN focuses on three main activities:

1. **Informing** Australian business on regional integration developments and the business landscape with a particular focus on an annual business survey;
2. **Explaining** the contribution of Australian business to ASEAN markets; and
3. **Advocating** for policies, rules and regulations that support Australian business activities in ASEAN (including organising sector roundtables in key areas of interest for Australian business).

For further details on our activities please visit our website: <http://austchamasean.com>

Special thanks to :

Courtney Miller, Project Director

Daniel Willett, Analyst

Norazuin Lokman, Graphic Design

PRODUCED BY



IN COLLABORATION WITH



GOLD SPONSORS



SILVER SPONSOR



SUPPORTING PARTNERS



Welcome to Sydney!

New South Wales (NSW) is home to some of the world's most innovative and creative businesses. Our state excels in sectors including agriculture, tourism, education, resources, innovation and technology.

One NSW company leading the charge in agriculture and technology is The Yield. Founded by Ros Harvey in 2014, The Yield is developing technological solutions offering long-term value across the industry.

The Yield is transforming food and farming practices by working closely with producers to design digital solutions that solve real challenges—at farm level and throughout the food chain.

The company's end-to-end ecosystem of sensors, data analysis, artificial intelligence and apps offers seven-day microclimate predictions to farmers, helping them to make faster, more informed decisions.

The technology is also used to improve business systems in agriculture—from more accurately predicting water salinity to prevent the closure of oyster farms, to informing on-land farming decisions like when to plant, irrigate, feed and harvest crops. The knowledge gained also feeds into research models that can help in plant disease management.

The Yield has worked collaboratively with the NSW Government for a number of years.

'The NSW Government is a cornerstone customer of our Sensing+ for Aquaculture solution, which includes a dashboard for food safety regulation. We're also partners in the Food Agility Cooperative Research Centre and, as part of a joint project, we're currently rolling out our technology to oyster growers in NSW',

Ms Harvey said.

The Yield has support from some of the world's biggest companies including Bosch, KPMG and Microsoft. In fact, Microsoft has identified The Yield as a global-leading exemplar of innovation in AI.

The company, which has expanded rapidly, has plans to develop locally before scaling the business globally over the next 12 months. Find out more at www.theyield.com

The Yield is just one example of an innovative NSW company pushing agritech boundaries to find workable solutions to global business issues.

The NSW Government fosters these industry leaders—we have partnered with industry and universities on The GATE (Global Ag-Tech Ecosystem), a collaborative research and technology facility specifically designed to develop agritech ideas. For more information visit www.thegate.org.au



To find out more about everything Sydney and NSW offers, visit www.industry.nsw.gov.au



PRODUCED BY

