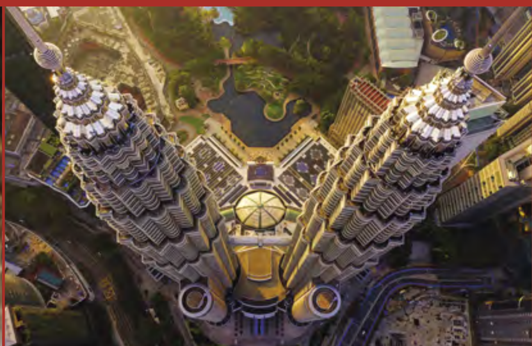
Investing in ASEAN

Association of Southeast Asian Nations

2023

• one vision • one identity • one community •

| Brunei Darussalam | Cambodia | Indonesia | Lao PDR | Malaysia |



| Myanmar | Philippines | Singapore | Thailand | Vietnam |

Allurentis is delighted to have been involved in partnership with ASEAN on this, the tenth publication and would like to thank all sponsoring organisations for their kind contributions. We are confident that it will raise awareness with all readers and prove to be an invaluable resource, especially for those wishing to become involved in the extraordinary business opportunities and growth prospects within the region.

Photos courtesy of: **www.istockphoto.com** | **www.stock.adobe.com**

Contents

Eyes on ASEAN

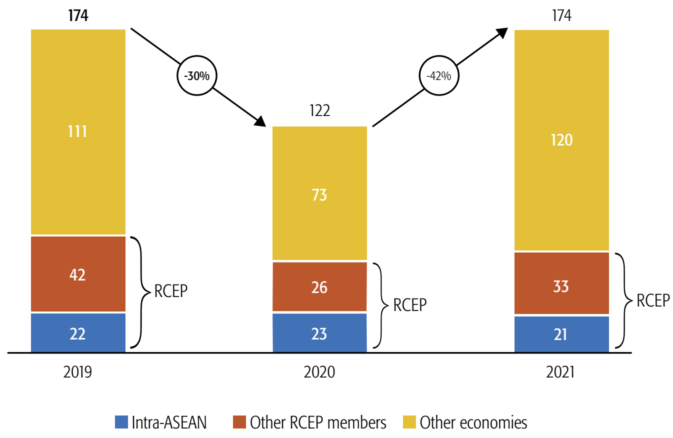
The Association of Southeast Asian Nations (ASEAN) is a fast growing trade bloc of 10 member states: Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.

With a combined population of over 660 million and a collective GDP of almost US$3.2 trillion in 2019, ASEAN ranks as the third largest regional economy in Asia and the fifth largest economy in the world, after the US, China, Japan and Germany.

Since it was established in 1967, ASEAN has been on a journey of almost constant growth. Even through the challenges of the 2008 global economic crisis, regional GDP continued to grow steadily at an average annual growth rate of 5.7% through to 2019. The services sector accounts for just over 50% of the bloc's GDP, followed by manufacturing (36%) and agriculture (10.5%)[1].

Like most regions of the world, Covid-19 brought a temporary halt to economic expansion. But as the worst impacts of the pandemic continue to recede, ASEAN is once again open for business. Foreign Direct Investment (FDI) inflows rebounded in 2021 to US$174 billion, a return to pre-pandemic levels, reflecting the attractiveness of the region's economy for global investors[2].

ASEAN: Flows of FDI, 2019-2021 (Billions US$)



Source: ASEAN Secretariat and UNCTAD, FDI/MNE database (unctad.org/fdistatistics)
Note: RCEP = All ASEAN member states plus Australia, China, Japan, the Republic of Korea and New Zealand

> The IMF projects that ASEAN's economy will grow 5.6% in 2022 and 6.0% in 2023, outpacing the projected global GDP growth rate.

It would be wrong to characterise ASEAN as a grouping of homogeneous states, however. There remain significant differences in terms of political, economic and social systems. Average per capita income levels, for example, range from approximately US$1,286 in Myanmar to US$59,785 in Singapore[3].

Nevertheless, with a large market and strong regional integration, ASEAN remains a major FDI destination in the developing world – second only to China – and is expected to play an important role in driving global economic recovery. The International Monetary Fund (IMF) projects that ASEAN's economy will grow 5.6% in 2022 and 6.0% in 2023, outpacing the projected global GDP growth rate[4].

This revival is being driven by several factors, including rising investment from outside the region, growth in manufacturing, increasing strategic importance in global supply chains, and growing investment in infrastructure, including the digital economy.

There was a 12% rise in announced greenfield investment projects in 2021, mostly in manufacturing and infrastructure-related activities. Three industries in particular accounted for over two-thirds of greenfield investment: electronics and electrical equipment; energy and gas; and information and communication.

The number of cross-border corporate transactions involving ASEAN states declined between 2020-2021, but the value increased exponentially to almost US$50 billion, driven by several 'mega-deals'[5]. These included the US$34 billion merger of Grab (Singapore) and Altimeter Growth (United States).

ASEAN states have also benefitted from the increasing popularity of the so-called "China+1" approach to global procurement. This has seen a growing number of foreign investors looking to mitigate their supply chain risk by investing in a broader base of supply opportunities in the region.

This is reflected in the fact that the manufacturing sector saw the strongest growth in 2021, rising 134% to US$45 billion, focused on key industries such as electric vehicles, electronics, biomedical and pharmaceuticals[6].

Finance and banking remained the largest recipient of FDI, however, increasing by 22% to US$57 billion. The dynamic FinTech sector was another key driver of growth, as the strong digital economy helped boost investment in data centres and ICT activities.

The move towards closer economic integration between ASEAN member states, which began in earnest with the ASEAN Free Trade Area (FTA) established in the 1990s, continues to pick up pace.

The FTA was followed by the introduction of the ASEAN Economic Community at the end of 2015, which gradually saw the elimination of most import duties between member states by the end of 2018.

The latest evolution of this integration is the Regional Comprehensive Economic Partnership (RCEP), between ASEAN and its five main regional trading partners: China, Japan, South Korea, Australia and New Zealand. RCEP came into force on 1 January 2022, and has been billed as the world's largest free trade agreement, accounting for around 30% of the world's GDP and over a quarter of global trade.

Despite on-going uncertainty in the global economy, ASEAN is well placed for continued growth. Its industrial sector is developing fast; regional integration is deepening; there are growing numbers of middle-income consumers feeding into demand; and there is a consistent policy push from governments. For foreign investors, the ASEAN market is increasingly hard to ignore.

[1] https://research.hktdc.com/en/article/Mzk5MzcxNjEz
[2] https://asean.org/wp-content/uploads/2022/09/AIR2022-Web-Online-Version-310822.pdf
[3] https://research.hktdc.com/en/article/Mzk5MzcxNjEz
[4] https://asean.org/wp-content/uploads/2022/09/AIR2022-Web-Online-Version-310822.pdf
[5] https://asean.org/wp-content/uploads/2022/09/AIR2022-Web-Online-Version-310822.pdf
[6] https://asean.org/wp-content/uploads/2022/09/AIR2022-Web-Online-Version-310822.pdf

US-ASEAN Business Council

Ted Osius, Ambassador (ret.), President & CEO, US-ABC

Ted Osius

In 2022, as ASEAN emerges from the Covid-19 pandemic, US-ASEAN relations increasingly demonstrate ASEAN's importance to American economic success. The Council plays a critical role in this relationship by serving as a connection between the US private sector and ASEAN governments and markets in support of US government initiatives. In May 2022, the White House hosted the first US-ASEAN Special Summit, during which the Council created an engagement between ASEAN heads of state and other senior officials and US business leaders. It is through engagements like this that ASEAN continues to position itself as a trusted trade partner for the United States.

The ASEAN Economic Community (AEC), now six years old, constitutes the world's fifth largest economy, with an average GDP growth rate predicted to top 5% each year well into the next decade. Vietnam is expected to lead this charge with more than 7% growth this year. Looking specifically at ASEAN's digital economy, the pace of growth is among the fastest in the world, expected to exceed US$300 billion by 2025.

ASEAN's significant growth drives the increase of US-ASEAN trade, which reached US$380 billion in 2021. US Census Bureau trade data for the first half of 2022 shows four ASEAN nations ranked within the top 20 US trade partners, and ASEAN is the largest destination for US foreign direct investment, totalling more than the investments in China, Japan, South Korea, and India combined. Reciprocally, ASEAN is now the fastest-growing and one of the largest sources of investment from Asia into the United States.

2022 is also notable for the beginning of the Indo-Pacific Economic Framework (IPEF) negotiations, which includes seven of the ten ASEAN countries. The Los Angeles Ministerial in September outlined the priorities for the framework's four pillars: trade, supply chains, decarbonisation, and fair economy. The IPEF ministerial statements demonstrate the mutual ambitions between the United States and ASEAN to deepen the economic relationship between the two. As the IPEF process produces new rules, disciplines and commitments by participating members, the Council anticipates this will lead to further increases in trade and investment between the United States and ASEAN, further solidifying the region as a trusted trade partner.

www.usasean.org

UK-ASEAN BUSINESS COUNCIL

UK-ASEAN Business Council

The Rt Hon the Lord Vaizey of Didcot, Chairman, UKABC

The Rt Hon the Lord Vaizey of Didcot

Southeast Asia will be the world's fourth largest economy by 2030. Its 700 million population is young, educated, increasingly online and with a growing middle-class is attracting the attention of the world. UK businesses must think of Southeast Asia as part of their global strategy. The UK-ASEAN Business Council is the leading UK based organisation that offers awareness and connections for UK companies looking to do business with Southeast Asia's vibrant markets.

ASEAN has been significantly impacted by the pandemic but its resilience and optimistic outlook can be felt when I meet with government and business leaders in the region. The ASEAN Comprehensive Recovery Framework has been highly effective in bringing the region together to face the challenge of Covid-19 and put ASEAN on a stable footing for strong economic recovery.

Two areas of increasing importance for ASEAN and the UK are digital transformation and green economic growth. ASEAN's digital economy is expected to be worth US$1 trillion by 2030 as more and more people in Southeast Asia shop and trade online, accelerated by the pandemic. Green inclusive economic growth is the focus of ASEAN's governments as they recognise the need to achieve their climate change commitments made at COP26 in Glasgow. The UK business community have the skills and expertise to demonstrate that business can be green and profitable.

Cambodia being Chair of ASEAN in 2022 has advanced the region in many areas under the theme 'Addressing Challenges Together'. The UK-ASEAN Business Council is a key partner to ASEAN and has supported Cambodia's Chairmanship of the business activities that culminated in the ASEAN Business and Investment Summit, where I led a delegation comprising of globally recognised UK companies. We look forward to Indonesia's Chairmanship of ASEAN in 2023 and to supporting plans for the year ahead.

The UK and ASEAN have a deepening partnership that is enduring and long lasting. Business relationships take time to develop in Southeast Asia. Now is the time for UK business to get involved to ensure they are well positioned to be part of ASEAN's exciting future.

www.ukabc.org.uk

EU-ASEAN Business Council

Martin Hayes, Chairman, EU-ABC

Martin Hayes

ASEAN has made a strong recovery in 2022, coming out of the worst of Covid-19 with significant economic growth and record levels of inward FDI flows. This is testament not only to the quick and impressive economic support packages that much of the region put in place during the darker days of the pandemic, but also to the continuing strong fundamentals that underly the reasons why businesses see ASEAN as an attractive place to invest in and do business with.

The region has the world's third largest workforce which is generally young, eager, and very tech-savvy. Collectively, the ASEAN countries have excellent external facing trade deals in place: the RCEP will surely help the region grow further and faster. On top of that, a burgeoning middle-class, significant rates of urbanisation, and being geographically advantageous to reap the benefits of any relocation of supply chains, means that ASEAN should be well placed to continue its growth trajectory, even as the world faces significant economic and geopolitical issues.

European businesses continue to see ASEAN as a thriving region with plenty of opportunity. In our 2022 Business Sentiment Survey, 63% of respondents said that they saw ASEAN as the region of best economic opportunity over the next five years: more than six times the number for the next highest rank place, China. Nearly three-quarters said that they were looking to expand their operations in the region. That is a strong show of faith in ASEAN.

Internally, ASEAN remains a work in progress as an effective trading bloc. The recently announced move to upgrade the ASEAN Trade in Goods Agreement will hopefully spur ASEAN economic integration project to greater depths. This is needed if the region is to achieve its stated aim of becoming a single market and production base. Externally, we hope to see the conclusion of the EU-Indonesia CEPA negotiations in the not-too-distant future, and hopefully the recommencement of FTA negotiations with the Philippines, Thailand, and Malaysia. That would spell a boon for trade and investment relations in both directions.

European businesses have much to offer ASEAN in areas such as sustainable finance, digital technologies, energy transition, pharmaceutical and medical innovation, to name just a few. The EU-ASEAN Business Council will continue to support European business by bringing its best efforts to ensure a continued, sustainable, and just recovery from the pandemic for ASEAN.

www.eu-asean.eu

Understanding sustainable growth in Southeast Asia

Amanda Murphy, Head of Commercial Banking, South and Southeast Asia, HSBC

Amanda Murphy

The HSBC Navigator: Southeast Asia (SEA) in Focus report is a pioneering study of how global companies plan to expand their business operations. Amanda Murphy, Head of Commercial Banking, South and Southeast Asia, HSBC, examines its findings and identifies three dominant trends that will underpin the region's long-term growth.

Our survey[1] canvassed the views of more than 1,500 international businesses across six major economies that are doing business in Southeast Asia. The region is home to a young, increasingly affluent, tech-aware, educated population willing to spend. Moreover, HSBC Global Research[2] expects the six markets of Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam to post economic growth of between 3.6% and 6.7% this year.

The businesses surveyed are also confident about the region's economic prospects. Indeed, as many as nine out of ten plan to expand their presence, with three in five anticipating organic growth of 20% or more over the next 12 months. Equally encouraging, these firms are emerging from a pandemic and operating in a rapidly changing environment. One that is characterised by a core group of drivers referred to as the three Ds: demographics, digitalisation, and dynamism.

Demographics - powered by the people

The ASEAN bloc, which encompasses ten Southeast Asian economies (including the six featured in our study), has a gross domestic product (GDP) of over US$2.6 trillion, and by 2050, the bloc is expected to become the world's fourth-largest economic area. At the same time, its combined population of more than 600 million people is the world's third largest labour force, ranking behind India and China. Within its member states are 31 cities with more than one million people, and almost half of the total population (49.5%) live in urban areas[3].

This is encouraging, but there are roadblocks. Finding the right talent remains problematic for some foreign businesses operating in the region, with almost a third of respondents (30%) citing a lack of skilled workers as one of the biggest challenges they face. To put this into context, concerns about recruitment were only just behind worries about supply-chain issues (31%) and in second equal place with regulatory concerns.

And with sustainability factors demanding greater focus, 32% of firms noted an inability to hire employees with environmental, social, and governance (ESG) expertise as a barrier to becoming more ethically focused.

Digitalisation – making the numbers add up

Southeast Asia is also home to a fast-growing population of digital natives operating in an incredibly innovative climate. Some economies have quickly recognised the shift towards digitalisation. Over the past few months, for example, Malaysia has confirmed its 5G rollout plan, and the central bank has already awarded five digital bank licenses[4]. The Monetary Authority of Singapore (MAS) – the country's de facto central bank – issued four licenses at the end of 2020 - two Digital Full Bank licenses and another two Digital Wholesale Bank Licenses. A year earlier, the MAS had indicated that it would issue five licenses in total to non-bank players, allowing them to operate in Singapore with a minimal physical presence[5]. In Indonesia, seven digital banks are already operational, with another seven awaiting licenses[6].

Meanwhile, the Philippines issued six licenses, but only two are up and running[7]. In contrast, Thailand is still catching up[8], whereas Vietnam is even further behind. Because there is no licensing framework for digital banking, aspiring digital banks need to partner with existing lenders instead[9].

The HSBC study shows that digitalisation ranks at the top of corporate agendas, and companies are happy to spend money to embrace the technology required to transform their businesses. Specifically, half of the respondents said that they intend to invest 5-10% of their operating profit in boosting their digitalisation strategies, while more than a quarter (26%) revealed they plan to invest more than 10%.

This is not to say that companies find this evolution easy, as more than a third (34%) want help developing cybersecurity programmes, 32% require digital payment solutions, and 31% want their banking partners' support in creating e-commerce and digital platforms.

Dynamism – let's get this business started

The entrepreneurialism of Southeast Asia has produced a vibrant start-up scene that rivals any in the world. This has not gone unnoticed by the firms surveyed, with 89% indicating plans to expand into the region's markets over the next two years. Concurrently, more than half (55%) expressed a desire to boost their inorganic growth "significantly", while 61% expect organic growth to increase by 20% or more over the next 12 months.

The determination to participate in Southeast Asia's start-up culture is made more compelling by a statistic brought to light by the analysis. As many as four in nine respondents were unaware of or had no plans to harness: the Regional Comprehensive Economic Partnership (RCEP) and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), two significant free-trade agreements that involve Southeast Asia. Once knowledge of these accords grows, forward-thinking businesses will inevitably look beyond their core markets for opportunities in neighbouring territories.

For balance, it's also worth pointing out that regional trade isn't flawless. Despite a reduction in tariffs, ASEAN still has a number of trade barriers, especially across the services sector. According to the EU-ASEAN Business Council, non-tariff barriers have increased by almost 60% since 2015, overshadowing much of the excellent work on tariff reduction[10].

Ultimately, the analysis reminds us that the key to unlocking growth in Southeast Asia is understanding the dynamics of each market and grasping how businesses across individual economies can connect and work together.

[1]https://www.business.hsbc.com/en-gb/campaigns/hsbc-navigator-sea-in-focus

[2]https://www.gbm.hsbc.com/en-gb/campaigns/global-research

[3]https://www.adb.org/features/asean-12-things-know

[4]https://www.business.hsbc.com/en-gb/campaigns/hsbc-navigator-sea-in-focus

[5]https://www.withersworldwide.com/en-gb/insight/the-evolution-of-banks-in-singapore-things-you-need-to-know-about-the-regulation-of-digital-banks_1

[6]https://www.trade.gov/market-intelligence/indonesia-digital-banking#:~:text=The%20seven%20currently%20licensed%20digital,)%20TMRW%20(Bank%20UOB)

[7]https://forkast.news/headlines/philippines-central-bank-approves-two-more-digital-banks/#:~:text=Of%20the%20six%20digital%20banks,limited%20operations%

[8]https://fintechnews.sg/58911/virtual-banking/thailand-seeks-to-join-the-digital-bank-race-in-southeast-asia/

[9]https://mambu.com/insights/articles/timo-tnex-and-cake-lead-vietnam-s-digital-banking-revolution

[10]https://theaseanpost.com/article/another-race-zero-asean-non-tariff-barriers


Unlock your growth potential in the world's largest trade bloc
Southeast Asia is at the centre of the world's largest free trade agreement, RCEP, covering over 30% of global GDP[1]. With our global network and award-winning[2] trade solutions, we can offer you a single point of access to help create opportunities in the region.
See how at business.hsbc.com/asean
HSBC | Opening up a world of opportunity
1. HKTDC Research 2022
2. HSBC is awarded as the World's Best Bank for Trade Finance in Euromoney Awards for Excellence 2022
Issued by The Hongkong and Shanghai Banking Corporation Limited

Tackling supply chain sustainability

HSBC

Covid-19 exposed the vulnerability of supply chains globally. In the early days of the pandemic, as multiple lockdowns disrupted the flow of raw materials and finished goods around the globe, businesses scrambled to bolster their supply chains' resilience. This had the effect of driving trade finance deeper into the supply chain, steadying suppliers' working capital and thus the supply of goods to the buyer. But in a post-pandemic era where businesses must balance growth plans with ESG goals, the question now being asked is: are supply chains sustainable enough?

Our latest HSBC Navigator: SEA in Focus report findings confirm that sustainability is very much front of mind for international businesses operating in Southeast Asia. Nearly half (47%) of the decision-makers from China, France, Germany, India, the UK and the USA in our survey state they would invest between 5 and 10% of their operating profit into increasing the sustainability of their business in Southeast Asia over the next 12 months.

Sustainability priorities

With supply chains accounting for as much as 80% of the world's total carbon emissions[1], it's no surprise that they are under scrutiny from multinationals looking to improve their sustainability credentials. 37% of respondents cite 'using partners which are more local to my business' as their highest priority, followed by 'reviewing sustainability credentials of suppliers' (36%). Companies are also keen to deepen their connections with the region through investing in and/or supporting local communities (36%). Promoting nature-positive supply chains and supporting a circular economy are also seen as routes to making business in the region more sustainable.

The need for a collaborative approach

While international businesses may be keen to advance their sustainability agenda, SMEs, which can make up to 90% of a supply chain[2], may not have the resources or the expertise to keep pace. Incorporating sustainable practices is costly, and many SMEs are still in recovery mode from the pandemic. To make progress on their sustainability journey they will need support.

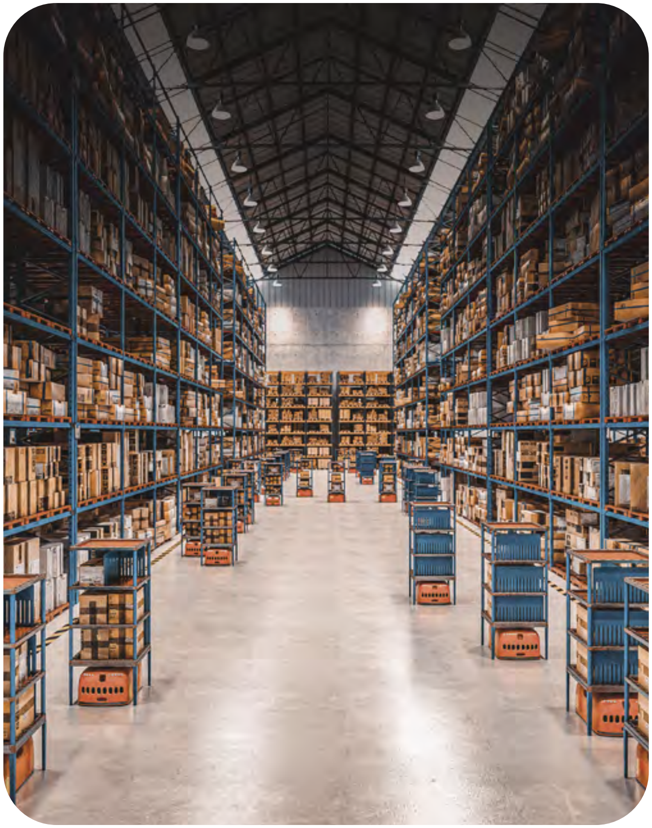
Forward-thinking companies are addressing this issue through sustainable supply chain finance (SSCF) programmes. These offer more favourable financing terms to suppliers that demonstrate their progress in improving their environmental, health, safety and social standards.

Powerful partnerships

The US retail giant Walmart has pledged to remove a gigaton (1 billion metric tons) from its supply chain by 2030[3]. But like many retailers, a large proportion of Walmart's Scope 3 carbon emissions were embedded in relationships with SMEs. To incentivise its suppliers to reduce their carbon footprint, in 2019 the retailer partnered with HSBC in a SSCF programme.

Recently the apparel company PVH has also partnered with HSBC in a SSCF programme, in what is the first tied to both environmental and social objectives, and based on suppliers' sustainability ratings[4].

As demonstrated by these and other sustainable supply chain finance programmes, finance is a powerful lever to improve the sustainability of businesses. Embedding sustainability in global supply chains is not only beneficial for the environment and society, but also for companies' bottom lines.



Seven steps towards a net-zero supply chain

1| Rethink product design – revaluate how it's made, how it's used, start again if needed. Build to last, rather than build to replace.

2| Embrace collaboration – a supply chain connects companies around the globe. Share knowledge, tech, investment, resources – and across the sector too.

3| Build capabilities – invest in training; hire people with sustainability expertise.

4| Invest in R&D – explore how alternative fuels, low-energy manufacture and carbon capture might neutralise or reduce your footprint.

5| Harness the power of data – better data structures mean you measure carbon emissions, water usage etc. across the supply chain in real-time.

6| Think holistically – aim for workable standards and practices rather than frequently changing policies.

7| Enable financing – set up banking partnerships to help small suppliers finance net zero strategies.

HSBC has the tools, network and relationships to support businesses on their growth journey. Find out how we can help at business.hsbc.com

Today, we and many of our customers contribute to greenhouse gas emissions. We have a strategy to reduce our own emissions and to help our customers reduce theirs. Find out more about our climate strategy at hsbc.com/sustainability

[1]https://www.mckinsey.com/business-functions/sustainability/our-insights/starting-at-the-source-sustainability-in-supply-chains

[2]https://www.business.hsbc.com/en-gb/insights/sustainability/what-you-should-look-for-in-a-supply-chain

[3]https://corporate.walmart.com/newsroom/2019/05/08/walmart-on-track-to-reduce-1-billion-metric-tons-of-emissions-from-global-supply-chains-by-2030

[4]https://www.pvh.com/news/pvh-hsbc-partnership


Realise your sustainability ambitions in Southeast Asia
In a world where sustainability and profitability go hand-in-hand, going green can offer opportunities for your business to transition and grow. As Asia's Best Bank for Sustainable Financing[1], our expertise can help you unlock next-generation climate solutions.
See how at business.hsbc.com/asean
Today, we and many of our customers contribute to greenhouse gas emissions. We have a strategy to reduce our own emissions and to help our customers reduce theirs. Find out more about our climate strategy at hsbc.com/sustainability
HSBC | Opening up a world of opportunity
1. HSBC is awarded as Asia's Best Bank for Sustainable Financing in Euromoney Awards for Excellence 2022
Issued by The Hongkong and Shanghai Banking Corporation Limited

Finance: Youthful middle-class creates demand

There are powerful factors which make the financial sector in ASEAN countries an attractive proposition for investors and institutions. A young population with a growing middle-class, a digital economy that is accelerating at pace and an entrepreneurial mindset are combining to create a myriad of opportunities.

Yet it is important to recognise there are issues which need to be addressed. For instance, the Asian Development Bank[1] reports that the financial sector struggles with challenges such as the lack of long-term finance for infrastructure and limited financial access among households and small businesses.

At the same time, however, it also highlights new opportunities around more recent developments, such as the increasing emphasis on climate change finance, particularly in alignment with the Paris Agreement, and building financial frameworks to address additional risks, such as climate-related disasters and pandemics.

With 383 million people under the age of 35, ASEAN countries have a significant number of young people (61% of the total population)[2]. Importantly, this demographic is very aware of the need to be skilled and technologically proficient.

According to a survey by the World Economic Forum (WEF)[3], 15-35 year olds in Southeast Asia are acutely aware of the challenges of the Fourth Industrial Revolution and place a premium on skills development. Young people within ASEAN believe the number one reason they change jobs is to learn new skills, 9.2% believe their current skills are already outdated and a further 52.4% believe they must upgrade their skills constantly.

In addition, the Boston Consulting Group (BCG)[4] projects that the number of middle-income and affluent households in economies such as Vietnam, Indonesia, and the Philippines will grow by around 5% annually through to 2030.

The digital revolution

These factors are now influencing the digitisation of the region's economy, particularly in the financial services sector. E-commerce, for instance, is surging ahead. It is expected to reach about US$340.5 billion by 2025[5], yet that is nowhere near its full potential. The digital economy accounts for only 7% of GDP in the region, compared to 35% in the US and 16% in China[6]. A buoyant e-commerce sector needs other services in order to continue its growth, such as FinTech, digital payments, and data processing. This multiplies the number of substantial investment opportunities in the ecosystem.

Young entrepreneurs are already making themselves known. In Indonesia alone, there are more than 62 million SMEs, one for every five Indonesians according to the WEF[7].

The rapid growth of some of these SMEs typifies the tech-driven transformation influencing financial markets. Grab started as a taxi app in Kuala Lumpur and is now headquartered in both Singapore and Indonesia. The Indonesian e-wallet, Ovo, illustrates the opportunities in a country where half the 270 million population do not have bank accounts, yet most have mobile phones. As of 2019, it was valued at US$2.9 billion and had been downloaded more than 100 million times[8]. In May 2021, another two Indonesian tech businesses, Gojek and Tokopedia, merged in a US$17.2 billion deal to form the GoTo Group, a tech giant that now contributes 2% to Indonesia's GDP.

Not every start-up is going to end up as big as GoTo, but its history shows the salient factors. The country itself is vast and is home to the world's fourth-largest population and has a rapidly growing middle-class.

Apps creating opps

These examples also demonstrate that in ASEAN markets, many consumers take a 'mobile-first' approach, fuelling the rise of digital ecosystems, including highly integrated 'super apps' that offer a one-stop-shop for a range of services.

Wary of the increasing, digitally driven competition, many of the large incumbent financial service organisations are investing in their own tech platforms to respond to consumers' evolving expectations. Singapore's Overseas-Chinese Banking Corporation, for example, launched a 60 minute mortgage approval service for Singaporeans in May 2020, by leveraging automation and straight-through processing of mortgages originated online. In 2020, 30% of loans were applied for and executed through this platform .

Local governments are also adapting, setting economic goals which cater to its growing and technologically literate middle-class. Thailand has launched its 4.0 initiative, a 20 year strategy to pivot towards a digital economy, while the Philippines central bank has approved a Digital Payments Transformation Roadmap with the aim that it will be 'cash-lite' by 2023 .

Investing in innovation

This triumvirate of changing consumer habits, new payment channels and commitment from local regulators has boosted digital innovation. In Singapore for example, the Government is playing an active role in promoting blockchain developments. Its central bank is leading the development of a blockchain network prototype, Project Ubin, to create a multi-currency payments system for cross-border clearing and settlements globally – potentially the world's first.

Overall, the region is full of exciting prospects for financial services products which can combine local insights and understanding with agility and innovation.

[1]https://www.adb.org/what-we-do/sectors/finance/overview
[2]https://www3.weforum.org/docs/WEF_ASEAN_Youth_Survey_2019_Report.pdf Page 5
[3]https://www3.weforum.org/docs/WEF_ASEAN_Youth_Survey_2019_Report.pdf Page 4
[4]https://www.bcg.com/publications/2021/asean-manufacturing
[5]https://www.bain.com/globalassets/noindex/2021/e_conomy_sea_2021_report.pdf Page 8
[6]https://www.bain.com/insights/advancing-towards-asean-digital-integration
[7]https://www.weforum.org/agenda/2021/09/how-can-indonesian-smes-scale-up/
[8]https://www.reuters.com/business/grab-take-majority-stake-indonesias-ovo-2021-10-04/

Global Expansion made easy: How an Employer of Record can efficiently and effectively expand your business footprint in the ASEAN region

Charles Ferguson, General Manager, (APAC) at G-P (Globalization Partners)

Charles Ferguson

Understanding and complying with local employment laws and recruiting staff in a new territory can prove a major challenge to any business expansion plan. Charles Ferguson, General Manager, (APAC) at G-P (Globalization Partners), explains how using a Global Employment Platform™ can quickly and cost-effectively, simplify the process.

Could you explain the role of an Employer of Record?

An Employer of Record (EOR), allows you to hire around the globe without setting up a legal entity. The EOR serves as the legal employer while the customer manages and directs the daily work of their new team member.

Partnering with an EOR will allow businesses to bypass the tedious and lengthy processes associated with entity set up, enabling companies to hire talent right away in a compliant manner. This broadens the scope for business expansion by allowing the customer to test multiple new markets and find the best talent where they need it in a timely and cost-effective way.

What are the principal benefits to a business in using an EOR like G-P?

As the industry-leading (EOR), G-P helps growing companies unlock their full business potential by making it possible to build highly skilled, global teams in days instead of months. Through our SaaS-based platform, we help find, hire, onboard, pay and manage team members quickly and compliantly, to expand growth opportunities for everyone, everywhere – without the hassle of setting up local subsidiaries or branch offices.

With G-P, customers receive around-the-clock access to the industry's largest and most experienced team of global HR experts, who assist with questions about hiring talent in over 187 countries and consistently achieve a 98% customer satisfaction rating.

How did this industry develop, and what is the history of G-P?

G-P is the trailblazer that launched the EOR industry. Our company founder and Executive Chair, Nicole Sahin, is the visionary creator of the industry which is at the forefront of future work.

Nicole founded G-P while witnessing first-hand in a previous role how time-consuming, complicated and costly, global expansion was for companies wishing to grow beyond their geographical borders.

Today, the need for flexible work is greater than ever and G-P's AI-driven technology is enabling the future of the everywhere workforce. We offer greater access to global talent, the ability to scale remote teams and grow revenue faster – anywhere in the world, as well as onboarding global talent while minimising costs and risk.

What differentiates G-P from other recruitment businesses?

In August 2022, G-P was named EOR industry leader by research firm NelsonHall for the second time, and then in September 2022, G-P was named the leader in Everest Group Employer of Record Solutions Peak Matrix Assessment 2022. These analyst reports state that G-P stands out for its continued technology innovation to meet fast-growing future market needs. This combined with 95% of new client onboardings done through their owned legal entities, ensures both compliance and security, positioning G-P as a clear leader in the market.

The G-P solution is available in 187 countries, and a global team of in-house legal and HR experts provide round-the-clock support and delivers 98% customer satisfaction ratings consistently. We also engage with our customers online in 19 different languages and offer payments in over 180 countries.

What is G-P's corporate strategy and what are its core values?

Our tagline, "Global Made Possible" is at the heart of what we do – we break down barriers for global businesses to enable employment opportunities for everyone, everywhere. We are partners for growth, beyond borders and boundaries and unlock the possibilities of the everywhere workforce.

Underpinning this is the G-P Triple Bottom Line, where we prioritise happy customers, happy employees and happy shareholders. We believe we can be hungry and humble at the same time in delivering unparalleled product excellence and customer satisfaction.

How long has G-P been active in the ASEAN region?

G-P has had an active presence delivering our technology in the region for seven years. We established our revenue team in APAC with headquarters in Singapore in 2020, and we continue to expand our team on the ground as our customer base grows. We now have many team members in Hong Kong, Japan, Korea, Malaysia, Taiwan and the Philippines as well as Australia and New Zealand.

Are there any features of ASEAN that make EOR a particularly attractive option?

The ASEAN region is an important growth area for G-P. We are excited about the prospects here as we see a considerable amount of FDI flowing into the region with many companies expanding to new markets across Southeast Asia.

The region's population of 680 million – consists of mostly young, tech-savvy, educated individuals. This is a haven for talent, particularly for international companies who are eager to expand and seize opportunities

> Today, the need for flexible work is greater than ever and G-P's AI-driven technology is enabling the future of the everywhere workforce.

in this dynamic region. The incredible speed of digitalisation, the dynamic start-up scene, and political stability have attracted some of G-P's biggest customers to the region, where they can access this rich talent pool by leveraging our presence here.

How has the growing trend towards remote working affected G-P?

We know that remote work works. But expanding your global workforce brings complexity as well as opportunity. That is where G-P comes in, enabling the future of the everywhere workforce. We are connecting ambitious companies to global talent and talent to opportunities.

We are using technology as a force for good, helping people realise their potential and for companies to do the same. In the last year alone, we have expanded our platform to include new innovations: G-P Recruit, G-P Contractor, and G-P API. This powerful combination within the platform provides everything companies need to find and hire talent efficiently and ethically anywhere, just as quickly and easily as they would hire locally.

What are the key drivers of growth for your business across the ASEAN region?

The ASEAN region holds great opportunities for companies and investors, from a business growth perspective as well as having a pool of educated, tech natives.

With many start-ups and scale-up businesses keen to expand quickly into other markets, one of the quickest ways to do so can be to hire locally. Another approach can be to facilitate cross-border mobility and the G-P solution makes both these options fast and easy.

EOR services like those offered by G-P, have skyrocketed across the region as they make hiring across borders easier by removing the need to have a physical presence in the country while ensuring that legal and HR compliance, from payroll processing and employment, is met.

What is your message to businesses seeking to enter or expand in the ASEAN region?

With a digitally savvy population and a high-growth economy, the ASEAN region represents a huge growth opportunity for international companies.

With cultural and linguistic barriers, not to mention complex local laws and regulations, doing business in the ASEAN region can be challenging. However, having local hires on the ground can help your business overcome many of these issues.

Working with G-P can assist you with hiring local talent as we take the administrative headaches away and help you handle the legal, HR, and payroll compliance of your local talent, so you can focus on growing and expanding your business and customer base.

Consumer Markets: E-commerce on the rise

The ASEAN region is on the brink of a major leap forward economically, a step change offering unique opportunities to investors agile enough to participate. Generally, these are not mature markets, yet consumers are technologically literate and keen to adopt new ways of purchasing products and services as demand grows.

In part, this growth will be fuelled by the world's largest FDA, the Regional Comprehensive Economic Partnership (RCEP), which links ASEAN with major economies, including China, Australia, and Japan, covering a population of 2.2 billion, or almost 30% of the world's population, with a combined GDP of US$25 trillion[1].

ASEAN is also a significant market in its own right. At present it is the world's third most populous economy and, by 2030, is expected to become the world's fourth largest. Domestic consumption, which powers roughly 60% of GDP, is estimated to double to US$3.9 trillion[2] in that time. ASEAN will see 140 million new consumers, representing 16% of the world's consumers – many of whom will make their first online purchase and buy their first luxury product. Income levels are rising, with regional GDP per capita expected to grow by an annual 4% (similar to the US) to US$6,400 in 2030[3], causing many product categories to reach inflection points where consumption takes off.

Growing middle-class

This consumption will come from a growing middle-class which is comparatively young and more than competent in using innovative technology to cover their needs. In 2030, the median age in the Philippines will be 29 while Indonesia's will be 32. At the same time, around 575 million people, or some 80% of the ASEAN population, will be online. This in turn enables new entrants to market to use technology to grow quickly, without needing to invest so heavily in physical assets. This can already be seen in sectors such as banking, health and education.

In Indonesia, 65% of the population lack basic bank accounts and 87% have not borrowed or used credit cards in the past year because conventional banking requires high-income requirements and a physical branch. Whereas digital banks and mobile e-wallets need neither. FinTech companies assess credit risk through data on consumer behaviour rather than knowing an individual customer. Their agent networks also extend credit to rural communities and connect to traditional businesses. Consequently, e-wallets are expected to grow 9% annually through to 2030, compared with an estimated 2% growth for traditional bank accounts. The pace is being set by innovative players such as Jenius and Digibank (in digital banking), GoPay and Ovo (in mobile wallets), and Kredivo and Akulaku (in credit).

Geographical barriers have also played their part in encouraging the uptake of digital services, particularly in healthcare and education. For example, Indonesia is the world's largest archipelago, with more than 17,500 islands, while the Philippines has 2,000 inhabited islands and Vietnam has expansive mountain ranges and impenetrable jungles.

Digital potential

Digital healthcare platforms can deliver swift and affordable services to both congested cities and remote rural areas. Consultations, diagnoses and prescriptions are all possible through video, voice calls and chats. For example, Halodoc has roughly two million users in Indonesia,

together with a network of 20,000 doctors and 1,000 pharmacies. In the Philippines and Vietnam, companies such as Kitika and Doctor Anywhere offer similar services.

Online education platforms have also proved popular. In Indonesia, the country's two largest public universities, the Indonesia Stock Exchange, and a privately-owned TV station collaborated to create IndonesiaX[4], which offers free and paid-for courses online. Similar services are offered through institutions such as AMA University and Topica in the Philippines and Vietnam.

The driving force for digital consumption will be Millennials (born 1981-1995) and Generation Z (born 1996-2012), accounting for 75% of ASEAN consumers and far more open to different ways of using purchases. In the same way as owning music in the form of vinyl and CDs has been superseded by streaming services in the UK, these younger consumers are happy to rent or share items once purchased outright.

Fashion 'sharing' brand Style Theory, for instance, started in Singapore and has expanded into Indonesia. Apart from claiming "to fulfil every woman's dream of having an infinite wardrobe" the service says it is more sustainable, preventing huge volumes of unwanted garments from going to landfill.

The role for foreign investment is demonstrated by iFlix, a Malaysia based video on-demand service that was founded by British media entrepreneurs and is now available in Malaysia, the Philippines, Thailand, Indonesia, Brunei, Vietnam, Myanmar, and Cambodia[5]. The service focuses on local content, offers a monthly subscription and can be viewed through apps available on Google Play.

These examples show the immense opportunities ASEAN has for investors with an innovative and compelling service to offer to a fast-growing consumer market that is open to new ideas.

[1] https://www.uobgroup.com/asean-insights/markets/asean-growing-consumer-markets.page?path=data/ai/61&cr=segment
[2] https://www3.weforum.org/docs/WEF_Future_of_Consumption_in_Fast_Growth_Consumer_Markets_ASEAN_2020.pdf
[3] https://www3.weforum.org/docs/WEF_Future_of_Consumption_in_Fast_Growth_Consumer_Markets_ASEAN_2020.pdf
[4] https://abconlinecourses.com/open-edx-use-case-indonesiax/
[5] https://www.techinasia.com/iflix-ceo-mark-britt-steps-down

Atos addresses IT and decarbonisation challenges across the ASEAN region

Purshottam Purswani, CTO, Atos APAC

Purshottam Purswani

Atos is a global leader in secure and decarbonised digital solutions, being ranked number one in managed security services worldwide by revenue. The end-to-end services it offers helps clients adopt technologies that improve efficiency, reduce costs, drive innovation and also contribute significantly to decarbonisation and sustainability goals which are a key focus in government agencies and businesses in this region, as Purshottam Purswani explains.

Where is ASEAN in digital transformation?

This region is home to abundant natural resources. Over the past two decades, all countries in Asia have thrived economically and have mostly developed social and political structures that allow them to boost economic development. These structures differ vastly across the region, and the political, social, and economic diversity is much larger than in the rest of the world.

The citizens of ASEAN member countries have generally become more affluent, with rising GDP in each country, with combined regional GDP more than quintupled from US$613.551 billion in 2000 up to US$3.11 trillion in 2020. The key industries which are focus areas for ASEAN are in agriculture, manufacturing, finance and export. At the same time, we see that the electronics and technology sectors (robotics, cloud, data analytics, and IoT) are emerging and are becoming strong contributors to driving the GDP.

Covid-19 has accelerated digital transformation in the region by 10 years. As the most populated region in the world, the ASEAN nations are set to be at the forefront of the global digital landscape. Many countries in APAC have released national digitalisation strategies. Singapore released it's Smart Nation 2025 Blueprint, Indonesia and Malaysia released strategies to Go Digital and Thailand announced its vision to become a Digital Hub in ASEAN.

Atos' approach through ASEAN is not to view the region through a single lens or to treat it as a consistent "region," but we are granular in our various states of development; some countries have developed and are way ahead in terms of technology adoption, like Singapore. At the same time, they carry the largest number of legacy systems due to the early adoption of information technology. Some countries like Indonesia and Malaysia are on the development path with their digital transformation strategy.

What do you see as the ASEAN region's principal digital needs?

From a technological point of view, the region will require a digital economy underpinned by leading

Information and Communications Technology (ICT) solutions, an open and green industry eco-system and an effective course that addresses gaps in equality. Cloud and computing technologies will be the cornerstone of the digital frontier.

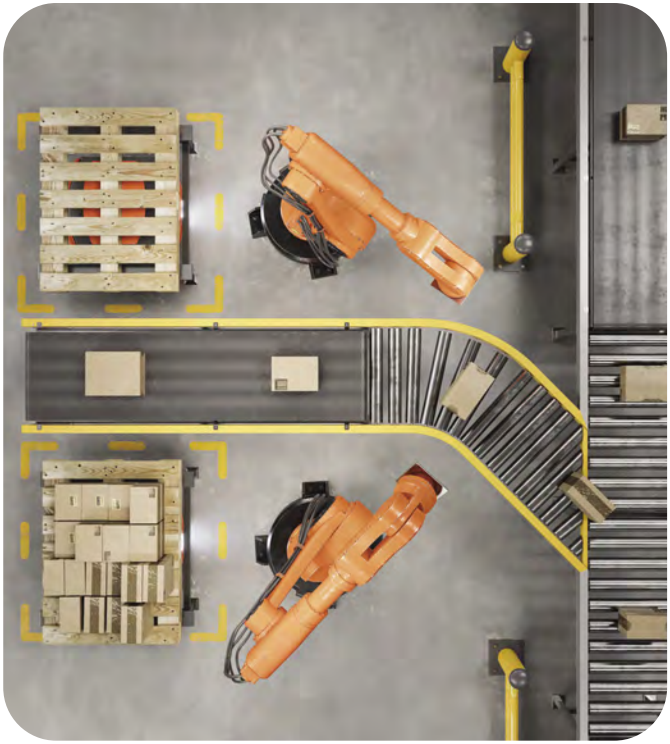
In an age of digital disruption, the public sector has the opportunity to champion a new digital vision. Atos seeks to highlight the immense opportunities associated with a strategic programme of digital transformation in the provision of digital public sector services that may include:

Use of robotics and automation to drive greater efficiencies and release talent within the public sector; cyber security and the need to win public trust over Government use of personal data; next generation business process services; modernising payments between citizens and government; pioneering technologies such as Augmented Interactive Reality (AIR) to re-invent the way services are delivered and use of big data and analytics to identify risks and opportunities to support evidence-based decision-making.

Atos recognises the need for both businesses and governments to unite behind a shared vision to combine the best elements of rapidly evolving technology and apply them to deliver a smart digital eco-system. The objective must be to improve public services, deliver greater efficiency and enhance citizen experiences across departments through this new approach.

How will the general population in ASEAN benefit from increasing digital services?

One of the key areas of public sector digitalisation will be developing citizen-centric digital services to transform public service delivery through the use of technologies such as data science and analytics, artificial intelligence and machine learning. Governments need to create a more integrated, unified platform to deliver a streamlined, more efficient and richer citizen experience.



“Joined-up” has become a buzzword within the public sector. The ability to incorporate digital channel shift into established structures, so that everything joins together is key. But all too often, citizens have to use multiple access points to get to what they need. That is because it is challenging for large government departments to make change in collaboration with others especially when so many silos are still in place.

Individuals do not want to have to re-key their personal details each time they access a service. More integration is needed across departments, with a common digital platform that learns from citizen interactions. The pandemic brought into focus the intense need for multi-party systems to enable seamless data sharing between individuals and organisations, to drive efficiency in applications such as contact tracing and frictionless payments.

What is Atos doing in the field of cybersecurity?

In the recent past, cyber protection for governments was chiefly about safeguarding national security and shielding secrets and data. Today, lines of defence have moved out of the world of espionage into every part of our public and private infrastructures. There has been a blurring of the lines between public and private. The result is that there are large numbers of daily touch points between citizens and private sector partners delivering services on behalf of government.

These companies need to work with public services (and other vendors) to prove their ability to deliver government's three key data requirements: availability, confidentiality and integrity. Critically, all three are required simultaneously and continuously – even more so than in the commercial sector.

Governments need to find a balance between security, freedom and confidence. This balance is founded on achieving the right levels of Trust and Compliance. We give digital marketplace leaders (such as Amazon, eBay and the like) our personal and payment details because we trust them. Government must continue to win the same level of public trust – especially as wide-scale digital transformation progresses.

Compliance underpins this trust. In essence, it is about Government working to protect citizens' interests by putting constraints on the way services are provided. It is important to make sure that regulatory and legal obligations stay relevant and responsive as technologies advance. Atos believes that protection from cyber threats needs to be moved nearer and nearer to the data itself.

Atos is developing 'data-centric security', where each piece of data is surrounded by its own metadata (data about data) that define how it can be accessed, where and by whom – so the data actually helps protect itself. Governments must accelerate the transformation of public services through the smart application of digital technology. Digital technology has the power to transform the way that users interact with a wide range of public services from healthcare to criminal justice.

How is Atos helping the process of decarbonisation and the building of sustainable businesses?

Our ASEAN customers are seeking solutions from us for a future-fit low-carbon economy and are looking for solutions that can benefit them, such as recommendations to reduce the carbon footprint of the IT environment, and to align digital decarbonisation ambitions with their current product portfolios. Atos has a unique combination of IT expertise and extensive 'decarbonization' expertise, following our acquisition of EcoAct, a climate consultancy firm with over 15 years experience, enabling us to improve efficiencies in order to reduce both carbon emissions and costs as well as driving innovation to achieve success.

What are your key areas of focus across the ASEAN region?

For Indonesia, it is driving High-Performance Computing and Security for the public sector, defence, manufacturing, financial services, and insurance verticals. Malaysia is our centre of excellence for the digital workplace and strongly focuses on cloud computing and digital transformation using a low-code approach. For Singapore, the focus is on SAP, cybersecurity, cloud engineering, and application development (DevOps); the team focuses on developing and growing capabilities in data science across all verticals in Singapore. For Thailand, we deliver product lifecycle management solutions, enterprise resource planning solutions, application and data management services, and infrastructure & data management.

Your trusted real estate partner

James Puddle, CEO & Founder, One Global Group


James Puddle

Introduction

One Global Group was launched by James Puddle in Singapore in 2017 with the aim of changing the way property was sold not only in ASEAN, but globally. He did this by assembling the best teams in major cities around the world and creating a 'one-stop-shop' for property buyers on an international scale.

Creating teams with diverse cultures, a passion for real estate and customer service, has developed the best experience for clients and driven the business to greater heights.

One Global Group has always set out to provide a global reach with local expertise so that customers get the personal care of a boutique agency with the services of a large one. As the business has grown, new services and teams have been added, such as proptech and research teams, expat-focused services, and even a private office arm which acts as a real estate investment advisory service.

Today, One Global Group has offices in major markets in six countries globally including Singapore, Malaysia, Hong Kong, Shanghai, the UAE, South Africa, and the UK. They are also proud members of Leading Real Estate Companies of the World® (LeadingRE). The invitation-only association of 550 businesses in 70 countries is home to the world's prime independent residential brokerages, alongside its luxury marketing division, Luxury Portfolio International® (LPI). Both complement One Global Group's international reach.

"One-Stop-Shop" for real estate

By creating an international one-stop-shop for clients, One Global Group not only provides a plethora of specialised services under one roof, but also goes to great lengths to demystify property investments and ensure that clients have complete transparency. This is achieved through the use of technology; clients have total visibility of the purchasing process 24/7 through innovations such as One Global Connect™, their proprietary marketing software.

One Global Group's technology offerings also provide clients with the ultimate in research ability. Through the Group's innovative Data Hub, they're able to get real-time insights into local markets. This is vital in today's world when it comes to purchasing a property, and allows for better educated decision-making and a greater level of investment confidence for home buyers.

Expanding business

As part of its DNA, One Global Group is focused on both local and global markets. From its headquarters in Singapore, the Group provides its services to both the local market and overseas. When the business was launched, the team found that investors purchasing

residential properties overseas from Singapore also had a local property portfolio that they wanted One Global Group's experts to manage. Local services have since expanded to include commercial and industrial sales and leasing teams, such as One Global Commercial. The teams provide a wide variety of sales strategies such as auctions, closed bidding, closed tenders, expressions of interest, and private treaty.

On a global scale, One Global Group's teams focus primarily on the Australian and UK markets, however they are able to facilitate new build, secondary market, prime purchases, and global leasing. The Group also has specialised services for expats around the world to assist in managing property portfolios, mortgages, lettings, and management.

In addition to this, there is a business arm called One Global Private Office which works with private investors, family offices, and institutional investors. The team manage everything from project marketing and sales, to a specialised service called One Global Prime, which solely focuses on luxury assets.

One key aspect of the Group's success has been its ability to educate clients through a mixture of technology, content, and events. Overseeing One Global Group's research and technology offerings is the One Global Labs team. They focus on three key areas – research, data, and tools – to provide next level transparency and enhance the property investment experience. One Global Group's Marketing and Events team also initiate monthly marketing, events, and seminars, which provide face-to-face opportunities to discuss various topics in-person and virtually.

One Global Group also provides B2B services. One Global Group's Marketing and Events team offer business clients fully integrated marketing services. Their expertise enables the successful creation and launching of development brands in multiple territories. This includes ongoing multi-channel marketing campaigns and events.

Furthermore, the Group has an in-house consultancy team of experts that provide businesses with advice in many areas. The One Global Management and Consultancy advise institutional investors on entering the BTR market and supports organisations looking to expand into the territories the Group operate in, amongst other areas of expertise. Having a trusted partner on the ground helps business clients maximise their success.

The future

One Global Group continues to innovate and break the norm in the real estate industry, both locally in ASEAN and on a global scale. For 2023, the Group has many exciting plans and look forward to rolling them out over the coming year.

Infrastructure: Foundation for success

ASEAN countries fully recognise that they must invest in transport infrastructure if they are to achieve their potential. The region is home to 650 million people, however it faces significant geographic and topographic challenges. Indonesia, for example, consists of more than 17,000 separate islands, while the Philippines is made up of more than 7,000.

The need to upgrade infrastructure was recognised in the ASEAN Secretariat's Master Plan on ASEAN Connectivity 2025[1] which stated: "To promote travel, investment and trade across the region, ASEAN needs to significantly enhance its infrastructure investment and productivity".

The governments in the region know they can only realise the opportunities offered by the 2020 trade pact – the Regional Comprehensive Economic Partnership (RCEP) – through improving infrastructure both within and between member states. RCEP created duty-free access to the majority of goods which could enhance investment in every ASEAN country, but this will only work with necessary ports, roads, railways and airports capacity available to transport people and products.

Private sector involvement

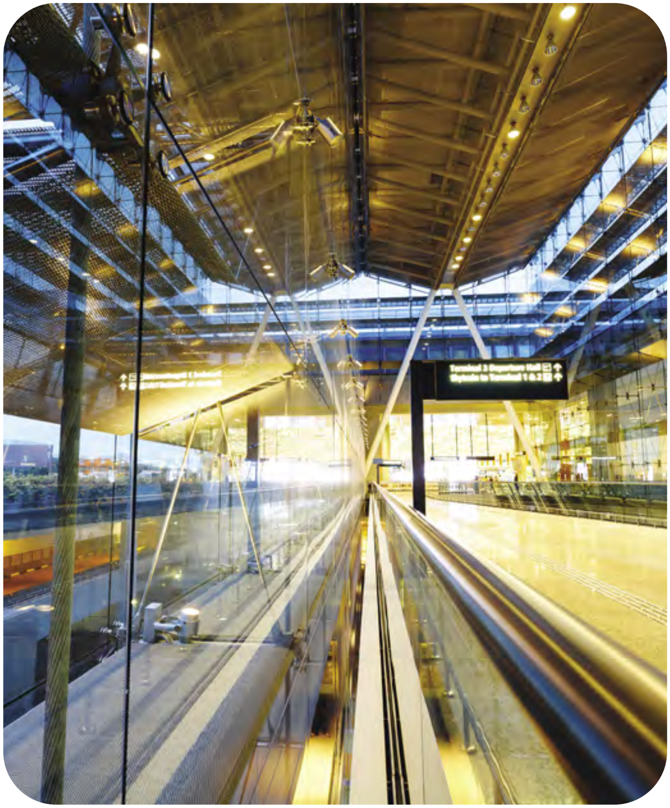
ASEAN governments are open to private sector involvement to help them achieve these objectives, usually through PPP arrangements. Many governments have announced comprehensive programmes to attract investment and engage private sector partners in developing their infrastructure.

In 2021, for instance, Vietnam's transport ministry announced its transport infrastructure masterplan between then and 2030, which is estimated to cost between US$39.4 billion and US$62 billion. Under the plan, Vietnam will build thousands of miles of new expressways, high-speed rail routes, deepwater ports, and new international airports. The Government intends for the country to achieve a cargo transportation capacity of 4.4 billion tonnes per year, and a road transport capacity capable of moving 2.76 billion tonnes of cargo and 9.43 million passengers per year[2]. Two of the major projects, the Dau Giay-Tan Phu Expressway and the Gia Nghia-Chon Thanh Expressway, are to be built using the PPP model[3].

In February 2022, Thailand's Ministry of Transport announced plans for 37 infrastructure projects worth a total of US$42.8 billion, with some to be funded by PPPs. Among these, US$18 billion will be directed to five railway projects, US$8 billion will go to 12 road projects, US$1.7 billion for improvements to airports including Don Muang Airport in Bangkok, US$218.5 million to fight coastal erosion and rebuild beaches, and US$38 million for a new logistics centre[4].

In the Philippines, the Government launched a 30 year National Transportation Infrastructure Program in October 2021, overseen by the National Economic Development Authority (NEDA). It includes a list of core projects to be implemented between 2023 and 2052, that can be updated every five years by NEDA. This includes the North Luzon Expressway to Ilocos Region, the Subic-Clark Railway, and the Mega Manila Airport System[5].

Indonesia continues to commit large amounts of government spending to transport infrastructure. In 2022, seven important toll road projects were given approval after a finance package worth US$524 million was agreed, enabling contractor Wasikita Karya to start work on toll road connections. In 2021, a number of major projects were completed, including: KRL Jogja – Solo, Kuabang Airport, North Halmahera; Jakarta Manggarai Station Flyover; Wae Kelambu Multipurpose Terminal, Labuan Bajo Port[6].



Overseas investment

ASEAN countries have often welcomed foreign investment in their transport infrastructure, mainly from Japan in the past, although China is now the main influence due to its Belt and Road Initiative (BRI). First proposed in 2013, the BRI aims to improve China's connectivity to global markets with massive investments in flagship projects throughout ASEAN.

> Vietnam will build thousands of miles of new expressways, high-speed rail routes, deepwater ports, and new international airports.

Some, such as Malaysia's East Coast Rail Link (ECRL), have been labelled 'contentious' and perhaps illustrate why other investment partners are welcome. The scheme is to connect the eastern coast of Malaysia with the western part of the country under a deal whereby the 665km railway is built by the Malaysian unit of China Communications Construction Company (CCCC). CCCC will then operate the completed line in a 50:50 joint venture with Malaysia Rail Link (MRL). The line is due to be completed by 2028[7].

Cambodia and Lao PDR have also welcomed substantial Chinese investment through BRI projects. Currently, China has three major projects underway: a US$1.9 billion 190km expressway connecting the capital Phnom Penh to Preah Sihanouk Province on the coast; US$836 million Siem Reap international airport; and the new US$1.43 billion Phnom Penh international airport. All are scheduled to be completed around 2023 and are Build-Operate-Transfer (BOT) projects[8].

In Lao PDR, the flagship BRI initiative is the China-Laos Railway, which started operating in late 2021. This converted Lao PDR from a landlocked country to a land-linked one, cutting the travel time between China's Kunming to Lao capital Vientiane to around 10 hours. According to the World Bank, the new line could "increase aggregate income in Lao PDR by up to 21% over the long-term"[9].

This is the prize that all ASEAN countries are seeking – improved transport infrastructure, in partnership with foreign investors, that also has a tangible impact on GDP.

[1]https://asean.org/wp-content/uploads/2018/01/47.-December-2017-MPAC2025-2nd-Reprint-.pdf
[2]https://www.aseanbriefing.com/news/vietnams-transport-infrastructure-master-plan-three-proposals-for-implementation/
[3]https://www.worldhighways.com/wh10/news/vietnamese-expressway-works-planned
[4]https://thaiembdc.org/2022/02/15/transport-ministry-rolling-out-infrastructure-projects-worth-45-billion/
[5]https://www.pna.gov.ph/articles/1156550
[6]https://www.idnfinancials.com/news/41649/ministry-transportation-continues-development-indonesian-centric-transportation
[7]https://www.railway-technology.com/news/malaysia-east-coast-rail-link-project-costs/
[8]https://www.iseas.edu.sg/wp-content/uploads/2021/07/ISEAS_Perspective_2021_99.pdf
[9]https://www.worldbank.org/en/country/lao/publication/transforming-lao-pdr-from-a-land-locked-to-a-land-linked-economy

Logistics: Technology leads growth

Logistics accounts for some 5% of ASEAN's GDP and employment, providing jobs for around 17 million people[1]. It has a wide array of natural advantages and, combined with governmental commitment and targeted national policies, it is making a huge contribution to national economies.

Initiatives include the Regional Comprehensive Economic Partnership (RCEP) with Australia, Brunei, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, Thailand, and Vietnam.

Under the terms of the RCEP, signatories enable duty-free access to more than 90% of goods that otherwise would include duty. This coincided with the rise of the China Plus One procurement strategy, which encourages companies to improve the security of supply chains through diversifying their sources.

Changing technology and new ways of doing business have also played a part in increasing demand for logistics. ASEAN is now a fast-growing market that is home to more than 360 million smartphone-using consumers and has seen its share of e-commerce grow in recent years. The sector is expected to reach US$142.5 billion in value by 2025, according to a study published by Google, Temasek and Bain & Co[2]. This is nearly four times more than it was in 2019, when it was only US$36 billion. The outbreak of Covid-19 also accelerated and amplified consumers' reliance on e-commerce and created even larger potential opportunities.

Cutting red tape

ASEAN continues in trying to cut red tape with the introduction of the ASEAN Single Window (ASW), an electronic fast-track service for companies going through customs between member countries. Traders can exchange customs documentation through the ASW platform, expediting cargo clearance and reducing paperwork. When first introduced in 2019, only six members used ASW, but a recent symposium[3] reported that all members are now involved. The next move is to integrate the ASW with other countries' electronic customs platforms.

But the pressure is on to streamline the rules and requirements even further. An OECD report stated that further growth and greater prosperity are constrained by regulatory obstacles that impede competition[4].

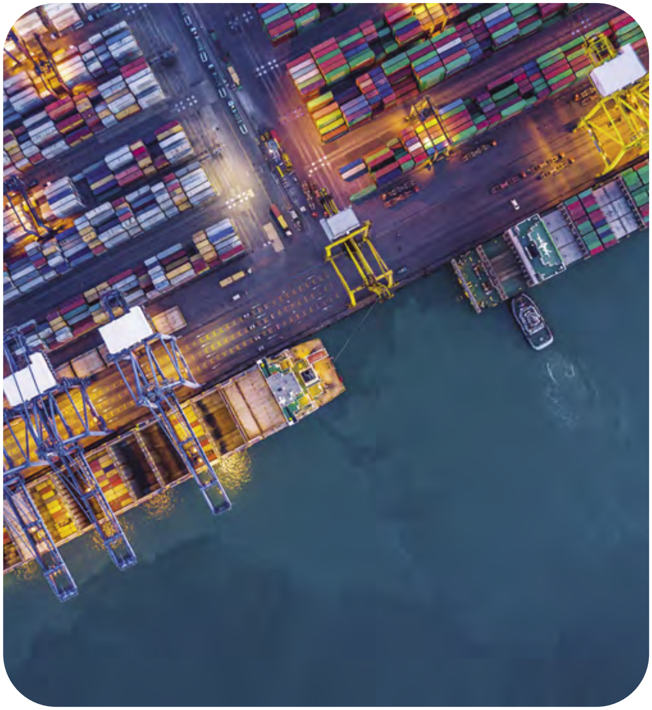
The report found, for example, that logistics costs account for up to 20% of the price of finished goods, almost double the global average, in some ASEAN states. It speculated that reducing barriers to trade and amending FDI restrictions to the global average could deliver an increase to GDP of up to 17% over the medium to long-term[5].

Smart logistics

Meanwhile, ASEAN nations are supporting initiatives such as the ASEAN Smart Logistics Network (ASLN), a platform which aims to promote logistics interconnectivity and integration. This is part of the ASEAN Connectivity Master Plan 2025, which promotes integration between members[6].

So far, two projects have been launched under the ASLN: the Vinh Phuc Inland Container Depot Logistics Centre (superport) between Singapore and Vietnam, and the Phnom Penh Logistics Complex in Cambodia (PPLC).

Managed by Vietnam's T&T Group and Singapore's YCH Group, the Vinh Phuc ICD Logistics Center has more than US$158 million in funding to develop an inland container depot and logistics centre. Once completed, it will be one of the largest logistics centres in North Vietnam, connecting 20 industrial parks by rail, road, and air, as well as linkages with Hanoi, Hai Phong International Airport, and China's Yunnan Province.



The Phnom Penh Logistics Complex (PPLC) is to be developed by YCH Group, the Singapore based integrated logistics and supply-chain provider, together with Cambodia based WorldBridge Group[7]. As with the project in Vietnam, the PPLC will follow YCH Group's 'superport' concept and is estimated to cost US$191.5 million and will begin in earnest in 2023. The PPLC is meant to strengthen Cambodia's standing as a regional logistics hub, because this is the key to its long-term goal of becoming a high-income country by 2050.

Country specific solutions needed

Challenging regulations and creating superports will go some way towards helping ASEAN countries to improve their logistics capabilities, but it is important to note that the issues vary from country to country. The World Bank publishes the Logistics Performance Index, measuring how long it takes goods to clear customs and arrive at their destination. Singapore is ranked 5th. The next country to feature is Thailand (34th) while Myanmar is ranked 139th.

This demonstrates clearly that there is no one specific solution to the challenges posed by logistics in ASEAN countries, meaning that there are opportunities for niche expertise. Some countries, such as Singapore and Malaysia, are turning to parcel lockers to cut out the expensive 'last mile' from the warehouse to the consumer's home, for example. Indonesia has carried out pilot schemes with drones delivering goods to the more remote islands in its archipelago. Meanwhile, some third-party logistics services are reported to lack the software required to optimise their ASEAN operations. The market is there and the red tape is being rolled back, ready for investors to bring their expertise and resources.

[1]https://asean.org/launch-of-reports-on-aseans-logistics-industry-to-drive-growth-and-regional-economic-integration/
[2]https://theaseanpost.com/article/logistics-services-race-intensifies-asean
[3]https://asean.org/symposium-on-asean-single-window-targets-expanded-trade-for-more-inclusive-growth/
[4]https://asean.org/launch-of-reports-on-aseans-logistics-industry-to-drive-growth-and-regional-economic-integration/
[5]https://asean.org/launch-of-reports-on-aseans-logistics-industry-to-drive-growth-and-regional-economic-integration/
[6]https://www.aseanbriefing.com/news/the-asean-smart-logistics-network-an-overview/
[7]https://www.businesstimes.com.sg/asean-business/ych-group-and-worldbridge-group-to-collaborate-on-phnom-penh-logistics-complex

Manufacturing: Moving up the value chain

For many years, the ASEAN region was seen largely as a location for low-wage assembly operations. But there are now a number of significant factors that favour a re-assessment of these countries' roles in manufacturing.

One of these is the upgrading of production processes. Industry 4.0 technologies, including advanced robotics, 3D printing, and real-time digital factory simulation are enabling manufacturers to expand from labour intensive assembly work into producing higher-value goods such as machinery and electronics. These developments indicate a regional manufacturing capacity that can accommodate a wide range of goods and support a growing number of sectors. The region is also adopting digitalisation with enthusiasm, enabling businesses to gain greater control and security over their supply chains.

China Plus One

Security of supply is another important factor driving manufacturing investment in the region. Covid-19 intensified a pressure that already existed, namely, to move manufacturing footprints closer to end markets and away from single sources. This can be seen in the 'China Plus One' strategy[1], where businesses improve the security of their supply chain by diversifying their networks into one or more Southeast Asian markets. Many firms – Intel, Foxconn and LG[2], for example – are moving their manufacturing into ASEAN, with markets such as Vietnam seeing a significant increase in activity.

Southeast Asia has several significant advantages for those seeking a new manufacturing base, with an attractive blend of low costs, speciality skills, and relatively free access to Western and Asian markets. In terms of productivity-adjusted wage rates, ASEAN economies such as Indonesia, Malaysia, the Philippines, and Thailand rank among the most cost-competitive in the world[3].

Educated workforce

But it is not just lower wage costs that attract global players. Among the reasons Samsung cited for selecting Vietnam as a regional manufacturing hub, were the quality of its young and educated workforce, widespread internet access, a domestic venture capital ecosystem, and government incentives and support. Samsung[4] now produces half of its global smartphone output in the country, together with circuit boards, and camera modules. In February 2022, it invested a further US$874 million to make mobile components, including touch sensor modules, linear motors and lenses, bringing its total investment in Vietnam to almost US$2.25 billion.

Free trade pact

The climate for manufacturing has also been significantly improved by the 2020 free trade pact – the Regional Comprehensive Economic Partnership (RCEP). RCEP member countries (Australia, Brunei, Cambodia, China, Indonesia, Japan, South Korea, Lao PDR, Malaysia, Myanmar, New Zealand, the Philippines, Singapore, Thailand, and Vietnam), which have a combined population of 2.2 billion and account for around 30% of global GDP, committed to providing duty-free access to goods that represent 92% of tariff lines. They also pledged to harmonise many rules and regulations that affect e-commerce and trade. This will create greater access to Asia's largest and most developed markets, lower the costs of importing manufacturing inputs, and make it easier for companies to build supply chains that leverage different advantages and skills across the region.

Manufacturers are already taking advantage of this economic integration. Japanese multinational Yokogawa Electrical Corporation illustrates how companies can benefit from distributing segments of the value chain across more than one ASEAN country, benefiting from low costs in one and advanced manufacturing in another. The company makes precision instruments for industries ranging from chemicals to steel to aerospace. It manufactures components and subassemblies on the Indonesian island of Batam and then ships them to Singapore, where Yokogawa has an innovation centre and its regional logistics hub, for final assembly and testing. Semiconductor manufacturer Infineon uses a similar strategy. It assembles and packages more than 400 million semiconductor devices each year in Batam and ships them for testing to Singapore, where Infineon also has R&D and Industry 4.0 centres[5].

Another strategy is to employ ASEAN as a manufacturing base for higher-value, technologically advanced products. Food product manufacturers are leading the way on this front. OmniFoods, a food-tech company set up by Hong Kong based Green Monday, does value-added processing – such as adding flavours and mixing ingredients for plant-based "meats" – in Thailand, for example[6]. The US company Eat Just[7] is building Asia's largest lab-grown meat plant in Singapore, which became the first Government to allow the sale of cultured meat. This will open in 2023 and will house the single-largest bioreactor in the cultivated meat industry to date.

Value chain

The ASEAN manufacturing sector is also harnessing Industry 4.0 technologies to move up the value chain. Singapore, Malaysia, and Vietnam are among the countries that have made advanced manufacturing systems a priority. They have published industry roadmaps and strategic plans and invested in areas such as smart factories, the industrial Internet of Things (IoT), advanced robotics, and cloud computing applications for manufacturing. Samsung's assembly lines in Bac Ninh, Vietnam, for example, incorporate 6,000 robots despite the nation's low labour costs. Similarly, the US$209 million Hyundai Motor Group Innovation Centre in Singapore will incorporate technologies such as AI and industrial IoT into manufacturing processes for cars[8].

Today's ASEAN markets offer investors and manufacturers far more than cheap labour costs: they provide unmatched opportunities to reshape the economics, the technologies and the logistics of global manufacturing.

[1]https://www.business.hsbc.com/asean/asean-as-a-global-manufacturing-hub
[2]https://asia.nikkei.com/Business/Technology/Samsung-injects-920m-into-Vietnam-factory#
[3]https://www.bcg.com/publications/2020/manufacturing-strategy-built-trade-instability
[4]https://asia.nikkei.com/Business/Technology/Samsung-injects-920m-into-Vietnam-factory#
[5]https://www.bcg.com/publications/2021/asean-manufacturing
[6]https://www.foodnavigator-usa.com/Article/2021/08/26/Asian-plant-based-meat-sensation-OmniFoods-makes-US-retail-debut-with-OmniPork
[7]https://www.bloomberg.com/news/articles/2022-06-10/eat-just-to-open-asia-s-largest-cultivated-meat-facility-in-2023#xj4y7vzkg
[8]https://www.youtube.com/watch?v=AQ2CCsOjY0s

Accelerating technological innovation for a sustainable future

Dr Bicky Bhangu, President, Southeast Asia, Pacific & South Korea, Rolls-Royce


Dr Bicky Bhangu

Rolls-Royce has had a major presence in ASEAN since the 1950s, with Singapore serving as the regional centre for its Civil Aerospace, Defence and Power Systems businesses.

Dr Bicky Bhangu, President, Southeast Asia, Pacific and South Korea, describes how the global power group is committed to delivering clean, safe, and competitive solutions across its operations.

What is Rolls-Royce doing to help achieve a carbon-neutral world?
As a leading power systems provider, we have a fundamental role to play in creating a resilient and inclusive net zero carbon future. We are proud to have joined the UN Race to Zero campaign in 2020, and have set clear and ambitious targets to become a carbon neutral business by 2050.

In June 2021, we announced our net zero strategy focusing on developing new technologies, accelerating the take-up of sustainable fuels, and driving operational efficiency. We pledge to make all our new products compatible with net zero operations by 2030, and to achieve net zero emissions in all operations and facilities in the same year.

How are you trying to address the challenge of enabling aircraft sustainability?
Technology plays a key role in delivering the breakthroughs society needs for a sustainable future.

Rolls-Royce has decades of experience in pioneering advanced solutions in aviation, shipping, and power generation. Many of our products have evolved to have significantly higher fuel efficiencies.

Our Trent XWB engine, the most efficient large gas turbine engine in service today, is an example of how we are making technological advances in our current product range, with the engine being 15% more fuel efficient than the first generation of Trent engines manufactured in the 1990s. Our Ultrafan is the largest aero-engine in the industry and will power both narrow and wide-body aircraft, with a significant 25% fuel efficiency improvement compared to the first-generation Trent model.

We have also made significant progress in the testing of Sustainable Aviation Fuels, critical to reducing the commercial airline industry's emissions in the short term.

Does Rolls-Royce see electrical power as a key route to carbon neutrality?
Our breakthrough technologies help decarbonise the complex, critical and carbon-intensive sectors in which we operate, including transport and energy, to drive sustainable future economic growth. We are now in a new and exciting era where electric power can reduce carbon emissions and help achieve carbon neutrality.

Rolls-Royce is building the world's fastest all-electric 'Spirit of Innovation' aircraft. We are also actively developing hybrid-electric and all-electric solutions for aviation, particularly in the urban air mobility, commuter, and regional markets through Rolls-Royce Electrical.

What other initiatives are Rolls-Royce taking to reach a net zero carbon future?

Novel technologies bring growth opportunities such as in sustainable power generation through small modular reactors, microgrids, fuel cells, direct air capture and battery storage technologies.

One example is in fuel cells. Rolls-Royce aims to have integrated 2MW of hydrogen fuel cells into operational microgrid demonstrators by 2023, enough to power roughly 400 homes, or a small community. This project is expected to yield further insights into the integration of multiple power sources in a microgrid.

How important are digital technologies?

In light of digitalisation's impact on industries throughout the region, we are developing digital capabilities through a coordinated strategy, which focuses on developing a digital ecosystem and future-forward products for customers.

Our digital solutions such as Yocova improve efficiency by allowing aviation professionals to connect, collaborate, control, and commercialise data sources and applications in an open and secure environment.

What are the main areas of focus for your research?

Our technology team develops sustainable products and services in smart manufacturing technology, electrical, data analytics and AI, and advanced repair and materials.

Our suite of artificially intelligent technology solutions translates vast volumes of data into actionable insights to facilitate knowledge-powered decision making.

We work closely with top universities and government agencies regionally to conduct research and develop new applications to streamline the manufacturing processes. For example, our Rolls-Royce

@ NTU Corporate Laboratory in Singapore is the largest amongst our University Technology Centres in the world.

We are also a founding member of the Advanced Remanufacturing and Technology Centre (ARTC). Our Smart Manufacturing Joint Lab with ARTC and Singapore Aero Engine Services Limited develops next-generation aerospace manufacturing and MRO capabilities enabled by advanced processes, automation, and digital technologies.

What is ASEAN's role in driving transformational change in the aerospace sector?

ASEAN remains one of the most vibrant growth areas in the world, with a young and diverse talent pool. The movement of goods and connectivity of people form the backbone of the region's economies. Our challenge is to ensure that the region quickly gets back on its path of economic growth and prosperity after the pandemic and does this sustainably. As we foster collaboration regionally, we will be able to lay stronger foundations to tackle global challenges together and accelerate technological innovation for a net zero world.

Renewable Energy: Rising demand to boost supply

ASEAN countries are committed to increasing the role and importance of renewable energy to meet energy demands. At the 26th UN Climate Change Conference (COP26) held in Glasgow in 2021, its members updated their Nationally Determined Contributions (NDCs) and signed up to the Glasgow Climate Pact and the Global Coal to Clean Power statement.

Although unsurprisingly, there are variations between different ASEAN countries, they are all committed to increasing renewable energy and to employing grants, subsidies and the ASEAN Power Grid (APG) to do so. The APG is an ambitious initiative to eventually construct an integrated Southeast Asia power grid system.

Singapore is at the forefront of developing the APG, because its small size means it faces considerable challenges in generating sufficient renewable energy unilaterally. It will import up to 100MW each of low-carbon or clean electricity from Malaysia, Indonesia, and Lao PDR[1]. In June 2022[2], it received the first renewable energy import from Lao PDR as part of the Lao PDR-Thailand-Malaysia-Singapore Power Integration Project (LTMS-PIP), which is intended to pave the way for larger-scale imports of up to 4GW into Singapore by 2035.

Cross-border trading

Lao PDR is aiming to be a major supplier of renewable energy in the region. It has already exported more than 6GW of cross-border electricity to ASEAN members including Cambodia, Myanmar, Thailand, and Vietnam. Lao PDR has more than 8GW of installed hydropower capacity, which is set to increase in the near future to support domestic demand and future exports[3].

In January 2022, three companies – Keppel Infrastructure Holdings, a unit of Singapore's Keppel Corp, Thai renewables developer Impact Electrons Siam Co Ltd (IES) and Chinese greentech company Envision Group – signed an agreement to collaborate on projects to develop low-carbon electricity for export. One project is the 1GW extension of the Monsoon wind farm sited in the Sekong and Attapeu provinces, but the trio also envisages taking on other renewable energy projects in Lao PDR, including solar and biomass. IES alone has more than

1,900MW of wind and solar assets in development and operations in Thailand, Japan, Lao PDR and Vietnam[4].

Monopoly ended

According to The Economist[5], Vietnam is leading the transition to clean energy in the region. It is the world's 10th largest producer of solar power, having increased the share of electricity generated from zero to nearly 11% in just four years. The country is committed to net zero emissions by 2050 and is no longer building new coal-fired power plants. It has also ended the monopoly for Vietnam Electricity on domestic power generation and introduced supporting governmental legislation and policies, including feed-in-tariffs[6], attractive tax incentives and land lease waivers to attract foreign investors[7].

In Thailand, the Government's most recent National Energy Plan 2022[8] states that new power plants must contribute to increasing the proportion of clean and renewable energy by 50% on existing levels. The country is already taking a pioneering approach with its pilot of peer-to-peer solar-generated electricity trading, using a blockchain platform[9]. This could also feed into the Government's Energy for All programme, which encourages communities to develop and own their own power generators using both waste-to-energy and solar technologies. Energy storage technologies are another important area because these deal with the issue of intermittent renewable energy generation.

Energy companies such as Egat and Global Power Synergy are already involved, and the Asian Development Bank has invested US$6.8 million in the first private-sector project to combine battery storage with utility-scale wind power[10].

Malaysia is expected to more than double renewable capacity from 6GW to 14GW, rising from 18% to 30% of the generation mix[11]. Its aim is that non-hydropower renewables will be 20% of the energy mix by 2025, making Large Scale Solar (LSS) investment a major opportunity. The country already allows the installation of solar for self-consumption and has a Net Energy Metering Programme whereby excess energy is sold back into the grid. The nation's LSS projects offer a successful pathway to utility-scale solar adoption, though investment rules limit foreign ownership to 49% equity.

Green capital

Similarly, the Indonesian Government has shown its commitment to renewable energy by passing into law its plans to move the capital from Jakarta to a new, green city in East Kalimantan to be called Nusantra[12]. Power will come from the Mentarang Induk Hydroelectric Plant on the Mentarang River with an installed capacity of 1,375MW and from huge solar parks, such as the PT Bukit Asam Solar PV Park III, a 200MW power project.

The target for the country as a whole is that 23% of its energy needs will be supplied from new and renewable sources by 2025, as pledged under the Paris Agreement[13], and 31% by 2050[14]. The Government has pledged to provide more incentives or ease of business for developers on grid integration, land acquisition and scheme alternatives, while offering more feasible feed-in-tariffs[15]. To speed up the process, coal plants owned by the state-owned utility PLN will be retired sooner than their planned lifetime[16].

The opportunities in the renewable energy sector are massive in ASEAN, because the region's electricity demand is expected to double by 2040, twice the global average rate[17]. Member states are ready to welcome overseas expertise and investment to meet this challenge.

[1] https://tinyurl.com/5ece3cbh
[2] https://www.upstreamonline.com/energy-transition/significant-milestone-singapore-imports-renewable-energy/2-1-1244912
[3] https://www.upstreamonline.com/energy-transition/significant-milestone-singapore-imports-renewable-energy/2-1-1244912
[4] https://renewablesnow.com/news/new-alliance-to-undertake-1-gw-wind-project-in-laos-other-asean-projects-770908/
[5] https://www.economist.com/asia/2022/06/02/vietnam-is-leading-the-transition-to-clean-energy-in-south-east-asia
[6] Long-term fixed price contracts awarded to renewable energy producers to enable them to raise finance.
[7] https://www.entrepreneur.com/article/404121
[8] https://tinyurl.com/4bjn9zbd
[9] https://www.bcg.com/publications/2021/asia-pacific-renewable-energy-opportunities
[10] https://www.adb.org/projects/documents/tha-53174-001-rrp
[11] https://www.theedgemarkets.com/article/growing-champions-malaysias-renewable-energy-opportunity
[12] https://www.gunungcapital.com/insights/indonesias-new-capital-to-spur-demand-for-more-sustainable-building-materials-and-infrastructure
[13] http://greengrowth.bappenas.go.id/en/forging-a-brighter-path-for-rapid-and-renewable-energy-in-indonesia/
[14] https://www.irena.org/publications/2017/Mar/Renewable-Energy-Prospects-Indonesia
[15] http://greengrowth.bappenas.go.id/en/forging-a-brighter-path-for-rapid-and-renewable-energy-in-indonesia/
[16] https://ihsmarkit.com/research-analysis/southeast-asias-new-energy-policy-announcements-in-pursuing.html
[17] https://www.bcg.com/publications/2021/asia-pacific-renewable-energy-opportunities

Tourism: Restoring sustainably

ASEAN has major plans to increase the region's tourism sector with a specific focus on sustainability, as laid out in the ASEAN Comprehensive Recovery Framework and its Implementation Plan[1].

Tourism has always been an important part of the income of ASEAN countries. Before the pandemic, the sector accounted for 14.3% of combined GDP and provided more than 13% of employment – around 30 million jobs. Then Covid-19 struck: the number of international tourists plummeted by more than 80% and tourism revenue fell by more than 75%[2].

Early reactions to the shortfall in visitors included increasing domestic tourism using discounted fares, subsidised accommodation and increased domestic flights. Vietnam launched a 'Vietnamese people travel in Vietnam' campaign while Thailand launched the Rao Tiew Duay Gun ('We travel together') programme, with a budget of US$608 million to help increase domestic tourism[3].

Focus on sustainability

That is not to say that pre-pandemic tourism was without its challenges. Not least the strain it often placed on local resources and infrastructure and the environmental damage that was often an indirect consequence of hosting large numbers of overseas visitors. Boracay island in the Philippines demonstrates how rapid growth in tourism can overwhelm an area. The number of visitors more than doubled in six years[4], placing such a strain on the sewer and waste management systems that it had to be closed to visitors for about six months for environmental rehabilitation[5].

The coming years will enable ASEAN countries to develop coordinated, long-term, sustainable plans to make the most of their impressive tourism assets. Meanwhile, a number of cross-border initiatives have been introduced to enhance the tourism offer across the region. These include an ASEAN safe tourism travel stamp to assure travellers of high standards of hygiene and safety, greater digitalisation of tourism and strengthening data and information networks. Countries are also working together to promote connectivity and travel within the region.

Government support

Individual countries are also developing their own sustainable, post-pandemic tourism strategies. In the short-term, this has generally meant supporting the sector with subsidies and encouraging an expansion in domestic tourism, while drawing up longer-term plans. Thailand, for instance, aims to target premium markets. The Thai Government is launching a long-term residence programme to attract foreigners to the country through new visas which last for up to 10 years, tax and investment incentives, a relaxation of the restrictions on foreign ownership of residential property, and more[6].

The programme will target four key markets: wealthy global citizens, wealthy retirees, work-from-Thailand professionals, and other highly skilled professionals. The country's ambition is to welcome over one million additional visitors and generate over US$26 billion in domestic spending over five years, starting in 2022.

Similarly, Malaysia also launched a comprehensive support programme as part of its efforts to boost its tourism industry, including financial aid and vouchers[7]. Tourism is vital to its economy, as more than 23% of jobs are linked to the sector. The National Tourism Policy (DPN) 2020-2030[8] highlights environmental and eco-tourism as a key opportunity. The country's abundance of natural assets makes it ideally placed to capitalise on. The aim of the 10 year plan is to make the country's tourism firms more competitive, while also encouraging sustainable and inclusive sector development and planning for the future.

"Our goal is to brand Malaysia as the top-of-mind eco-tourism destination in the world," Prime Minister, Muhyiddin Yassin said. As part of the new tourism policy, it has cut red tape for tourists, no longer insisting on travel insurance, for example[9], and is planning to create special tourism investment zones for projects to boost public-private cooperation and attract more local and international investment.

Digital nomads

The Asian Development Bank (ADB)[10] is also supporting a change in emphasis in the sector, looking for longer-term visitors who might be fewer in number yet are spending more and placing less strain upon resources. It points out that holiday home rental businesses, such as Airbnb, have seen bookings for 28 nights or longer increase since 2019. As part of the move to sustainable tourism, the ADB suggests that governments in the region should update their regulations and strengthen their digital infrastructure to enable businesses to cater to this type of working traveller who are dubbed 'digital nomads'.

Covid-19 demonstrated just how important the tourism sector is to ASEAN member states. As the risks from the pandemic continue to recede, authorities across the region have taken up the challenge and are keen to prioritise different forms of tourism that may be more low-key and less of a strain upon resources. They are also open to foreign investment and expertise to make the most of their heritage and natural resources.

1 https://asean.org/asean-comprehensive-recovery-framework-and-its-implementation-plan/
2 https://tinyurl.com/2p8pn9zv
3 https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/reimagining-travel-thailand-tourism-after-the-covid-19-pandemic
4 https://seads.adb.org/solutions/what-southeast-asian-countries-need-do-shift-sustainable-tourism
5 https://www.officialgazette.gov.ph/2018/04/26/proclamation-no-475-s-2018/
6 https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/reimagining-travel-thailand-tourism-after-the-covid-19-pandemic
7 https://www.nst.com.my/news/nation/2022/06/806944/ministry-increases-years-tourist-arrival-target-45-million
8 https://www.aa.com.tr/en/asia-pacific/malaysia-rolls-out-2020-2030-tourism-policy-plan/2086207
9 https://www.nst.com.my/news/nation/2022/07/814464/malaysia-eyes-over-4-million-international-tourist-arrivals-2022-says
10 https://seads.adb.org/solutions/what-southeast-asian-countries-need-do-shift-sustainable-tourism

Education: Securing future generations

Education is a priority focus for the countries of ASEAN, particularly higher education. There is good reason for this. More than a decade ago, offering a deep resource of cost-effective labour may have been sufficient to attract foreign investors. But this is no longer the case. Countries must offer more, as Samsung's venture into Vietnam shows: the electronics giant chose the country to become its regional manufacturing hub due, at least in part, to the quality of its young and educated workforce[1].

All ASEAN ministers of education have signed up to the new ASEAN Work Plan on Education 2021-25. What this means for higher education is summarised as "Enhanced regional capacity in higher education as part of lifelong learning provision, including the harmonisation of ASEAN higher education", moving the region into sharing the same academic standards. The aim of harmonisation is that a qualification in one member state – a degree for example – will be recognised in another[2].

The UK has been active in the ASEAN education sector for many years, through the British Council. It participated in the European Union Support to Higher Education in the ASEAN Region, known as SHARE, up to the end of 2022. This programme has contributed to harmonisation through a number of projects such as producing a study on Graduate Employability in ASEAN, as part of a series of studies to support the Master Plan on ASEAN Connectivity 2025.

Better jobs

Awareness of the importance of higher education is accompanied by a growing demand for tertiary education and the value of a foreign university qualification in the employment market. Academic reputation, employment prospects and cost are the top priorities for students[3]. In Indonesia, for instance, college graduates typically earn three times more than high school graduates over a 10 year period, while their unemployment rate is 50% less[4]. For wealthier students, this often means studying abroad. Traditionally, the US and the UK were the favoured destinations, but many are also turning to Australia as being nearer and more affordable[5].

According to the UNESCO Institute for Statistics (UIS), Vietnam, the highest contributor of outbound tertiary students among ASEAN countries, recorded a 16% increase in students studying abroad, from 108,301 in 2018 to 126,059 in 2019. Similarly, Cambodia, Indonesia, Lao PDR, Myanmar, and the Philippines recorded 7% to 25% increases during the same period[6].

International campuses

Post-Covid, the proven alternative to attracting more ASEAN students to study overseas is to establish a campus branch in an ASEAN country. Monash University (Australia), Nottingham University, Southampton University and Heriot-Watt University, for example, all have campuses in Malaysia and the Royal Melbourne Institute of Technology (RMIT) has a campus branch in Vietnam.

The appetite for international campus branches in the region is likely to grow, too. According to a projection by the United Overseas Bank (UOB), 65% of the population is expected to be middle-class by 2030, with 60% of this group under the age of 35. In addition, they will want a university education that might not be available from an indigenous university.

Investment welcomed

Many countries are strengthening their efforts to attract more foreign investment in the education sector. In 2018, Indonesia passed laws which enabled foreign universities to set up stand-alone branch campuses without requiring a local partner[7]. Previously, the higher education sector was effectively 'nationalised', with government entities in charge of standardisation and accreditation of universities[8]. Two Australian universities are already setting up campuses, Monash in south-west Jakarta and Central Queensland University (CQU) in the North Sumatran capital of Medan[9]. As part of the arrangement, CQU will deliver Australian MBA courses to Indonesian Government officials in partnership with Jakarta's Bakrie University.

Indonesia is not alone. Around the same time, the Thai Government announced that foreign universities would be allowed to open campuses to help develop the country's Eastern Economic Corridor. Two universities have applied so far: US based Carnegie Mellon University and National Taiwan University[10]. The Philippines Government has passed the Transnational Higher Education Act, enabling foreign universities to provide education services in the country through partnering with a local institution[11]. The British Council and the Commission on Higher Education Philippines have since supported new university partnerships to build local expertise in niche areas critical for national development in the Philippines. Some of the courses developed include sustainable food systems, international public health, oceanography, meteorology, and data science.

E-learning expands

While the commercial opportunities for opening campuses in ASEAN countries are attractive, the region's geography – Indonesia and the Philippines are archipelagos, for instance – makes distance learning via the internet a potentially easier route to develop. It also offers scope for overseas software providers. For instance, IndonesiaX[12] offers free and paid-for courses online. Similar services are offered through institutions like AMA University and Topica in the Philippines and Vietnam, respectively.

HarukaEdu (now Pintar) shows another way to invest in education. This Indonesian start-up uses its own e-learning platform to enable higher education institutions to offer degrees online. It attracted investment from the Pearson Affordable Learning Fund (PALF), the venture capital arm of UK based Pearson, so it could develop new courses with its latest university partners[13].

As a whole, ASEAN countries have a lot to offer potential investors who can provide career-enhancing courses. The demand is there and set to grow as the workforce is increased by ambitious young people. The various governments also recognise they need an educated workforce if they are to attract the knowledge-based industries of the future, and so have removed many of the barriers to investment.

[1] https://tinyurl.com/2dv44np8
[2] https://www.universityworldnews.com/post.php?story=20210824155030216
[3] https://www.pwc.com/my/en/assets/publications/2020/pwc-harnessing-education-in-the-new-economy.pdf
[4] https://plc.pearson.com/en-US/news/pearson-affordable-learning-fund-makes-investment-indonesian-online-higher-education-startup
[5] https://fulcrum.sg/aseans-consumers-on-the-move-tertiary-education/
[6] https://fulcrum.sg/aseans-consumers-on-the-move-tertiary-education/
[7] https://www.pwc.com/id/en/publications/general/investment-guide-indonesian-university-sector.pdf
[8] https://fulcrum.sg/aseans-consumers-on-the-move-tertiary-education/
[9] https://www.timeshighereducation.com/news/indonesias-second-foreign-branch-campus-months-away
[10] https://tinyurl.com/2pmhwcuk
[11] https://www.universitiesuk.ac.uk/universities-uk-international/insights-and-publications/uuki-blog/national-push-tne-philippine-experience
[12] https://abconlinecourses.com/open-edx-use-case-indonesiax/
[13] https://plc.pearson.com/en-US/news/pearson-affordable-learning-fund-makes-investment-indonesian-online-higher-education-startup

Healthcare: Prosperity strengthens demand

The ASEAN region's healthcare sector is changing rapidly as its demographics, society and lifestyle evolve.

Economic growth is creating greater demand for quality and innovative healthcare services, while the focus has shifted because of an ageing population and reduced infant mortality. Deaths from communicable diseases are still prominent in Cambodia, Myanmar, and Lao PDR but in the rest of the ASEAN region, the major causes of death are now chronic diseases and injuries, changing the priorities for healthcare accordingly.

Greater disposable income also means that people in ASEAN can afford higher-value products and services such as elective treatments and cosmetic surgery, fertility clinics, sports rehabilitation, and weight loss treatments. In general, the population is becoming more interested in prevention rather than cure, prioritising quality of life and recognising stress as a serious issue to be avoided through living a healthy lifestyle.

Sector spending grows

According to recent figures from the World Health Organisation, ASEAN spends close to 4% of its GDP on healthcare, with Singapore at the top of the list with per capita expenditure at US$2,450[1], more than three times the amount of the second highest, Brunei, which spends an average of US$650[2]. These figures fall rapidly: Malaysia US$409, Thailand US$289, Vietnam US$169, the Philippines US$133, Indonesia US$112, Cambodia US$105, Lao PDR US$63 and Myanmar US$56. By comparison, the G7 spends an average of US$5,190 per capita[3].

These figures are expected to rise as ASEAN improves healthcare services and catches up with the average spending rate in other markets. ASEAN countries are slowly committing to universal healthcare systems and these systems have become a key driver in changing the behaviour of local populations towards health.

Major markets in the region, such as Indonesia and the Philippines, have succeeded in implementing their own national insurance programmes. Indonesia is considered the largest in the world, covering more than 180 million people. Virtually the whole of Thailand's population is covered for primary and hospital care and Singapore offers the most advanced levels of healthcare for its citizens, providing specialised treatment, such as heart transplants and neurological procedures.

Travel and treatment

Medical tourism is also an important source of income in the region. Globally, it was worth some US$28 billion in 2020, with nearly one-third of the 11 million global medical consumers travelling to Southeast Asia. Foreign patients account for some 40% of revenue in private hospitals in Singapore, Malaysia, and Thailand[4]. These three countries lead the field, having around 100 Joint Commission International (JCI) accredited healthcare centres in total. JCI certification is the gold standard for patient healthcare and safety.

A common strategy is to promote medical tourism and travel, combining health services for wealthy foreigners with recreational

> Singapore is also pioneering the use of digital technology to improve access to acute care and to engage with patients.

packages to boost consumption of such health services. In Vietnam, the Vingroup[5] has constructed a series of JCI accredited hospitals and clinics, including Vinmec Times City and Vinmec Central Park. These not only provide treatment but also hospitality to the standards of a five-star hotel, with VIP rooms and presidential suites available.

In common with the rest of Asia, ASEAN countries are employing digital technology to make the most of scarce resources and meet rising expectations in a format that is familiar to its digitally-literate population.

One way to achieve this is to broaden access to primary care. In Indonesia, Halodoc tackles the lack of primary care outside of major cities such as Jakarta and Surabaya. It is one of the largest platforms for patients to easily access consultations with general practitioners via smartphone, pharmacy delivery, and home lab services across more than 50 cities[6].

Digital services

Another strategy is to use digital technology to encourage consumers to monitor their own health and take remedial action to reduce costs of long-term care. For instance, the Health Promotion Board (HPB) of Singapore runs the Healthy 365 programme, turning wellness into a game by awarding redeemable Healthpoints based on daily step counts, healthy food purchases, and health screenings. It recently expanded the programme by partnering with Apple to launch LumiHealth, which adds extra activity and wellness challenges for users of the Apple Watch[7].

Singapore is also pioneering the use of digital technology to improve access to acute care and to engage with patients before and after their visit. Its HealthHub application serves as a single portal for all citizens to book appointments, order medications, and access vaccination records and disease risk assessments.

ASEAN countries offer many points of entry into healthcare, provided their propositions are in-line to the specifics of individual countries. One of the characteristics they all seem to share is understanding and trusting digital technology as an efficient, rapid and responsive method to overcome the challenge of delivering healthcare, against a background of complex logistics and scarce resources.

[1]https://www.aseanbriefing.com/news/investing-in-aseans-healthcare-sector-new-opportunities-after-covid-19/
[2]https://www.statista.com/statistics/1038149/sea-total-health-expenditure-per-capita-by-country/
[3]https://www.omfif.org/2020/04/asean-resilience-put-to-the-test/
[4]https://www.aseanbriefing.com/news/investing-in-aseans-healthcare-sector-new-opportunities-after-covid-19/
[5]https://www.vinmec.com/en/benh-vien-da-khoa-quoc-te-vinmec-times-city-17265/hoi-suc-cap-cuu
[6]https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/the-future-of-healthcare-in-asia-digital-health-ecosystems
[7]https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/the-future-of-healthcare-in-asia-digital-health-ecosystems

Life Sciences: Future is digital

The past decade has seen ASEAN economies playing an increasingly significant role in the global healthcare economy. As the region continues to demonstrate consistently strong economic fundamentals, the outlook for inbound investments is anticipated to be positive over the immediate term. The healthcare spend in Asia is projected to grow by 135% to US$2.25 trillion by 2026, and life sciences will be a significant part of that[1].

The move into Singapore by Cambridge life science enabler Abcam in 2022, illustrates some of the attractions. Abcam supplies research tools and its Singapore facility will offer scientific and technical support to local life science companies, of which there are many. Its new base is Biopolis Biomedical Research Hub, where there are more than 350 life sciences companies, including eight of the top 10 global pharma organisations.

Abcam is just one of the many global companies to expand its presence in key markets such as Indonesia and Thailand, with heavy investments in R&D, sales and marketing, and manufacturing.

Demographic diversity

In general, the region is undergoing several waves of shifting demographics. These include an ageing population, accompanied by an increased prevalence of chronic diseases, rising affluence, and the growth of densely populated cities. There is also the matter of diversity: different ASEAN markets have very different sets of demographics and disease profiles – and such disparities are often indicators of a varied range of unmet patient needs. In some countries, the population is ageing, for example, while others – including Cambodia, Lao PDR, and Myanmar – have relatively young populations[2].

The Covid-19 crisis has played a part in concentrating on developing domestic capabilities and supporting local value chains, promoting the drive to establish regional headquarters, manufacturing and R&D facilities close to key end-markets. The pandemic also accelerated digital transformation, enabling advances to occur far more quickly and demonstrating that in life sciences, as in so many other industries, the future is digital.

Medtech innovation

Singapore, in particular, is leading the way and already exploring how this could work. It has established the Integrated Health Information Systems (IHiS) body to oversee the development and standardisation of digital healthcare technology across all six regional health systems in the country. Around 800 digital IT systems have been designed, trialled or implemented, spanning areas as diverse as electronic medical records, medical imaging, laboratory test records, medication dispensing, patient registration, billing, financial aid, community care, telehealth and video-conferencing for consultations.

The 10 governments in ASEAN have gone some way towards allaying foreign investors' concerns about the regulatory environment and the protection of intellectual property rights. There is general recognition that this is necessary to attract more FDI. The first step was the publication

of the ASEAN Medical Device Directive in 2015, harmonising medical device regulations, facilitating market penetration and encouraging efforts to meet the growing demand for innovative equipment. Now well established, the directive builds trust in quality and health safeguards in member states.

The move towards standardisation is very much in line with the objectives of the ASEAN Economic Community, yet there are still significant regulatory differences between markets. Each country maintains the right to retain its own regulatory system with varied requirements and registration systems[3]. This means, for example, that in Vietnam, a medicinal product that has been marketed for under five years in its country of origin will need to undergo local clinical trials, whereas no other ASEAN market imposes such a requirement. This is a unique rule that does not apply to other markets in the ASEAN region where local clinical trials are not required, even if medicinal products are marketed for less than five years.

Market forces

Each country's healthcare system also plays its part in shaping the market. For instance, Indonesia is now venturing into higher-value drug manufacturing as a result of the compulsory national health insurance scheme (Jaminan Kesehatan Nasional or JKN). This prioritised the use of low-cost generic drugs, which in turn increased competition and drove down profit margins[4].

This meant that local manufacturers needed to find higher margins by producing more valuable drugs. For instance, Kimia Farma, a state-owned manufacturer with injectables capabilities, recently announced plans to expand its market presence beyond Indonesia, with acquisitions in Saudi Arabia's Dawaa Medical Company and co-investments with Singapore based Cellsafe to venture into biosimilars and stem cell research[5].

The opportunities that ASEAN countries present for life sciences investors is immense, given that the home market is large, becoming more prosperous and keener to capitalise on the potential of high-tech products to improve healthcare services.

[1]https://www2.deloitte.com/content/dam/Deloitte/sg/Documents/life-sciences-health-care/sea-lshc-state-lshc-asia-pacific.pdf

[2]https://www2.deloitte.com/content/dam/Deloitte/sg/Documents/life-sciences-health-care/sea-lshc-state-lshc-asia-pacific.pdf

[3]https://www.dksh.com/global-en/tl-hec-trends-impacting-south-east-asia-pharma-market

[4]https://www.indonesia-investments.com/business/business-columns/pharmaceutical-exports-indonesia-remain-under-pressure-in-2017/item7867

[5]http://www.thejakartapost.com/news/2018/03/05/kimiafarma-acquires-dawaa-in-mideast-expansion-bid.html

Agriculture: Increasing food security

Agriculture presents a major opportunity for foreign investment in many ASEAN markets. The region is home to around 8% of the world's population, yet it only has 3% of its agricultural land.

Farming is critical to the livelihood of millions of people as food supply chains are becoming more fragile. Demand is increasing as a consequence of a growing population.

The sector is a major part of the economy in several ASEAN countries, representing a large proportion of their GDP: 23% in both Cambodia and Myanmar, 15% in Vietnam and 14% in Indonesia. It is a major employer too. In the Philippines, for instance, 29% of the labour force work in the sector, while in Lao PDR that figure is 72%.

Resolving these issues to provide employment while producing enough food for everyone is a major challenge, one that favours partnerships between government bodies and investors with an innovative approach.

Covid-19 demonstrated only too clearly the need to increase domestic food security and boost local production. Travel bans, movement restrictions, delays in port clearances, and the shutdown of processing plants and ancillary businesses severely disrupted the food supply chain.

Agritech to increase productivity

Following the pandemic, governments across ASEAN are trying to improve the efficiency of production and shorten supply chains, by moving more production onshore. This has been accompanied by increased investment in agricultural technology (agritech) to increase farming efficiencies, quality, and sustainability. These approaches have differed from country to country.

In Vietnam, for example, almost 40% of the land is cultivated and provides nearly 40% of the jobs. But this strong foundation is threatened by climate change. The Mekong Delta, for example, which grows nearly half the country's rice, is vulnerable to rising sea levels. By 2050, 60% to 75% of provinces in the region may be affected, according to projections by Vietnam's Ministry of Natural Resources and Environment.

Addressing these risks will require substantial investment to improve infrastructure. Investment in smart farming and agritech, in particular, is seen as an effective way to raise production and increase efficiencies. In Vietnam, a start-up called MimosaTEK is using a cloud-enabled device with sensors to allow farmers to monitor the progress of crops and receive drought alerts. The system runs on existing infrastructure: smartphones, electricity, internet connectivity and irrigation equipment, so it is ideal for small-scale farmers. Now, after a successful pilot programme, the technology is being extended throughout the Mekong Delta.

Incentives for investors

In Thailand, agritech has been identified as an area in the Thailand 4.0 strategic economic development plan to boost its food production. This means exemptions on corporate income tax and import duty of raw materials for both Thai and foreign investors. There are also additional tax exemptions for companies that invest in upgrading their production capabilities through agricultural innovation. By 2028, the agri-food industry is expected to contribute 7% of GDP, up from 6% currently.

Singapore has limited farming land and currently imports over 90% of its food. Urban farming and indoor aquaculture are a few ways the city-state plans to raise homegrown production to 30% by 2030, a goal known as '30 by 30'. A '30x30 Express' grant was offered to nine urban farms in 2020 to accelerate production. In Budget 2021, a US$42.7 million Agri-Food Cluster Transformation Fund under the Singapore Food Agency was announced.

Such funds have helped farms like Eco-Ark improve its production capacity. It is an offshore high-tech aquaculture farm that can produce 20 times more fish compared to other coastal farms. Its closed containment system uses water drawn from the sea which is filtered with ozone technology and pumped back into the sea – in a space about the same size as three basketball courts (1,400m^2).

Indonesia's agritech start-up, TaniHub Group, is streamlining the fragmented agricultural market by building an end-to-end agriculture ecosystem. TaniHub connects its 45,000 farmers with 350,000 buyers, such as hotels, restaurants, and grocery stores. It also has a logistics platform, TaniSupply and TaniFund, a FinTech platform that provides loans which farmers can pay off by selling on TaniHub.

In Malaysia, the Malaysia Digital Economy Corporation has rolled out a pilot project, eLadang, to transform 'traditional farming into a high-income digital economy profession'. It connects smallholder farmers to online marketplaces like HappyFresh, smart farming solution providers, smart warehousing facilities and last-mile delivery providers like Lalamove.

ASEAN countries are keenly aware that they need to increase efficiency and output throughout the sector if they are to enjoy better food security. They are all looking for innovative and effective means to achieve this. The support they offer in return varies from country to country but includes favourable tax terms and lower rates of duty.

Water: Investing in flows of supply

Many ASEAN countries are faced with the issue of providing safe, clean water at a time of increasing water scarcity. Recent figures[1] show that 110 million people in the region lack access to safe water. The challenges facing the sector include urbanisation, population growth, rapid industrialisation, and climate change.

Urban populations in Indonesia[2], for example, are estimated to grow annually by 2.21%, as the rural population shrinks by 0.13%. The least urbanised countries in the region, such as Cambodia, Lao PDR, Myanmar and Vietnam, are also the fastest urbanising countries in Asia, with growth rates of around 3%.

Quality of the provision of water services in urban and rural areas, and the disparity in access between them, are therefore major challenges for ensuring the right to safe water. For example, in Cambodia, the proportion of the population using safely managed drinking water services in urban areas is 55%. In rural areas, it is just 16%, according to the Asian Development Bank.

The more developed economies are faring better. Singapore can now meet up to 40% of its water demand through recycled water. In the Philippines, the 12 million population of metropolitan Manila receives a potable 24 hour water supply provided through successful PPPs[3].

Disaster risks

Water availability is further compromised by the fact that several ASEAN countries are vulnerable to disaster risks which threaten supply. The World Economic Forum's Global Risks Report ranks several as being particularly exposed, partly due to their vulnerability with sea-level rises and cyclone activity. The Philippines is ranked third at risk, Brunei Darussalam is eighth, Cambodia is 12th, Vietnam is 25th and Indonesia 36th[4]. In Vietnam's Mekong Delta, climate change and rising sea levels threaten freshwater availability in its main rice-growing area, accounting for more than 65% of total freshwater demand.

Member countries are setting up their own responses to the matter of water supply. In Thailand, the Government set up the Office of the National Water Resources (ONWR) in 2017, and formulated a 20 year National Water Resources Management Plan (2018-2037) to target increased investment[5].

According to the ONWR, industrial development in the Eastern Economic Corridor, the country's economic powerhouse, will rapidly increase demand for water in Thailand's eastern region. Both the public and private sectors are planning to invest in various projects to add over 350 million m^3 of watershed capacity in the next 10 years. This can be achieved by increasing the capacity of existing reservoirs, building new ones, improving pumping systems that feed water back into the reservoir, and diverting water from other river basins.

Water security

As a heavily populated island state with a strong industrial base, Singapore has been aware of its issues with water supplies for decades. Its latest response to increasing water resilience is its Deep Tunnel Sewerage System (DTSS). This will completely replace existing wastewater infrastructure with a new network of tunnels, pipelines, water reclamation plants and ocean outfalls. One of the most ambitious wastewater management programmes in the world, the US$3.4 billion project will allow Singapore to accommodate an expected population increase from 4.5 million to 5.5 million, and redevelop land no longer needed for sewerage facilities[6].

> Both the public and private sectors are planning to invest in various projects to add over 350 million m^3 of watershed capacity in the next 10 years.

Indonesia, in contrast, is a far larger country and faces far more intractable issues. It has a population of more than 268 million, but most depend on river or bottled water. For the 20% of the population that has a water main connection, the quality of the municipal water supply is low and drinking tap water is discouraged.

In the capital city of Jakarta, only 63% of the water is piped. The city's non-revenue water rate, or clean water that is lost before it reaches customers, stands at a very high 42%[7].

The country's national medium-term development plan aims to achieve 100% universal access to drinking water and sanitation services and there are seven major projects under consideration[8]. These include the Lambakan Dam Project in East Kalimantan Province (US$520 million); the Pelosika Multipurpose Dam Construction Project in Southeast Sulawesi Province (US$334 million); the Riam Kiwa Multipurpose Dam Construction Project in South Kalimantan Province (US$237 million); the Jenelata Dam Construction Project in South Sulawesi Province (US$240 million); the Karian Dam-Serpong Water Conveyance System in Jakarta and Banten Province (US$244 million).

Malaysia is also making a concerted effort to improve its water security. In 2021, the Government announced that US$5.5 billion had been approved for water infrastructure projects to strengthen water coverage and services[9]. Projects to be carried out include flood mitigation programmes, integrated river basin management, coastal erosion control as well as the flood forecasting and warning programmes.

ASEAN countries are well aware of the challenges that face them to secure safe, sustainable water supplies. Equally importantly, they are open to innovation and investment to help them put their plans into action and meet their ambitious targets.

[1]https://tinyurl.com/bdfvje9t
[2]https://tinyurl.com/bdfvje9t
[3]https://www.adb.org/news/features/meeting-challenge-water-security-resilience-asia-pacific
[4]https://www.weforum.org/reports/global-risks-report-2022/
[5]https://www.rvo.nl/sites/default/files/2021/10/The%20Water%20Sector%20in%20Thailand.pdf
[6]https://www.arcadis.com/en-gb/projects/asia/singapore/deep-tunnel-sewerage-system
[7]https://indonesien.ahk.de/en/infocenter/news/news-details/water-management-infrastructure-remains-top-priority-for-govt
[8]https://www.trade.gov/market-intelligence/indonesia-water-projects
[9]https://www.thesundaily.my/local/rm258b-approved-for-water-infrastructure-projects-under-12mp-NF8403870

Defence: Challenges offer opportunities

ASEAN is increasing its military spending to enhance security in the region and strengthen its defences.

ASEAN foreign ministers met in Phnom Penh in August 2022 with senior diplomats from China, the US, and other powers, and published a collective statement expressing concerns about increased volatility[1]. Without naming countries, they said ASEAN was concerned about tensions which "could destabilise the region".

The South China Sea is a particularly sensitive area. Most major neighbouring countries depend on the Straits of Malacca and sea lanes through the South China Sea for both energy and trade. Its seabed is also thought to contain significant untapped energy deposits.

Growing budgets

ASEAN countries not only have to guard against potential military risks. They must also contend with terrorism, piracy, smuggling, and organised crime over massive areas of land and sea. The Indonesian archipelago stretches over more than 3,000km for example, while Malaysia consists of two land masses 1,000km apart. Vietnam, Myanmar, the Philippines, and Thailand all extend for more than 1,500km from north to south.

So, the region is increasing its military spending. Over the last 15 years, the total defence spending of Southeast Asian countries has doubled in absolute terms, while military expenditure in Thailand and Indonesia has grown 10% annually[2].

Based on a report by researchers at the Shanghai Institute for International Studies, the largest military spenders over the past three years are Singapore (US$9.6 billion) and Indonesia (US$7.9 billion). Thailand and Vietnam both have an expenditure of approximately US$4.5 to US$6.8 billion each. Next on the list are Malaysia and the Philippines, with respective governments spending around US$3.8 billion each on defence.

It is not surprising that ASEAN's wealthiest nation is also its top defence spender. Since the early 1970s, Singapore has allocated an average of 6% of its GDP to defence, which has enabled it to acquire, for a state of its size, highly capable ground, air, and naval forces.

According to data compiled by the German Institute for International and Security Affairs, Vietnam's arms imports have increased by almost 700% over the past decade, moving Hanoi from the world's 43rd largest arms buyer to one of the top 10.

While military sales are not always in the public domain, most estimates place Russia, the US, China, and the UK as the largest suppliers. However, the list of providers includes many others such as France, Germany, the Netherlands, Japan, Poland, and Ukraine, according to assessments by the Stockholm International Peace Research Institute (SIPRI).

Independent procurement

ASEAN has no arrangements for the joint procurement of equipment, no country is willing to rely on a single source for military imports and

each country equips itself according to its own priorities. The region's air forces reflect this diversity. Capabilities and quality range from the advanced air power of Singapore, with an air force similar to those operated by US allies in North Asia, to the Philippines, which is more invested in combating internal terrorism than establishing a fast jet capability.

The mainstay of the Republic of Singapore Air Force (RSAF) is its fleet of 40 Boeing F-15SGs, all equipped with the Raytheon APG-63(V)3 Active Electronically Scanned Array (AESA) radar, a Lockheed Martin Sniper targeting pod, an infrared search and track sensor and an Israeli electronic warfare system[3]. By contrast, Philippine airpower is geared toward fighting insurgents. Its fixed-wing air combat capabilities are served by a dozen KAI FA-50 light-attack jets – which also serve as trainers – and six Super Tucanos, which were ordered shortly after a fierce battle with Islamic State militants on the island of Mindanao, in which combat operations were hampered by the lack of precision strikes.

New entrants

The lack of a central ASEAN procurement policy, combined with priorities varying from one state to another, means there are openings for new entrants, as was recently demonstrated by BrahMos Aerospace. This Indian-Russian joint venture has sold its supersonic cruise missiles to the Philippines in a deal signed in January 2022, and is now reportedly in negotiations with Indonesia.

This shows that ASEAN members are not only in the market for defence products and services but are also willing to consider relatively new suppliers.

[1]Manila Standard, 6 August 2022
[2]https://theaseanpost.com/article/defence-market-southeast-asia
[3]FlightGlobal, 10 February 2022


Tap into the world's fastest growing digital economy
With Southeast Asia's digital economy set to double to over USD350 billion by 2025[1], find out how our award-winning[2] digital solutions can support your growth in the region and open up new opportunities for your business.
See how at business.hsbc.com/asean
HSBC
Opening up a world of opportunity
1. Bloomberg, Southeast Asia Digital Economy to Reach $363 Billion by 2025
2. HSBC is awarded as Transaction Bank of the Year for Asia-Pacific in 2021 by The Banker
Issued by The Hongkong and Shanghai Banking Corporation Limited