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Association of Southeast Asian Nations

2021 | 2022



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Southeast Asia is increasingly attractive to foreign investors

Mitigating the social and economic effects of the Covid-19 pandemic has been the principal focus since the beginning of 2020. ASEAN's experience with past pandemics including SARS, Avian and Swine influenzas, have led them to activate earlier planned preparedness protocols.

At the beginning of January 2020, four days after China's notification to the World Health Organisation (WHO), ASEAN's Secretariat alerted senior health officials to the unfolding emergency.

Governments have therefore been able to work collectively to strengthen their pandemic response plans and address the dual challenges of resuming business activity while keeping people safe.

Vietnam, for example, is one of the very few countries worldwide to have recorded positive economic results over 2020 with predicted GDP growth of 2.3%. The Philippines, though normally one of the smaller recipients of FDI, witnessed a near 30% rise in investment by a diverse range of Japanese, Dutch, American and Singaporean firms.

The dilemma for all governments is keeping further waves of infections at bay while bringing both economic and social activities back to a high degree of normality. Southeast Asia is poised for economic recovery in 2021 with the rollout of Covid-19 vaccines and gradual opening up of global economies. The Asian Development Bank has estimated that Southeast Asia's GDP will expand 5.2% against a contraction of 4.4% in 2020.

Therefore, ASEAN is again on course to become the world's largest single market by 2030. This is reflected in the investment flows that have continued at a high level.

In 2020, despite the severe effects on the global economy, ASEAN received US\$70 billion in new investments. Even though this was a

decline of 14% on the previous year it represented the largest FDI inflow of any emerging market region, according to UNCTAD's 2020 Investment Trends Monitor.

A key reason is that a combination of rising labour costs, supply chain concerns and geopolitical tensions are driving multinational companies to relocate a growing proportion of their manufacturing from China to ASEAN countries.

FDI growth has been driven by strong investment mainly in Singapore, Indonesia and Vietnam, with these three countries receiving more than 80% of inflows in 2019, according to UNCTAD. Vietnam while recording a 10% fall still received some US\$20 billion of investment.

ASEAN offers many long term incentives to investors, not least since it is recognised as an area of increasing geostrategic importance as political, military and economic power shifts steadily towards the region.

All countries are deploying the Association's Single Window, where trade and cargo flows can be hugely accelerated as trade information is processed by computer linked systems. Singapore, Thailand, Vietnam, Malaysia, Cambodia and Lao PDR are also using the ASEAN online Customs Transit System to track goods.

The economic prospects have been further enhanced following the Regional Comprehensive Partnership (RCEP) agreement signed in Hanoi in November 2020.

Once it is ratified, the landmark agreement will link ASEAN with China, South Korea, Japan, Australia and New Zealand, a group of countries with a combined population of 2.3 billion, into the world's largest free-trade agreement. The trade deal covers 30% of global GDP and 28% of the world's trade. ASEAN countries are expected to benefit significantly

from RCEP, potentially by up to US\$19 billion per year by 2030, according to the Brookings Institution.

Alongside the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), these agreements will ensure substantial growth. They promise to achieve a positive evolution in global and regional economic progress and underpin the resumption of strong long term economic growth in ASEAN countries.

ASEAN continues to enhance its credentials in the global economy. The World Economic Forum's annual meeting to be held in Singapore in August 2021, will bring together leaders from around the world meeting in person for the first time since the pandemic. ASEAN countries will have the platform to present the unique investment opportunities offered in a multitude of sectors set to drive trade and investment over the next decade and beyond.

The Covid-19 crisis has served to further push many of the technological shifts that were already apparent prior to the pandemic, particularly in terms of digital transformation ranging from the provision of healthcare services to online purchases and payments.

In 2020, Thailand announced its plan to promote itself as the region's electric vehicle hub, by manufacturing 250,000 electrically powered vehicles by 2025 and increasing to 750,000 units by 2030, representing 30% of total vehicle production in the country. Singapore has already become a leading technology hub and its sector is set to grow further with more than 270 venture capital funds and 4,000 start-up tech companies located there.

Although health security remains a huge challenge, the region is stepping up its efforts to meet this. Singapore became the first country in Asia to receive a Covid-19 vaccine from Pfizer and BioNTech in December 2020. Indonesia has partnered with China's Sinovac Biotech to produce Corona Vac vaccine and is also developing its own, while acquiring further supplies from Novavax and AstraZeneca, with the aim of vaccinating more than 60% of the entire population by 2022.



Malaysia has secured orders from AstraZeneca, Pfizer-BioNTech and the global COVAX Facility backed by the WHO, and is negotiating with other potential suppliers as it plans to inoculate 80% of its population.

Elsewhere the Philippines has allocated US\$1.72 billion to purchase 148 million doses of vaccines from pharma companies including AstraZeneca, Sinovac and from India's Serum Institute of India. Vietnam has ordered 30 million vaccine doses from AstraZeneca and is also developing its own vaccine.

A huge boost has come with the decision by the Quadrilateral Security Dialogue (QSD), a strategic forum which groups the US, Australia, India and Japan, to deliver one billion doses of the vaccine to ASEAN countries by the end of 2022. The vaccine, expected to be Johnson & Johnson's single jab, is due to be manufactured by India's Biological E company. The QSD initiative will help to accelerate the economic recovery programmes of all countries in the region.



US-ASEAN Business Council

Alexandar C. Feldman, Chairman, President & CEO, US-ABC



Alexandar C. Feldman

For more than 35 years, the US-ASEAN Business Council has been a leader in strengthening economic and diplomatic ties between the United States and Southeast Asia. Year after year, we continue to witness the incredible growth and development of the region.

In the last decade, ASEAN member states increased their investment into the United States by over 250%, from US\$7.3 billion to over US\$27 billion. US direct investment in ASEAN increased by an average annual rate of 10% in the same period, making ASEAN the largest destination for US direct investment into the Indo-Pacific. ASEAN is the fourth largest market for US exports, and the United States is the fourth largest trading partner of ASEAN. This mutually beneficial relationship matters for the United States, supporting almost 42,000 American companies and about 590,000 US jobs.

Though the US-ASEAN trade and investment relationship remains long standing and beneficial for all parties, the global impact of Covid-19 has substantially undermined short term investment channels. Although FDI in Southeast Asia shrunk by 31% to US\$107 billion in 2020, the region beat the global FDI decline of 45%.

At the individual country level, inflows in the Philippines rose by 29% to US\$6.4 billion, exemplifying the resilience of ASEAN’s economy.

Despite the current challenges global investors face, there are several factors that paint a positive portrait of US-ASEAN investment in the years ahead. ASEAN currently has the world’s third largest labor force, and its middle class is expected to more than double in size from 135 million to 334 million by 2030, making ASEAN a powerful engine for long-term economic growth. The proliferation of smart trade policies that benefit US investors into ASEAN couples well with the region’s demographic profile. Singapore has already concluded two digital economy agreements, including one with Australia and another with New Zealand and Chile. Also, the sweeping RCEP and CPTPP free trade agreements greatly benefit American companies operating in ASEAN.

Favorable demography, new trade agreements, and a forward-looking economy are all factors that facilitate greater US-ASEAN investment. I encourage you to visit our website at www.usasean.org to learn more.

UK-ASEAN Business Council

Baroness Neville-Rolfe DBE CMG, Chair, UKABC



Baroness Neville-Rolfe DBE CMG

Southeast Asia continues to offer tremendous opportunities for UK companies looking to grow their businesses. The fourth largest population in the world is young, increasingly online and in search of innovative goods and services that the UK can offer. The UK-ASEAN Business Council (UKABC) is the leading organisation that offers awareness and connections for UK companies looking to invest in Southeast Asia's bright future.

The region is demonstrating its resilience and spirit of collaboration in recovering from the Covid-19 pandemic. ASEAN has faced significant economic disruption as it relies heavily on tourism, manufacturing and international trade. The ASEAN Comprehensive Recovery Framework is ensuring that ASEAN will bounce back better and build a resilient future. According to the OECD, ASEAN is expected to return to 5.1% GDP growth as vaccines are rolled out and economies re-open.

UK-ASEAN bilateral trade is at an all time high of £42 billion. Now that the UK can chart its own independent trading agenda, it is forging ahead with regional initiatives such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership and bilateral Free Trade Agreements signed with Singapore and Vietnam. It is also in formal trade discussions with Indonesia, Malaysia and Thailand to identify how to improve the trading environment.

Brunei is Chair of ASEAN in 2021 and has – as its main priorities – Recovery, Digitalisation and Sustainability. UKABC will work in partnership with Brunei to achieve its stated aims and goals. This collaboration offers UK companies the opportunity to engage in regional trade policy discussions that shape the future of the region. Given the importance of COP26 we are collaborating with the UK and ASEAN governments to raise awareness of the challenges of climate change and how, in particular, UK innovation and technology can provide solutions.

The region's digital economy represents 7% of ASEAN's £2 trillion economy and has the potential to be a global top five digital economy. While technology will upset norms, it will offer the region the ability to be future ready and enable much greater inclusive growth, particularly in health and education. The UK's innovative companies, across all sectors, are introducing digital solutions to challenges faced by the region.

ASEAN's story will continue to be one of opportunity. It will continue to grow from strength to strength as its economies develop and as its societies embrace technological advancement. The UKABC looks forward to partnering ASEAN in its journey towards economic prosperity and inclusive growth.

www.ukabc.org.uk



EU-ASEAN Business Council

Donald Kanak, Chairman, EU-ABC



Donald Kanak

ASEAN was not spared the impacts of COVID-19 on lives, livelihoods, and its economy. The governments of the region responded early, with public health measures and economic support packages to maintain jobs and ensure economic stability. By our count, ASEAN governments collectively injected around €150 billion into their economies as well as working on regional initiatives to cope with the pandemic and set a path for economic recovery as set out in the ASEAN Comprehensive Recovery Framework (ACRF) in November 2020. The ACRF covers not just health issues but also sustainable economic recovery, enhanced trade facilitation and investment regimes, accelerated moves on digitisation and a green growth strategy.

Coupled with the ambitious Priority Economic Deliverables that Brunei unveiled for its ASEAN Chairmanship, the ACRF and national recovery plans from each ASEAN nation should lead to a significant economic bounce back in 2021 and 2022. With those measures the region will likely remain the fifth largest global economy. Based on favourable demographics (the third largest work force globally), high rates of urbanisation and growing consuming classes, the region will remain attractive for investors. ASEAN Governments are supportive of long term FDI to help ensure continued strong, equitable, and sustainable growth.

European businesses continue to see ASEAN as a thriving region with plenty of opportunity: more than half of European businesses responding to our 2020 Business Sentiment Survey, which was undertaken at the height of

the various lockdowns, saw ASEAN as the region of best economic opportunity for the next five years; nearly 75% reported that they planned to expand their trade and investment in Southeast Asia. That is a strong show of faith in ASEAN.

ASEAN remains a work in progress as an effective trading bloc. The signing of RCEP in 2020 was a positive achievement. 2020 saw the coming into force of the EU-Vietnam FTA, further strengthening the trade and investment relationship between Europe and ASEAN. European businesses overwhelmingly favour more focus from the EU on FTAs like those with Vietnam and Singapore. EU-Indonesia CEPA negotiations now appear to be back on track, and the recent ASEAN-EU Strategic Partnership should point to a closer, more dynamic future for both regions.

Meeting ASEAN's long term goals will require more progress on targets for intra-ASEAN trade by harmonising standards across the region, removing non-tariff barriers, and fostering more innovation and competition. Making more progress in those areas, which still lags the region's stated goals, benefits consumers and boosts foreign investment.

The EU-ASEAN Business Council will continue to support European business bringing its best efforts to a recovery from the pandemic, and ASEAN's long term sustainable development. 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.

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As a leading sustainable finance provider with over 130 years' experience in the ASEAN region, named The World's Best Bank for Sustainable Finance by Euromoney in 2019 and 2020, we're here to help.

See how at business.hsbc.com/asean



Together we thrive

Seeking the light: ASEAN 2021 | 2022

Stuart Tait, Regional Head of Commercial Banking, Asia-Pacific, HSBC



Stuart Tait

2020 was disproportionately hard for Southeast Asia; with an early start to the pandemic, its economy contracted more than many other emerging markets.¹ Yet the fundamentals of the region remain intact. And despite being clouded by Covid-19, the opportunities to harness growth from trade, digitalisation and sustainable growth still shine brightly.

The fundamentals

Accounting for over 8% of the world's population, ASEAN countries combined equate to over 642 million people.² Dig a bit deeper and its demographic is one of dynamism, with 35% of the population under 25 years old and 65% to be classed as middle income by 2030. With expanding digital networks and growing numbers of mobile phone and internet users – ASEAN's growing population has more people coming online than any other region in the world, with e-commerce forecasted to grow to US\$88 billion by 2025.

The result is that despite the social and economic challenges of 2020, the region's prospects have held up. Indeed, FDI has remained strong, suggesting that ASEAN is poised to gain global market share. China, for instance, now trades more with ASEAN than it does with the EU or US.³

For firms looking to embark on new opportunities in the region, or deepen their presence, it's worth keeping an eye on three key themes that are poised to take-off: trade, digital and sustainability.

Trade: Regional Comprehensive Economic Partnership (RCEP) opportunity

Nearly a decade and 31 rounds of negotiations in the making, the RCEP – which was signed in November 2020 – is the world's largest trade deal. Involving ASEAN, China, Japan, South Korea, Australia and New Zealand, it accounts for 30% of the world's population and 29% of global GDP.

The pact eliminates tariffs and quotas on 65% of goods traded within the region - moving to 90% over 20 years. Of course there are some limitations to it, but it is an incredible achievement in aligning a diverse group of countries.

For Southeast Asia, RCEP opens the trading door even wider.

- Firstly, RCEP further cements ASEAN's trade openness; giving further provisions to enable its markets to continue trading – and at a crucial point in time.

- Secondly, it deepens ASEAN's connectivity with China, Korea and Japan, who are the global heavyweights for the electronics, automobiles, textiles and garments industries, which the region is reliant on. Having each of these markets within the trade pact means ASEAN can retain its supply chain relevance across these sectors.

RCEP also has the potential to drive important domestic regulatory reforms in areas like labour laws, investment liberalisation, cybersecurity, cross-border data rules and

intellectual property protection, and streamlines various overlapping preferential trading arrangements by establishing common trade rules. This should help to reduce trade costs for businesses.

As businesses assess the long term implications of RCEP on their path to recovery, there are some immediate steps that can be taken to get ahead of the curve. By reviewing their current commercial relationships, companies can identify gaps and understand where the greatest potential lies to forge new ties and tap into some of the fastest growing consumer markets.

They can also look at how their current supply chains – regional or global – map against the RCEP. Those who work now to understand how the deal could impact their business model will reap the greatest benefits in the future. This is not only important to companies based in the member markets, but to any firms doing business in the region.

Finally, an in-depth understanding of RCEP and its impact on tariffs for each group of goods and services will be critical for firms to reassess their pricing strategies and maintain their competitive advantage.

Digital: Building stronger digital connectivity

Digital technology has the potential to play a key role in driving the development of new industries and new growth in Southeast Asia, but unless the region can agree on a common set of standards for data handling and digital commerce that encourage businesses to share data, that potential is likely to remain unrealised.

The headroom for growth in ASEAN's digital connectivity is enormous. A recent report by Bain & Company⁴ concluded that the ASEAN digital economy accounts for 7% of its total GDP. In China it is 16%. In the United States, 35%. Harnessing the digital economy to power and accelerate intra-regional trade and growth could, the report concluded, lead to an uplift in GDP of US\$1 trillion by 2025, with particular benefits for SMEs.



For growth to happen, already-agreed frameworks like the 'ASEAN Digital Integration Framework Action Plan' and the 'ASEAN Framework on Digital Data Governance' need to be fully implemented in order to integrate the currently disconnected rules and regulations of nations.

Sustainability: Sustainable infrastructure and greening the region

Covid-19's impact on societal behaviours, consumption patterns and energy usage, has been a turning point in how we move forward: amidst this significant change, ASEAN has the opportunity to redirect public and private spending on infrastructure and energy investment plans.

The money needed to flow into almost every economic sector to create substantial change is vast, especially sectors that would enable or contribute to mitigating climate change. The Organisation for Economic Co-operation and Development (OECD) estimates US\$6-8 trillion of infrastructure investment is required globally



ASEAN is on the move; businesses must keep their fingers on the pulse when it comes to trade, sustainability and digitalisation.

Stuart Tait, Regional Head of Commercial Banking, Asia-Pacific, HSBC



per year by 2030. However, HSBC estimates current total investment to be only US\$1 trillion per year at the very best.

Linked to this, this challenge is compounded by the environmental threat facing the region. HSBC Global Research recently reported that of the 20 global cities most vulnerable to rising sea levels, 15 are in Asia including five in ASEAN.

Rapid action is needed across all areas: energy, transport, urban buildings, industrial and land.

These are formidable difficulties, but success is within grasp. Outside of the bloc, Japan, the US and China continue to invest in Southeast Asian infrastructure.

Inside, the nations are continuing to work together. In addition to broader private investment, sustainable and green financing is getting an uplift across Southeast Asia. For instance, the ASEAN Capital Markets

Forum (ACMF) is working to harmonise standards and regulations around green finance, providing a complete suite⁵ of standards in line with international ones in order to accelerate development across Southeast Asia.

With all the change around us, expect to see a continued push to redirect dollars towards public and private sustainable infrastructure investment.

As with markets worldwide, Southeast Asia saw a torrid 2020. But as they look to reopen, member countries cannot approach economic recovery in isolation. Hope for the region's future lies in its nations playing their strongest hand; acting as a collective rather than the sum of its parts. Trade, sustainability and digitalisation will be amongst the key priorities to advance as we head into a post-Covid world; businesses must keep a finger on the pulse to reap the benefits that will emerge from ASEAN's deeper integration.

¹ HSBC Global Research: ASEAN in 2021, 11 January 2021

² <https://www.business.hsbc.com/asean>

³ HSBC Global Research: ASEAN in 2021, 11 January 2021

⁴ <https://www.bain.com/insights/advancing-towards-asean-digital-integration/>

⁵ ASEAN Green Bond Standards (2017), ASEAN Social Bond Standards (2018), ASEAN Sustainability Bond Standards (2018)

How to (not) fail in ASEAN

Sumit Dutta & Shruti Choudhury, ASEAN Business Partners



Sumit Dutta



Shruti Choudhury

Next time when you pick up a breakfast sandwich and chai latte at a Starbucks in Indonesia, spare a thought for the vanishing old Subway or the once fiery Nando's. Western fast-food chains have consistently been unsuccessful in either changing local taste buds or adapting themselves to local palate in ASEAN. Vietnam has increasingly seen western fast-food chains like McDonalds and Burger King fading into oblivion. Failing to cater to local ideas of "fast" and "flavour," western retail giants have had to withdraw from ASEAN with a bitter taste in their mouth.

And the story doesn't end here. Similar narratives can be found in every sector and industry across all ASEAN countries. Take for example Uber's notorious exits in Asia; General Motors wrapping up of operations from Thailand and Indonesia; eBay's dismal performance in many Asian markets; and Walmart bowing out of Indonesia. Most recently in 2020, French supermarket chain Auchan retracted from Vietnam and the British grocery retailer Tesco too pulled back from Thailand and Malaysia.

While many of the world's biggest companies may be in the West, the biggest markets are increasingly in the East. And this attracts western executives who have done well at home, to think they will easily succeed in ASEAN. Unfortunately, some have learnt the hard way that may not be the case. So, what makes some western firms thrive in ASEAN while others fail so drastically?

The answer is both simple and complex just like the region itself.

Why does ASEAN matter?

In 2020, ASEAN, with a land mass covering a larger area than Germany, France, UK, Switzerland and Spain put together, emerged as the world's fifth largest economy with an estimated total GDP of over US\$3 trillion. ASEAN already is the world's third most populous region with 650 million people, and has the world's third largest labour force, behind only China and India. Additionally, over the next decade, ASEAN is estimated to see 140 million new consumers, representing 16% of the world's new

consumer class. Over 60% of the ASEAN population is below the age of 35, internet literate, digitally aware and hungry to consume more.

While the decision to enter ASEAN is a no-brainer, the skeletons of failed companies can be seen everywhere. So, what must companies do to succeed in this market?

Be curious

It is essential to understand that the ASEAN customer thinks, behaves and buys differently from the average western customer. The range of parameters that they use to evaluate the value of a product is different from the West. Take the case of Uber. They by-passed the fact that Asian consumers are not very comfortable with credit card payments, and the company lost out to local competitors like GoJek and Grab. SaaS (software-as-a-service) find it hard to work in Asia as subscription models tend to be unsuccessful with users. A lot of digital insurance firms have dismal sales in Indonesia, where most people are suspicious of insurance as a risk mitigator.

Which is why it is important to ask the right questions. What are the customer dynamics of the market? What is the competitive landscape like? Are you a first entrant? What is the attitude of the people and the government to your sector? Investing in extensive consumer research to understand consumer patterns, market insights and trend analysis can go a long way, but some firms are shy of going that extra mile to save cost. Research and analysis may seem like unnecessary steps to seasoned marketing firms, but they will save you a lot of pitfalls later.

Understand the culture

More often than not, many western managers enter with a rigid mindset of “this is the right way to do things”. The fact that Asian culture is



different, is well documented and widely accepted. But it is not enough to memorise the courtesies and participate in the wining and the dining. Softer aspects need to be paid attention to such as – the Asian hesitancy to say an outright no, understanding that silence in a meeting is not consent, accepting that this is a culture wherein things are usually left to interpretation and adopting a new outlook to the concept of time. Patience is a virtue here. Asian businesses do not work towards the next quarter, they tend to play the long game.

If you invest at the granular level, respect the culture and are keen to learn, you earn the right to be part of the thriving ecosystem. Look at Unilever’s story in Indonesia, where they first entered in 1933 and



It is essential to understand that the ASEAN customer thinks, behaves and buys differently from the average western customer.



remained through political upheavals, policy u-turns and even the financial crisis of 1997-98. While many other multi-nationals were exiting the country, Unilever adapted its business model to ensure that products remained affordable, re-negotiated supply contracts, forged new joint ventures and developed a strong local talent pool.

Remember that ASEAN is not a homogeneous market

It is pertinent to accept that there is no “single ASEAN”. Just like the diverse European Union, ASEAN countries differ greatly in their views on etiquette, social norms, religion, business ethics and legal framework. Hence, a consistent strategy across the region may not be the answer. What may be the accepted culture in Vietnam may not be reflective of those in Cambodia, or the legal landscape in Singapore will be vastly different to that in Myanmar. Take for example the huge popularity of 7-11 stores in Thailand and its failure in Indonesia. Colgate is popular in the Philippines but never took off in Indonesia. This makes it imperative to wisely choose the destination country for your investment.

Choosing the right country

Before western firms jump on the eastern bandwagon, they need to do their homework and find answers to questions such as – is the country welcoming of your sector? Is the political system conducive to building a sustainable business over the medium to long term.

Within 60 days of a successfully conducted election in Myanmar, the military ousted the democratically elected government and declared a one-year state of emergency, a move that came as a shock to the foreign investors in the country. The ever-evolving geopolitical relationships between Asia and the West and within ASEAN, can leave businesses facing potential risks, especially in terms of supply chain disruptions and governing policies. Diversification of trade partners, routes, supply chain firms and liaising with trusted intermediaries and partners who can help you navigate troubled waters, can help mitigate risks.

Understanding local regulations and legal framework

Every ASEAN country plays host to a myriad set of rules and regulations, often conflicting and sometimes purposefully opaque. Treading through this web of regulations can make even the most native of businessmen timid to proceed.

In ASEAN, many sectors continue to be strictly regulated, negative investment lists for many countries run for pages, local shareholding requirements are common, even the first step of registering a company is often tedious. ASEAN can represent differing financial regulations to the West, making legal compliance a very real risk for foreign companies, particularly under the lenses of the UK Bribery Act or the US Foreign Corrupt Practices Act (FCPA). It is important to understand that Asian

central banks may have a different risk appetite compared to the Fed. Telecom regulators in Indonesia may have varying tolerance to market competition than those allowed in the EU. Food and drug standards are vastly different as is the intertwining of religious diktat and commerce laws in Malaysia and Indonesia. Failing to thoroughly learn about local regulatory landscape could hamper future prospects and end up causing not only financial loss but even reputational damage.

Vet your partners carefully

Partnerships are important in ASEAN because they help you to build scale and presence in the market quickly, riding off the backs of established players. They can understand the legal framework, the sensitive geopolitics and help navigate through the complex regulatory web. Additionally, local regulations sometimes require you to operate with a local partner in terms of ownership and shareholding. This is sometimes acutely uncomfortable for western firms, who want to retain autonomy in their business management dealings and decision making but yet need to accommodate local partners.

The first step is to identify trustworthy third parties who have the sectoral experience and who can highlight the realities. An immediate second step is to vet them. Many enterprises fail due to the wrong choice of partner and having an insufficient understanding of the integrity and reputation of their counterparts. While in Asian countries business introduction by mutual acquaintance is important, so is conducting due diligence.

Invest in the right people

Once you have decided to be here for the long haul and accepted that basic cultural lessons will not suffice, you will need to build a strong and professional local management team. Just hiring a translator or flying in expats is not enough.

Experienced local professionals bring with them the crucial know-how of the industry, culture, business practices, network and access to resources. Language fluency can also be a huge asset in helping to manage teams on the ground and in liaising with partners and government stakeholders. This should extend beyond the immediate internal organisation. Hiring local legal counsel and external consultants may also be necessary to help navigate complicated laws.

Focus on local competitors

Dismissing local/regional competition is one of the gravest mistakes western companies can make. Price advantage often helps local competition as ASEAN markets are price conscious. Competition from domestic players is often lacking in quality and service standards as compared to international offerings, and just produced at cheaper costs. However, Asian consumers are sometimes happy to accept low quality at bare minimum prices. Some global companies have resorted to innovative methods to combat the price barrier, such as reducing serving sizes or offering steep discounts. Others need to innovate.

The bright side

There are many triumphant stories of western firms who have been able to cater to Asian demand, tailor to consumer behaviour and navigate the regulations successfully. The Coca-Colas, Unilevers and Starbucks have successfully combined global strategies with local solutions. They have all been able to build huge businesses by winning local hearts, without losing their international USP.

ASEAN has the potential to become one of the largest and fastest growing markets in the world. Every internationally minded company looking to build a sustainable business has to find a way to succeed in ASEAN. Invest now in the future, before the ship sails.





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
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Global Upside makes expansion easier for growing businesses

Ragu Bhargava, Co-founder & CEO, Global Upside Corporation



Ragu Bhargava

Global Upside CEO, Ragu Bhargava, talks about why all high-growth companies need to have a Southeast Asia strategy and how his company is making the road to Asia easier.

What inspired you to establish Global Upside Corporation?

The inspiration came partly from our backgrounds in financial accounting as well as the need we were seeing in those roles from clients who simply did not have the resources, knowledge base or expertise to expand globally, or manage their growing operations and internal teams.

Could you describe the services offered by Global Upside Corporation?

We started 22 years ago in the business process outsourcing (BPO) world and have evolved into an expansive suite of global growth services for companies looking to go beyond their home country. We now also have HR software products to give our clients a truly holistic combination of professional services and technology that can help them setup, hire and

operate in a new country and optimise their growing global operations.

We provide full business lifecycle support from incorporation, to hire to retire and payroll support, to Global PEO or Employer of Record, and accounting, tax, and global compliance services. Our industry-first global human capital management software is designed to cater to a global workforce. The software helps companies stay compliant with wage/hour/labour regulations in the countries they operate in while having a robust system to centrally manage employees.

What effect has the global pandemic had on your business?

We were very fortunate to have grown during the pandemic. No one had to take a pay cut, nobody was terminated, and we were able to support our infrastructure growth and our clients without missing a beat. We've actually seen an uptick in companies wanting more access to global talent or wanting to enable their workforce to work from remote locations

globally. This increase in global talent demand and the work from anywhere trend has been quite good for us as we are the provider of choice in helping companies go global. In fact, we have seen quite an uptick in companies wanting to explore Southeast Asia and south Asian countries including Thailand, Malaysia, and the Philippines.

How active is Global Upside in the ASEAN region?

We have offices in Malaysia, the Philippines, Singapore and Vietnam and we are continuing to expand, with Thailand being the next country for us to enter. We are committed to the region and are looking to hire more staff in Singapore and to grow our presence in the Philippines. What we are seeing is that some of the negativity surrounding China and Covid-19 means businesses are looking at other options for manufacturing, so we are seeing interest in countries like Thailand and Vietnam, Singapore, and Malaysia.

What do you see as the principal attractions of the ASEAN region?

Most of the region is stable and there is an abundance of labour, from highly qualified engineers to blue-collar workers. It is a very competitive environment and though Singapore is one of the highest cost places in the region, the level of talent is higher than you would find elsewhere in the world, for example in the life sciences field. That availability of talent is attracting companies to establish both manufacturing and non-manufacturing businesses such as R&D in the region, because there is talent available.



What would be your advice to any business looking to establish in the ASEAN region?

Factors we advise clients to look at are the availability and cost of talent, but beyond that is facilities and availability of raw materials – if you want to set up a big office or manufacturing plant what infrastructure will you need, not just today but for some time to come? From a talent perspective, if you are in the life sciences industry, perhaps you should look to Singapore. The cost of labour may not be as low as it is in Thailand, but the level of talent is very high. Look also at subsidy programmes, which could pay some of your costs in the early years of a new business.

To learn how Global Upside Corporation could help you in the ASEAN region, go to www.globalupside.com

Reframing for growth and building a better working world post-pandemic

Liew Nam Soon, Regional Managing Partner, EY ASEAN



Liew Nam Soon

The pandemic has affected organisations on many fronts. How has it shifted the ASEAN business landscape?

The pandemic is a significant change analyst and has accelerated several trends in ASEAN. Firstly, the diversification of supply chains from China to ASEAN has intensified and brings new investments in areas such as electronics manufacturing in Vietnam, electric vehicles manufacturing in Thailand and renewable solar energy in Malaysia.

Next, as companies re-evaluate and reimagine their business models considering the changes in geopolitics, markets, customer expectations and industry convergences, success will be a case of building a better ecosystem – and not necessarily a bigger business. Key to this is customer-centricity, enabled by data, bringing partnerships and other opportunities together as investors seek to extend their roles in the ecosystems.

Thirdly, the focus on reskilling and creating career pathways will help the workforce combat the impact of automation and digital technologies. The pandemic has accelerated job displacements while creating opportunities in areas like e-commerce, healthcare, last-mile delivery and consumer technology. We expect to see investments in skills training in relevant sectors and data and technology skills.

Finally, the pandemic has underscored the critical role of environment, social and governance (ESG) considerations. Investments in green infrastructure and a transition to a lower-carbon future will take on greater prominence. ASEAN countries will have the opportunity to unlock economic growth by doubling down on green infrastructure while addressing infrastructure gaps and accelerating economic growth in the process.

How are EY teams helping companies differentially in navigating the post-pandemic world?

In the early phases of the crisis, we stayed close to clients, advising them on crisis management, recovery and reinvention. Now, there is a fresh impetus among executives to relook at their business models and operations to determine how to continue to stay relevant through partnership, M&A, and ecosystem and platform play. At the same time, companies are looking at innovation and technology to enhance their business and operations.

The pandemic has also made more organisations recognise the broader role they play in society and consider issues such as ESG more keenly in their strategy and operations.

Central to all of this is helping companies stay resilient through the unrelenting uncertainties. There are a number of ways that we differentially enable EY clients to stay ahead. For one, the EY Megatrends framework provides

deep insights into the forces of change that are reshaping our world today, to help businesses prioritise their objectives and create a dynamic future-back plan.

We also developed the EY Enterprise Resilience Framework, which is a diagnostic tool that provides a methodical approach to help companies focus on nine key areas – supply chain and global trade; employee health and wellbeing; talent and workforce; customer and brand; financial and investor; risk; government and public policy; technology and infosec; and insurance and legal disputes – to keep them resilient across the three time horizons of now, next and beyond.

It is important to focus on both the urgent and the important. On the latter, we are helping companies drive a greater emphasis on long term value creation through reframing and transforming their business, including seizing new growth opportunities, redefining purpose, and transforming into a full digital enterprise.

As an organisation, how is EY evolving to navigate the fast changing business landscape?

Mandatory lockdown measures imposed during the pandemic had meant that we needed to be nimble and agile and pivot our services for business continuity and align with client needs. Over the last decade, the EY global organisation has been investing heavily in innovation and digital technology to allow EY people to team better and serve clients in different geographies. Combined with a strong flexible work culture, aided by technology and virtual collaboration tools, our people adjusted to a remote working arrangement with relative ease.

It was also timely that we had launched our NextWave strategy in 2019, of which we articulated our ambition to create long-term value for

clients, people and society, and to invigorate our purpose of *Building a better working world*. Part of our NextWave strategy was to redefine two of our service lines, namely Strategy and Transactions, and Consulting, and this sharpening and deepening of our capabilities will enable us to meet the complex strategy, transformation and technology demands of EY clients in an end-to-end manner.

As an organisation, we too are accelerating our digital transformation. We plan to invest US\$1.5 billion in audit quality, technology solutions, people and the wider EY ecosystem of strategic alliances.

The investments will see a further build-out of EY client technology platform, which underpins EY services and allows us to drive client service innovation and support projects at scale and speed. As well, already a top global user of cloud technology, we will enhance and extend the range of EY digital offerings and services through a diversified, connected and intelligent ecosystem of strategic alliances and a global innovation network. Going in hand with technology investment is developing our talent with cutting edge digital skills.

All of these will no doubt benefit the clients, organisations and talents that we work with.

Finally, for CEOs of organisations looking to grow in ASEAN, what are the three questions they should ask?

The three key questions would be:

- 1** How will you build – or acquire – the key competencies needed for growth in ASEAN?
- 2** How will you factor in sustainability, ESG and long term value in your business strategy and execution?
- 3** Do you have the right leadership and culture in place to drive transformational change?



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Maximising opportunities in ASEAN in a post-pandemic world

Liew Nam Soon (LNS), Regional Managing Partner, EY ASEAN

Adrian Ball (AB), Partner, Global Trade – ASEAN, EY Solutions LLP

Vikram Chakravarty (VC), EY Global Strategy Leader



Liew Nam Soon



Adrian Ball



Vikram Chakravarty

With its 650 million population and fast-growing wealth, ASEAN is rapidly becoming an economic superpower. How can businesses and investors leverage ASEAN's opportunities for growth?

How has the Covid-19 pandemic affected the business landscape in ASEAN?

LNS: The Covid-19 pandemic has changed the shape of our global economy, supply chains and business models. There is an unprecedented opportunity across ASEAN to reimagine business and build a foundation for a sustainable future. Governments and businesses can collaborate to create more resilient and productive economies, upskill workers, create jobs using technology, boost productivity, optimise costs while providing the opportunity to build long term value.

Going forward, two imperatives are clear: companies need to accelerate transformation to meet new and rapidly evolving customer demands. Additionally, organisations should apply holistic cost transformation and find strategic ways to align resources to maximise potential.

More than ever, it is vital to build resilience to enable agility across the enterprise, expand testing for scenarios around third parties, technology, operations and regulations, and develop new performance metrics. While one cannot predict all risks, organisations should be ready to respond with agility and flexibility when crisis occur.

VC: The pandemic highlights several major trends that are already present. The need to embrace digital technologies to grow is not new, yet any ASEAN businesses which have lagged in this must now accelerate digital adoption. Should they successfully bring this into their

core operating model, there is potential for them to win and leapfrog the competition.

The pandemic has also brought sustainability and environmental, social and governance (ESG) concerns to the fore. Companies are looking for advice to help them navigate ESG issues and options – and understand the trade-offs.

Companies also increasingly see the need to invest and generate focus among businesses. ASEAN has too many fragmented sectors and sprawling conglomerates. We anticipate a major effort among these corporates to streamline and focus on core and jettison non-core business, and take the proceeds to invest into digital and AI for transformation.

Geopolitical tensions will remain – and the upside for ASEAN is that it is well-positioned to capitalise on opportunities in supply chain and as a regional headquarter. All in, there are massive opportunities for ASEAN businesses, but they need to transform and transact their way forward and not sit on the fence.

Where are the opportunities for investments in ASEAN?

VC: ASEAN has geographic and sectoral advantages that offer immense opportunities. However, there is a need for a multi-country strategy and partnerships with local firms to drive success. The top sectors that will likely see strong investment opportunities include logistics, technology, manufacturing, real estate, financial services, life sciences, fast-moving consumer goods, and electronics. Countries that will potentially draw strong investment interest include Singapore, Indonesia, Vietnam and the Philippines.



That said, investors need to better understand joint venture structures, acquisition target, execution risks, local market demands and multi-country operations to secure success in their ASEAN investments.

How should companies develop a strategy to venture into, grow or scale in ASEAN?

LNS: When developing an ASEAN growth strategy, it is useful to focus on where companies can meet the infrastructural, financial, medical, logistical and educational needs of these countries. Companies that do so are well-positioned to ride on ASEAN's growth momentum to expand their businesses into the region.

In building the strategy, consider the business model and how you can leverage digital and data and a skilled workforce, and gain a good



There is an unprecedented opportunity across ASEAN to reimagine business and build a foundation for a sustainable future.



understanding of the local consumer demands, investment environment, regulations, and tax and business costs of the different ASEAN markets. It cannot be a “one-size-fix-all” strategy but a holistic one that caters to cross-border ASEAN customers, trade and business flow and yet nuanced to local practices, preferences, regulations and operating conditions.

With the Regional Comprehensive Economic Partnership (RCEP), what does this mean for businesses in ASEAN?

AB: ASEAN countries already have a comprehensive network of “ASEAN+1” free trade agreements (FTAs) with each of the five non-ASEAN RCEP member countries. Preferential duty rates under these ASEAN+1 agreements are already low, with many products already in scope. For ASEAN exports, additional market access benefits under RCEP will, for a number of products, be a long time coming.

The qualifying rules under the existing network of FTAs can be complex, so many companies do not take advantage of the FTA benefits. The RCEP, with a single set of qualifying rules, makes FTA benefits more accessible, particularly for small and medium enterprises. We see RCEP as an enabler for them and the utilisation of FTA benefits will increase, leading to greater international trade. RCEP also offers existing FTA users an opportunity to revisit procurement strategies, utilising RCEP qualifying rules to streamline sourcing options and reduce cost.

While India is not part of the RCEP, ASEAN already has an FTA with India. With that, ASEAN exports are able to have preferential market

access to India and manufacturing in ASEAN is in a prime position to act as a regional source for RCEP member countries and India.

LNS: With RCEP as an enabler, there is scope for RCEP members to invest more in one another and ASEAN can play an important role as intra-ASEAN trade and investments pick up. The RCEP is expected to drive investments in many developing economies in ASEAN, such as Indonesia, Thailand, Vietnam, the Philippines, as well as frontier economies like Lao PDR and Cambodia. It also can help drive investments in several areas including integrating into reconfigured global chains, infrastructure project finance and manufacturing, clean energy, infrastructure and healthcare.

Any last advice for investors interested in ASEAN?

LNS: ASEAN’s fundamentals are strong and its fast-growing digital economies should interest investors. Talent is another favourable factor, with the region’s growing, young and increasingly better educated workforce that has manifested into a fast-rising middle class. The rise of FinTech and ecosystems have also driven financial inclusion across the region.

ASEAN is not homogeneous – the different levels of economic development, regulations, tax, language and cultural considerations should be deliberated when investing. Yet, with continued ASEAN integration, companies can capitalise on where common standards will be set for cross-border investments and businesses, to deliver a range of services for ASEAN customers across different countries.

Financial technology is rapidly changing banking in the region

Covid-19 has triggered a sharp rise in digital payments and home deliveries globally. The use of internet technology to make purchases and payments has surged throughout the world, not least in ASEAN countries. This trend is part of much wider changes set to alter the way banking is provided.

ASEAN populations totalling more than 640 million is on the cusp of a financial revolution and is fast emerging as the next megamarket for digital consumer finance. Boston Consulting Group (BCG) estimates that at least 10% of the adult population of Malaysia, Vietnam, Thailand, Indonesia and Singapore already use their mobile phones as e-wallets.

Digital financial services bring in some US\$11 billion in revenue, and this is expected to grow over threefold to US\$38 billion and account for 11% of total financial services revenue by 2025, according to BCG.

Technology promises to rapidly change the nature of banking and how the sector's services are provided in a region where there is still substantial inequality of access to financial services. BCG says that more than 174 million adults across Southeast Asia lack bank accounts or credit cards, while another 30 million make minimal use of banks.

According to a 2020 International Data Group (IDC) report, the region's high unbanked populations and low penetration of traditional financial

products make it an ideal growth field for digital financial services. Digital lending, e-wallets, insurance technology and wealth management are primed to address many inherent existing issues and are expected to grow rapidly, it says.

At the end of 2020, the Monetary Authority of Singapore (MAS), announced the award of full digital banking licences to four groups. These comprise Grab-Singtel, a taxi hailing business which has diversified into providing financial services, Sea Limited a digital entertainment company, Ant Financial a subsidiary of China's Alibaba and Hong Kong based Greenland.

These neo-banks will provide all their services online and are expected to start operations at the beginning of 2022. Other countries in the region are also set on radical change, with the Philippines issuing a framework for digital banking.

Cambodia launched a blockchain based payments platform in October 2020. The innovation is seen by the Government as a critical step in the modernisation of its payments system.

The advancing pace of technology innovation is rapidly transforming the financial services industry in ASEAN countries. FinTech companies are utilising a wide variety of technology such as cloud computing, mobile

phones, AI, machine learning as well as blockchain and distributed ledger technologies to make financial services and products far more accessible to customers and on a 24/7 basis.

The standout technology is blockchain, which essentially acts as a ledger of transactions. These transactions are distributed and duplicated across a network of computer systems on a blockchain in a cryptographic way. This makes it impossible to change or manipulate the transactions thereby allowing the secure transfer of money, contracts and other items as timestamped digital documents.

Central banks are keen to explore the scope of FinTech applications with regulatory sandboxes established to test systems in Brunei, Malaysia, the Philippines, Thailand and Singapore. The latter is playing a particularly influential role in FinTech development in the region.

In 2019, the Bank for International Settlements (BIS) and the MAS, the country's central bank, launched a BIS Innovation Hub Centre in Singapore. Similar centres have been set up by BIS in Hong Kong and in Switzerland. They aim to identify and develop in-depth insights into critical trends in technology affecting central banking.

The MAS has also embarked on the final experimental fifth phase of its Project Ubin. This experiment was set up with the participation of some 40 financial companies to understand blockchain and distributed ledger technology and how these systems could be applied to new models in the clearing and settlement of payments and securities.

The MAS says that the multi-currency payments network prototype developed under phase 5 of the project successfully settled payments



in different currencies on the same network. An international settlement network, modelled after this prototype, could enable faster and cheaper transactions than conventional cross-border payments channels.

Chia Song Hwee, Deputy CEO of Singapore's Temasek state-owned investment concern, says that blockchain technology has great potential to transform businesses and open up new business opportunities adding that "Phase 5 of Project Ubin has demonstrated the commercial applicability, viability and benefits of blockchain technology across industries, beyond capital markets and trade finance."

According to Lay Lim Teo, Chairman of Accenture Singapore, collaboration between financial and non-financial firms to create the network necessary to support multi-currency payments will also drive



The use of internet technology to make purchases and payments has surged throughout the world, not least in ASEAN countries.



new products and services that generate new revenue streams. “We have identified areas where blockchain based solutions can be deployed at scale and drive greater payment efficiency across industries,” she says.

In Malaysia, regulators are also taking steps to make the country a competitive hub for FinTech start-ups in a bid to seize a share of the burgeoning opportunities, for example with Luno, the first cryptocurrency exchange to be authorised by its Securities Commission in 2019.

The heavily populated ASEAN countries have a particularly urgent need to widen the reach of their financial systems. The World Economic Forum says that some 33% of SMEs lack access to loans and a line of credit. This problem is more acute in the Philippines, where half of its SMEs lack access to formal loans, even though they employ 65% of the national workforce and account for 99% of business undertakings.

The gulf between formal financial institutions and low-income households is illustrated by the growth of peer-to-peer lending (P2P), in which individuals borrow directly from other individuals. In Indonesia, for example, millions of people obtain funds through informal social gatherings that serve as micro-credit groups.

At such meetings, typically hosted monthly in homes, borrowers raise small loans from the rest of the group, usually repaid without interest after a year. However, even Indonesia’s P2P lending has started to be digitised. One firm, Mapan, is reportedly connecting 200,000 lenders and some 2.5 million members via its app.

In 2020, Asian Development Bank (ADB) approved US\$500 million of loans to support Indonesia’s efforts to expand financial access for micro, small and medium-sized enterprises. The support is designed to improve the country’s payments infrastructure as well as strengthen the regulatory framework for digital financial services, data privacy, consumer protection and financial literacy.

ADB says that its programme supports Indonesia’s goal to increase the number using financial products or services offered by formal financial institutions to 90% by 2022, up from 76% in 2019.

It went onto say, “Financial inclusion will play an important role in Indonesia’s recovery from the Covid-19 pandemic. More equitable efficient access to financial products and services will support government measures to mitigate the pandemic’s economic and social impacts, rebuild livelihoods and prepare for economic shocks.”

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Future-proofing ASEAN's financial services industry

Sharon Toh, Head of ASEAN Region, SWIFT



Sharon Toh

SWIFT is the world's leading provider of secure financial messaging services. Sharon Toh, SWIFT's Head of ASEAN Region, explains its background and how its platform is helping the region's financial services sector embrace the future.

Discover SWIFT

Today, goods and services move more quickly and across greater distances than ever before, and there is a need for payments to keep the pace but at the same time, remain trusted.

SWIFT was established to find a better way for the global financial community to move value – a reliable, safe and secure approach that the community can trust completely. The cooperative has constantly evolved in an ever-changing landscape. It first went live with its messaging services in 1977, replacing the Telex technology. Over four decades later, SWIFT's messaging services are used by more than 11,000 financial institutions in over 200 countries and territories around the world, as it continues to provide reliable, secure and efficient messaging services to its community of users.

Three years ago for example, SWIFT gpi was introduced to create a faster, more transparent and traceable cross-border payments experience; and with its community, SWIFT successfully completed a test to integrate gpi with Singapore's domestic instant payment service, Fast and Secure Transfers (FAST). The cooperative also entered the real-time payments market with Australia's New Payments Platform, and rolled out the Customer Security Programme to support the banking community in its cybersecurity

needs. In addition, SWIFT works with its community to develop a catalogue of innovative APIs that supplements the range of SWIFT services delivered using API technology.

Keeping pace with ASEAN's flourishing digital economy

Innovation is, and has always been, at the heart of SWIFT, and the cooperative is well placed to build on the rapid adoption of technology in ASEAN in recent years. With the region racing to grow its digital economy and infrastructure, navigating the new digital era effectively has become a pressing concern for the community.

"We pride ourselves on being at the forefront of innovative application of technology within the financial sector, and we support the needs of our ASEAN customers through new capabilities and functionalities, various forms of connectivity, and secure user access," said Sharon Toh.

Beyond this, SWIFT recently announced a new vision to accelerate growth in international payments and securities, and support innovation. Over the next two years and beyond, it will roll out a next-generation digital platform, to enable seamless transactions from one account to another anywhere in the world with end-to-end transparency and predictability.

In payments, financial institutions will be able to expand offerings to businesses and consumers and enhance the end-customer experience. In securities, financial institutions will benefit from improved reconciliation, reporting and asset servicing processes as well as end-to-end visibility of transactions to reduce settlement fails and fines.

“One advantage of the new platform for our community are increased opportunities to create – either independently or collaboratively with partners – new value-added services to support long term business growth,” she added.

The ISO 20022 standard for cross-border payments, which SWIFT is supporting in terms of adoption, plays a central role to this new vision. The shared standard offers higher-quality payments, and when fully in force from 2022, brings a host of benefits to the community, including increased automation, faster processing, more effective reconciliation, improved mitigation of financial crime risk and better payment insights.

Navigating the growth in regional trade

Payment interoperability is especially important across the diverse economies of ASEAN, for enhanced intra-regional trade and business activity, and the new platform addresses this by minimising friction, optimising speed and providing end-to-end transparency and predictability from one account to another anywhere in the world.

At the same time, the global pandemic has transformed technology from a strategic priority to an operational imperative. With digitalisation comes increased cyber risk. Powered by APIs and cloud technology, the platform offers new and extensive data capabilities that enable fraud detection, data analytics, transaction tracking and exception case management.

“Payment interoperability and risk management are vital ingredients in ASEAN’s trade regionalisation. When Covid-19 hit, it became very clear that lockdowns were preventing couriers from getting trade documentation through from one country to the next. Trade requires a lot of documents – and in recognition of this challenge, we have been looking at how we could capitalise on SWIFT services to move hard-copy trade documents digitally and securely over the SWIFT platform,” said Toh.

That is not all. SWIFT also launched a proof-of-value with a number of banks in ASEAN, and signed a Memorandum of Intent with

Singapore’s Infocomm Media Development Authority (IMDA) recently, to encourage the digitalisation of documentary trade.

Supporting ASEAN’s capital markets

ASEAN’s capital markets are fast evolving, with participants – from investors, issuers and regulators – under pressure to go faster, work smarter, improve transparency and service new assets – without compromising on safety and security.

SWIFT’s new strategy in capital markets and its platform will help the ASEAN banking community simplify processes like reconciliations and reporting and make them more efficient, to enable end-to-end transaction monitoring in near real-time, so the relevant parties in the chain will be able to track and provide visibility on the status of a transaction.

“Together with our community, we are helping to build this new world on a strong foundation, in line with the ASEAN Economic Community’s vision of a region with strong, interlinked capital markets that facilitate greater trade and investment flows,” Toh added.

Towards a vibrant financial services landscape in ASEAN

SWIFT is no stranger to disruption, having transformed previously manual processes and unlocked efficiencies in the financial system, to reduce frictions, costs and operational risks. Over the next two years, it will continue to advance by embracing the exciting potential of new technologies through its digital platform.

“The financial services industry may have come a long way since the days of the Telex. But our end goal remains unchanged. We share an aim with our community to achieve instant and frictionless transactions, in support of the regional integration efforts by ASEAN member states and in creating a more dynamic and resilient ASEAN, capable of responding and adjusting to emerging trends,” said Toh.

To learn more about how SWIFT can help you in the ASEAN region, go to www.swift.com

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Recruiting the best talent to help your ASEAN business grow

Nicole Sahin, Founder and CEO, Globalization Partners



Nicole Sahin

Finding the best team and understanding local employment laws are a challenge for any company seeking to expand internationally. Nicole Sahin, Founder and CEO of Globalization Partners (GP), introduces her business model and explains how it can help you manage your staffing needs across the ASEAN region

What does Globalization Partners do and how is it different from other Employer of Record companies in the industry?

Globalization Partners is an Employer of Record (EOR) and we simplify hiring global remote teams by enabling companies to employ anyone, anywhere, in the world quickly and easily. Companies find the talent they want to hire, and we put that team member on our fully compliant, in-country payroll. Our technology solution intersects with our built-in-house, fully compliant global legal infrastructure, and is supported by our world-class HR team members around the globe.

In terms of how we differ, there are two global EOR models. One is a fully built in-house model (which is our model) whereby a highly qualified legal, HR, and tax team have been put in place to efficiently meet the needs of our customers. This model takes on the liability for ensuring things are handled properly and legally in each country.

There's also the consolidator model. This is the model where an umbrella company selects third-party mom and pop shops in each country on behalf of its customers, and acts as an intermediary between the customer and the local in-country partner. This is known as the aggregator or consolidator EOR model.

Our model not only helps you manage your company while you're building it, but it is a critical differentiator at the time when you exit, when every detail of your international contracts will be scrutinised.

You set up Globalization Partners in 2012 after an earlier career in Silicon Valley: what motivated you and how has your past experience helped drive the company's impressive growth?

Globalization Partners began as many companies do – with an idea: that the best companies and brightest people should be able to seamlessly collaborate, without regard to location. I knew that if I could make it easy for people to work together from different countries, the barriers that were traditionally in place to global business would break down. I love the idea of connecting everyone, everywhere, to great opportunities.

Eventually I decided that the only way to make the type of positive change I envisioned was through business. I'm proud to say that our comprehensive solution is helping

companies achieve their international expansion goals faster than they could have imagined. We also have built a company people love, with 97% customer satisfaction ratings.

To drive our own growth, we've made significant investments in our technology, operations, and intellectual capital and have constructed a unique global legal infrastructure, and AI-powered technology platform that delivers our compliant expansion solution. In addition, we continually focus on developing key partnerships that will provide long term options for meeting customer goals as companies increasingly turn to us in the new era of global remote work.

How would you define your mission and Globalization Partners' core values?

Our mission is to simplify building a global remote workforce by making it fast and easy for companies to hire anyone, anywhere in the world. We do this while ensuring industry leading legal, HR, and compliance standards, via our AI-powered user experience.

Our core values include respecting comprehensive employee rights on behalf of our customers in over 180 countries. We do this while maintaining our exceptional service ratings, which requires rigorous commitment to:

- A **Triple Bottom Line**: treating our customers, our employees, our shareholders, our partners, and the professionals hired on behalf of our customers with empathy, cultural intelligence, and respect for each individual
- Conducting our business ethically with transparency and integrity
- Championing quality over quantity to surpass customer expectations
- Breaking down barriers to global business and commerce with world class technology that is compliant with local employment and privacy laws, and respectful of human rights.



What are the principal benefits to a growing business in hiring Globalization Partners?

Companies identify the talent they want to hire, and we can have those team members up and running in another country within days – allowing companies to generate new revenue streams and capture new market share. This provides ultimate flexibility and allows an organisation to react quickly and dynamically to evolving market trends and demands. Whether it's tapping into existing markets or creating new ones, expanding your workforce globally can be the key to long term prosperity in an unpredictable world.

We take on the more onerous aspects of hiring internationally and remove many of the biggest roadblocks to global expansion.

Could you explain your role as an Employer of Record?

In a typical employment model, the employer hires the employee and takes on the responsibility of all tax, legal, and employment benefit provisions.



Firms must build exceptional teams in order to take advantage of this open window and harness the truly unique momentum gathering in ASEAN.



As an EOR, we take on the employment responsibility from a legal perspective. Companies can hire anywhere in the world while avoiding the hassle of navigating complex labour laws, taxes, benefits, currency exchange, or payroll issues. But even more importantly, we help guarantee competitive compensation packages to high-value international employees, based on their country standards. Working with us is an excellent way for businesses to offer employees great benefits without setting up the legal infrastructure needed to put these packages in place.

What are the key advantages to a business in using an Employer of Record?

With an EOR, companies can hire the best talent from around the world, without that employee leaving their home – and without the company having to set up an international branch office or subsidiary. This keeps your team members on the ground in their own country, where they already have the legal right to live and work. Many employees working remotely from their home country who may be attracted to international companies are already accustomed to working from home. They can start work within a few business days, without waiting for visa approval. We like to think of the solution we bring to you and your international candidates as a digital visa. We are the conduit for your company to access talent everywhere. With our worldwide entity infrastructure in place, you can onboard a new hire almost anywhere in the world within a few business days. Legally, the employee is on our payroll, but your new team member is fully dedicated to you.

There is a trend among progressive companies towards remote working and a “work from anywhere model” – how has that impacted your business?

As a global community, we’re at a crossroads. Companies that not only allow remote work but embrace it and make it a core tenet of their talent acquisition strategy, are going to come out on top. Building your own team in Estonia...or South Africa, Vietnam, Colombia, and anywhere else your business takes you, gives your company the edge.

As a result of the remote working trend, companies have started to think differently about where they source talent. As more seize the opportunity that comes with building remote teams, we are seeing increased demand for our solution and significant momentum in 2020, with 50% year-on-year customer growth.

What is covered in your GlobalPedia database and how can businesses access it?

GlobalPedia is the world’s only up-to-date guide on labour laws, norms, and regulations. Whether you’re growing an international workforce or hiring one employee, you can know what to expect by consulting it first. It provides everything you need to know about hiring anywhere in the world and can be accessed via this link: [GlobalPedia | Globalization Partners \(globalization-partners.com\)](https://globalization-partners.com).

How much experience does Globalization Partners have in the ASEAN region?

ASEAN represents a significant opportunity and our GM of Asia Pacific, Charles Ferguson has exceptional entrepreneurial and executive

experience in Human Capital Management solutions in the region, including being the Asia Head of ADP. We have been working with companies to expand into the Asia Pacific region for years, with 40% of our customers already there. Now that we have launched operations there, companies can easily accelerate global growth plans in and outside the region.

What do you see as the key drivers of growth in your business across the ASEAN region?

Given the unique times we are operating in, businesses of all sizes and makeup must assertively expand their regional presence to benefit from the growing opportunities across Asia Pacific, and most acutely, in Southeast Asia. This is even more critical given the significance of the recent signing of the world's largest trade agreement, the Regional Comprehensive Economic Partnership (RCEP). On 15 November, 2020, 15 Asia Pacific nations signed this, the world's largest free-trade agreement (FTA). It includes ten ASEAN nations and five regional trade partners: China, Australia, Japan, New Zealand and South Korea. Over ten years in the making, the RCEP covers almost one-third of the world's population and over 30% of its GDP. Once ratified, the agreement will progressively lower tariffs, increase investment, act to counter protectionism, and ultimately allow more free movement of goods. It also represents the first ever FTA between China, Japan, and South Korea – Asia's largest, second-largest and fourth-largest economies.

Countries like Singapore have responded to Covid-19 by accelerating investment in digitisation - how has Globalization Partners responded to the challenges posed by the pandemic?

In 2020 we announced a range of new free support services to customers and prospective customers planning to hire talent internationally during the pandemic. The new services have been launched to help businesses plan for future talent needs in order to help them come out stronger on the other side of this unprecedented crisis. They include:

- **Virtual Interviews:** access to an online interview platform so companies can safely screen top candidates
- **Salary Benchmarking:** compensation analytics to ensure your offers are on target
- **In-Country Expertise:** for answers to questions about hiring international talent
- **Support for Finding Top Talent:** help from qualified, experienced, professionals that provide expertise in your target global location.

We've also completely automated global expansion with the unveiling in 2021 of our [Self-Service Global Expansion Experience](https://www.globalization-partners.com/goglobal/), allowing businesses to compliantly grow and manage their global teams – all in one place. The technology streamlines the process of building global teams by putting the country-specific requirements of onboarding at the customer's fingertips <https://www.globalization-partners.com/goglobal/>.

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

End to end innovation, strategic go-to-market execution, and operational excellence will be paramount to success, with needs in automation and digital transformation as well as regional expansion opportunities in the services sector being key areas of growth. The fuel for this evolution is access to amazing talent, and the timing for acquiring the best available is right now.

Firms must build exceptional teams in order to take advantage of this open window and harness the truly unique momentum gathering in ASEAN: revisit and redesign supply chains, invest in and develop new networks, and experiment with new market entry strategies. Bolstered by existing talent pools and amplified through key investments in free trade, countries and enterprise ecosystems are developing hubs, where start-ups, multi-nationals, and universities are collaborating with governments, working together to deliver economic growth and prosperity.



Supporting UK companies in ASEAN

British Chamber of Commerce Singapore

The Association of Southeast Asian Nations (ASEAN) is a region that provides enormous opportunity for UK companies. UK-ASEAN trade is worth nearly £42 billion, with real potential for further growth. The ASEAN export market is worth more to the UK than Australia, Brazil, India, Japan, New Zealand, and Russia, and could soon overtake China. ASEAN continues to be the UK's second largest export destination in Asia.

There is phenomenal support for UK businesses looking to expand across the ASEAN region. Britain in South East Asia (BiSEA) is a grouping of British Chambers of Commerce across the Southeast Asia region in Cambodia, Indonesia, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. The regional Chamber network facilitates the interests of UK companies along with the members belonging to British Chambers within Southeast Asia. BiSEA propagates strong business networks by providing representation, information, services and guidance as a validated third party contact to Chamber members. It provides a channel for companies to establish or develop their commercial presence within the Southeast Asian market.

How does it work?

British Chambers of Commerce are among the leading partners in the Department for International Trade (DIT)'s Overseas Partner Delivery initiative, providing bespoke business support to British SMEs including:

- **Advisory Services:** legislation and regulatory advice; route to market; and business mentoring
- **Business Matching:** identification of potential clients, agents, distributors, franchise partners, sponsors, etc and tailored meeting programmes
- **Events:** product/services launches, press conferences, business meetings, trade shows, industry missions, store promotions, networking events, and receptions
- **Knowledge Exchange:** webinars, sector white papers, survey reports, case studies
- **Market Studies:** sector research, competitor analysis.

Companies looking to expand can receive support from the British Chambers of Commerce that operate in each market, providing

businesses with on-the-ground expertise. Each of the British Chambers have a depth and breath like no other network, across all sectors, backed by businesses who are already operating in market.

Within the British Chamber of Commerce Singapore, for example, an online portal of information under the Future of Trade banner has been developed to provide advice and support. An online export enquiry form has also been created to allow the Chamber to provide customised support: www.britcham.org.sg/expand-your-uk-business-into-singapore

Why is this important?

The UK formally requested to join the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) on 1 February 2021. The CPTPP has been in force since December 2018, covering Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam, with Singapore being one of the founding countries to ratify the agreement. The CPTPP covers a market of around 500 million people and joining the bloc would reduce tariffs on UK exports such as whisky and cars, as well as service industries - the CPTPP eliminates tariffs for 94% of Singapore's exports to CPTPP markets.

Diversifying trade partners, and being part of the CPTPP can open many doors and opportunities, particularly around areas such as the future of the digital economy. Southeast Asia has over 400 million internet users offering a vibrant digital landscape that is changing the way people consume, work and live.

"In future it's going to be Asia-Pacific countries in particular where the big markets are, where growing middle class markets are, for British products," International Trade Secretary, Liz Truss, told the BBC's Andrew Marr. "Of course British businesses will have to reach out and take

these opportunities, but what I'm doing is creating the opportunities, the low tariffs, removing those barriers so they can go out and do that."

The British Chambers of Commerce within the BiSEA network, together with colleagues at the DIT provide an opportunity to connect businesses to companies and opportunities in the region.

How do I get involved?

Companies looking to find out more about exporting to or expanding into ASEAN countries can contact the British Chambers of Commerce for support. Virtual trade missions have replaced physical trade missions in the last 12 months, and many of the Chambers run sector-specific trade webinars to help companies understand how to operate in market. A list of the main contact points are below:

British Chamber of Commerce Cambodia:

www.britchamcambodia.org

British Chamber of Commerce Indonesia:

britcham.or.id

British Malaysian Chamber of Commerce:

www.bmcc.org.my

British Chamber of Commerce Myanmar:

www.britishchambermyanmar.com/en

British Chamber of Commerce Philippines:

britcham.org.ph

British Chamber of Commerce Singapore:

www.britcham.org.sg

British Chamber of Commerce Thailand:

members.bccthai.com

British Chamber of Commerce Vietnam:

britchamvn.com



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- Global Business Expansion**
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- Consultancy Services**
- Global Visa & Immigration**
- Project Management**
- Independent Contractor Solutions**
- Value Added Services**

Supporting business expansion across the ASEAN region

Ann Ellis, Founder CEO & Lucia Tan, Global Account Manager - ASEAN, Mauve Group



Ann Ellis



Lucia Tan

In a year that marks its 25th anniversary, Mauve Group continues to expand the scale and range of workforce solutions and consultancy services it offers across the ASEAN region. Founder CEO Ann Ellis, and Global Account Manager – ASEAN Lucia Tan, explain more about its history, services and plans for growth.

What inspired you to establish Mauve Group?

AE: The inspiration for Mauve Group came from our own experiences of being expatriates living, working, and starting a business in a foreign country. Mauve Group was founded and is still run today by my husband John Ellis and I. We moved to Italy from the UK in the mid-1990s having never lived and worked permanently abroad before – as expatriates, we had to think on our feet to set ourselves up locally in a new location.

At the time, John was a telecommunications engineer by trade, responsible for managing projects and network rollouts across many

different European locations. While he travelled extensively for work, he discovered that many of his colleagues needed support in their new work locations, including with obtaining visas, raising contracts, and invoicing and receiving their payments.

Recognising a niche opportunity, John and I began to float the idea of a company that could provide support to individuals and businesses setting up overseas in this new era of globalisation that was rapidly gathering pace in the 1990s. Almost immediately we found an appetite for the type of solutions we were offering. Through John's connections, we quickly started supporting globally-renowned brands in the telecoms sector such as Nokia and Ericsson with the personnel side of their international projects.

Could you explain the Group's core areas of business?

AE: Today, we offer a myriad of solutions designed to ease the way for

workers and businesses operating and expanding overseas. Often, the process of entering a new country can seem daunting to the uninitiated, particularly with the variances in corporate and labour law from country-to-country. We are often approached by clients that have applied the legislation of their own country to an international situation, and have got themselves into difficulty as a result.

Our most popular services help companies to manage the compliant employment of their international workers – an area that can carry heavy penalties if poorly managed. This includes Employer of Record, Global Payroll, Global Visa and Immigration, and International HR Consultancy amongst others. Organisations also engage us to set up new international companies for them, and consult on a variety of international compliance and corporate concerns such as tax and permanent establishment risks.

What does it mean to be an Employer of Record?

AE: An Employer of Record is a company that compliantly employs workers on behalf of a client, in countries where the client does not have their own entity or the ability to employ locally themselves. The Employer of Record takes care of all the necessary tasks to facilitate the employment, such as payroll, contract management and other HR responsibilities, while the client retains day-to-day management of the worker.

The concept of Employer of Record has become extremely popular during the pandemic as the remote work phenomenon has exploded. Companies with workers who have returned to their home countries, or have been assigned to overseas business, have utilised Employer of Record to facilitate their employment.

How would you describe your corporate strategy or vision?

AE: The Mauve Group goal is to be a trusted partner to organisations of any size seeking to expand their horizons and achieve growth beyond



their home markets. We want to be a safe, supportive pair of hands as companies venture towards globalising their products and services. Fundamentally, we want to show that going global is not just for the large multinationals – businesses of any size can expand internationally with the right support.

I can be sure of this because I've done it myself – we started the business from a tiny office in Northern Italy, and now we own companies in more than 50 countries worldwide, and operations in 150. I want to help entrepreneurs to understand that they can bring their business idea to a wider international audience, whether they are an SME or a large corporate - and it isn't as operationally daunting as they think.

How do you see the future of home and remote working post-pandemic?

AE: New trends in work are often led by the big tech companies, and every week we are seeing the likes of Salesforce, Spotify, Twitter and so on announcing remote, hybrid or “work from anywhere” policies. I am not part of the contingent that believes office-based working is completely dead, however. Some workers prefer the communal feel of the office environment, particularly younger team members or those who feel burnt out by a year of isolation.

Instead, I think we will see more and more companies moving to a hybrid model that allows both remote and office-based options, giving employees greater say in where they want to work. The pandemic has seen an increasing focus on employee wellbeing the world over – centring the worker in decision-making on policies like this helps boost morale and productivity.

Employers should do the research and get the right advice to avoid future issues with remote work policies. If staff are permitted to “work from anywhere”, employers must ensure there is no risk to themselves or the worker in terms of tax, immigration, remuneration and other HR concerns in the country the worker chooses to settle in.

What has been your experience in the ASEAN region?

LT: 2021 marks Mauve Group’s twentieth year of operations in the ASEAN region. Having only incorporated the company five years previously in 1996, ASEAN was a priority region for Mauve’s strategic expansion plans from very early on.

Our first projects in Asia centred around the support of independent contractors working for telecommunications companies who were implementing or upgrading networks in the region – firstly in Thailand from 2001-2003, moving to Bangladesh in 2006-2008, and finally Japan in 2009-2012.

Mauve set up its own companies in each country to facilitate these projects, and then built this into a network of ASEAN entities as demand grew and the service offering diversified. The next step was to partner with local experts in key areas such as tax and compliance, labour law and immigration so we could learn from the best and deliver locally compliant services. We still work with many of these same partners today.

How extensive is Mauve Group’s business in the ASEAN region?

LT: Having been in the industry for 25 years, and operational in ASEAN for 20 of those years, our portfolio has grown extensively to cover almost every part of Asia. We can serve clients who wish to expand into any part of Asia, whether through our own company or through the support of our trusted and due-diligence checked partners.

Are there any aspects of business in the ASEAN region that are particularly attractive?

LT: We often hear from our clients that the growing interest in doing business in Asia is due to strategic location. Many countries in Asia are in close proximity and travelling between these regions rarely takes more than a day. As a result, clients build hubs in certain ASEAN countries to introduce their products or services to the wider market.

As an example, we are seeing that Singapore’s simple and business-friendly tax system continues to draw foreign investment amidst the pandemic. Chinese tech giants such as Tencent, Alibaba and Bytedance are establishing their regional hubs in Singapore, where an open immigration policy, with appropriate work visa provisions, facilitates the relocation of foreigners wishing to set up business in Singapore.

The wealth of local talent is also driving clients to seek out Employer of Record or set up companies in the region. Vietnam, the Philippines and India are popular amongst clients for IT outsourcing and software development talent – technology is one of our top five client industries.

Pandemic hastens adoption of digital technologies for healthcare provision

Since 2020, healthcare sectors in ASEAN countries have been focused on containing the Covid-19 virus. Although the pandemic has had dire economic consequences, most of ASEAN has recorded significantly lower transmission and fatality rates per capita than other regions globally.

At the end of August 2020, transmitted cases per million people stood at approximately 582 across ASEAN countries, compared with 16,737 in the US, 9,924 in Latin America and 4,121 in the EU.

The region's experience with previous pandemics such as SARS in 2003 and the avian and swine influenzas in 2009, led governments to take Covid-19 seriously from the start. As a result, the ASEAN Secretariat's health division alerted senior healthcare officials in the region to the new virus on 3 January 2020, just four days after China's notification of it to the WHO.

Within weeks, ASEAN health, foreign affairs and tourism bodies had intensified cooperation and activated pandemic preparedness protocols, says Professor Hsien-Li Tan of the National University of Singapore.

The emergence of approved vaccines to combat the virus now indicate a path to recovery from the pandemic. The Thai Ministry of Public Health, the UK/Swedish company AstraZeneca, Siam Bioscience and the Thai industrial conglomerate SCG, which has R&D connections with Oxford

University, announced in October 2020 their intention to manufacture the potential vaccine developed by Oxford in partnership with AstraZeneca.

Some 30 companies in the Philippines have also reached an agreement with AstraZeneca to buy at least 2.6 million vaccine doses. Indonesia could become a regional hub for production of a vaccine developed by China's Sinovac Biotech.

Singapore is working on producing its own single-dose vaccine in cooperation with the US company Arcturus and Duke-NUS medical school. Meanwhile, Vietnam is working on producing its own vaccine with phase two and three trials due to take place early in 2021. The work is being conducted in collaboration with the Institute of Vaccines and Medical Biologicals in Nha Trang City, partnering with the New York based Icahn School of Medicine and the global health non-profit organisation PATH.

According to the UK Government, large scale manufacturing at Bangkok based Siam Bioscience will strengthen broad, equitable and timely access to the potential vaccine in the region and beyond. AstraZeneca is providing vaccine at no profit during the pandemic and will work with Siam Bioscience to set up the manufacturing facilities through technology transfer.



The emergence of approved vaccines to combat the virus now indicate a path to recovery from the pandemic.



Recovery will enable the region to refocus on its wide ranging agenda to improve healthcare. There are many challenges but also considerable opportunities for investment given the strong involvement of the private sector in the region's provision of medical services.

"The pandemic has greatly improved individuals' consciousness of personal healthcare awareness and hygiene. It has also accelerated the adoption and use of telehealth, which could help to offset these potential higher costs and provide a more efficient way for those insured to access and use healthcare in the future," says Cedric Luah, Asia Health Director at insurance brokers Willis Towers Watson.

New approaches are vital to ensure that ways of providing healthcare are sustainable as countries in the region continue to roll-out universal healthcare strategies. Indonesia's Jaminan Kesehatan Nasional (JKN) programme, introduced in 2017, now covers most of the country's 240 million people. Virtually the whole of Thailand's population is covered for primary and hospital care, while Singapore offers a comprehensive range of healthcare including complex surgery for its citizens.

Singapore's Healthcare Masterplan 2020 has increased patient insurance to cover a greater range of treatments and care, focusing on the needs of those on lower incomes and of the elderly. The plan also involves recruitment of more than 20,000 new healthcare workers and provision of 3,700 more hospital beds.

However, costs are steadily rising. According to Nikkei Asian Review, healthcare expenditures in six of the ASEAN countries – Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam – are expected

to reach US\$740 billion by 2025 from US\$420 billion in 2017. The region already spends close to 4% of GDP on healthcare, which is expected to rise as consumers become more health conscious.

Observers believe that Covid-19 will encourage reforms in ASEAN's healthcare sector, opening new investment opportunities in the fields of biotechnology, telehealth, pharmaceuticals and diagnostic medicine, among other areas. The need is to build SMART to enable universal healthcare to take root.

Driven by an increasing demand for healthcare, app-based consultations have begun to take off. While suitable for basic consultations, they have the potential to improve access to healthcare services for underserved areas.

According to a study by London based LEK Consulting and the US 'GRG Health, 60% of hospitals in ASEAN countries expect to continue using increased levels of telehealth after Covid-19 has passed.

The digital interventions needed to improve the quality of healthcare services from telemedicine to electronic medical records all need reliable internet connectivity. Making this element as basic a need as the supply of medicines and water.

The countries with the soundest telecoms infrastructure can move fastest. Singapore is attracting a vibrant community of health-related technology start-up firms. Vietnam is also catching up fast in terms of using digital technology to provide healthcare in rural and urban areas.

Technology and digital solutions will be essential to manage increasing patient volumes and staffing pressures. For example, artificial intelligence

(AI) and data analytics can be used to predict, automate and advance workflow efficiency and improve patient experience.

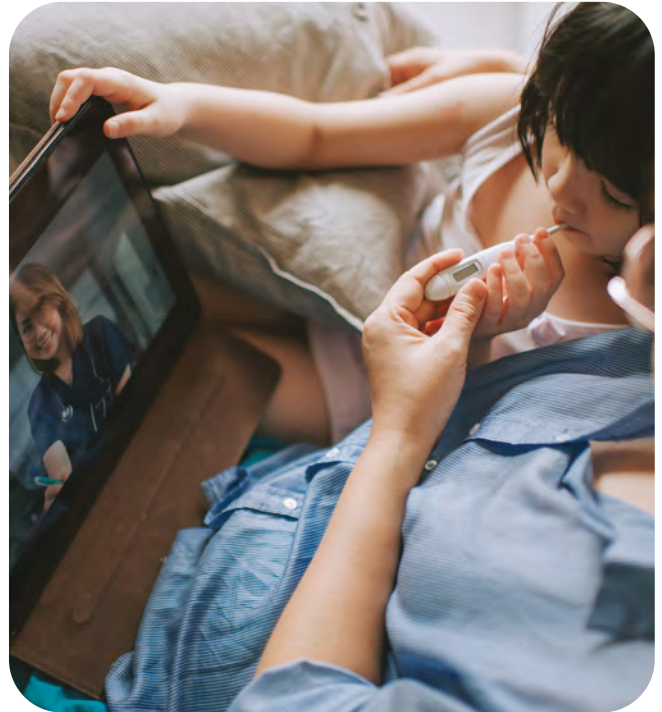
Specialist doctors are mainly concentrated in cities. Digitally connected equipment can expand the reach of clinicians to ensure patients in provincial or rural areas have access to specialist services. With the adoption of digital solutions, patient triage as well as remote diagnostic services can be expected to rise.

In Singapore, Doctor Anywhere was launched in 2017, and now has some 50,000 users accessing general practitioner consultations. China's online healthcare provider, Ping An Good Doctor, has a joint venture with Singapore based taxi app Grab, to use AI technology to route patients to an appropriate doctor.

Indonesia's Halodoc, founded in 2016, has some 20,000 doctors and two million users on its database. In addition to offering medical advice, the company also has partnerships with insurance firms to enable users to pay with their health insurance as well as consultations with pharmacies to enable medicines to be delivered to clients.

Several local start-ups are expanding, such as the Philippines KonsultaMD. Singapore's Doctor Anywhere has partnered with Vietnam payments platform ViettelPay to provide virtual clinics in Vietnam. In Thailand, Siam Commercial Bank has linked up with the Bangkok based private hospital Samitivej, to provide high-net worth clients with access to digital healthcare services.

As ASEAN countries commit to building universal healthcare systems, the adoption of technologies and investment in new business models offer ways of overcoming development hurdles. For the private sector



which is firmly embedded within the healthcare sectors of the region, a vast array of opportunities are opening up.

There is rising investor interest in Indonesia's healthcare sector for example. As a result of Government support for private sector involvement, foreign investors are permitted to own up to 67% of healthcare related businesses, while ownership in the pharmaceutical sector is capped at 75%.

The pandemic and the introduction of national health insurance systems have become key drivers in changing the behaviour of ASEAN populations towards health. The result is that people are becoming more health conscious and willing to spend more on medical services.

The hidden pandemics in ASEAN

Jay Thyagarajan, Vice President, Business Area Southeast Asia (BASEA), Novo Nordisk



Jay Thyagarajan

Many are not aware that both obesity and diabetes have reached pandemic proportions globally. According to WHO, 2.8 million people are dying each year as a consequence of living with excess weight or obesity¹. The International Diabetes Federation (IDF) has estimated that approximately 4.2 million adults died as a result of either diabetes or complications from it in 2019². These global trends are also present in ASEAN countries and not a lifestyle issue isolated to the western world. Obesity and diabetes are chronic pandemics in slow motion³.

Can you tell us more about the trend of diabetes across the ASEAN region?

In ASEAN, around 29 million people were living with diabetes in 2019, out of which almost 18 million were undiagnosed. The total prevalence is estimated to rise to approximately 46 million people by 2045, if the current trend is not abated².

Type 2 Diabetes left untreated can lead to severe complications such as heart disease, stroke, kidney disease or blindness, which are tragic for the individual and their families. These complications are very costly for a country's health system, especially when a Universal Healthcare Coverage is implemented. A national health insurance database study in Vietnam⁴ showed that 55% of people living with diabetes had

diabetes related complications. 70% of the total direct medical costs incurred by the Vietnamese health system for these patients were related to these complications and not the treatment of diabetes itself.

Does Covid-19 pose a more serious risk to people living with diabetes?

People with diabetes are at higher risk of severe clinical outcomes of Covid-19. Good diabetes management is therefore more important now, than ever. The risk of Covid-19 related mortality is particularly linked to hyperglycaemia⁵.

Is there anything that can be done to avoid the complications of diabetes?

Early diagnosis and treatment can reduce the risk of serious complications and costs to health systems. Yet many people living with diabetes in Southeast Asia are unaware of their condition, as is the case in many parts of the world. Novo Nordisk has partnered with key stakeholders, policy makers, and especially hospital administrations to minimise complications of diabetes, by standardising delivery of care, establishing specialised clinics and patient support programmes.

What is the background and history of Novo Nordisk?

Novo Nordisk is a leading global healthcare company, headquartered in Denmark. Our key purpose is to drive

change to defeat diabetes and other serious chronic diseases such as obesity and rare blood disorders.

Novo Nordisk has a long history of presence in ASEAN countries, our first office was established in Thailand in 1983. The regional office for Southeast Asia (BASEA) is based in Kuala Lumpur and covers 11 countries⁶. BASEA employs almost 700 people and we are extending our footprint in the region.

In 2021, we are celebrating the 100th anniversary of the discovery of Insulin. In 1921, a team of Canadian researchers discovered the insulin molecule, leading to the inception of Novo Nordisk in 1923. This ignited a century of ground-breaking innovations in diabetes care that have since saved countless lives. Today we are fortunate to have better medicines than ever, yet the number of people living with diabetes continues to grow at an alarming rate, including in ASEAN. This places a substantial burden on individuals, families, societies and healthcare systems. In addition to developing innovative medicines, we are committed to help societies defeat diabetes by accelerating prevention to halt the rise of the disease, providing access to affordable care to vulnerable patients and being environmentally responsible through our Circular for Zero Ambition.

How is Novo Nordisk investing in ASEAN?

It takes more than innovative medicine to defeat a serious chronic condition such as diabetes. That is why we have for years been working in partnerships with patients, policymakers, healthcare professionals and non-governmental organisations in ASEAN countries to raise awareness, improve prevention, promote earlier diagnosis and expand access to care. Changing Diabetes in Children is an initiative aiming to improve access to care and life-saving medicine and supplies for children and adolescents with Type 1 Diabetes. This initiative was launched in Myanmar in 2017 and has to this day reached 300 children.



World Diabetes Day, Twin Towers of Kuala Lumpur are in blue to mark the fight against Diabetes

We launched the same initiative in Cambodia in 2018, where we are supporting 323 children as of December 2020. Also in Cambodia, we have implemented Changing Diabetes in Adults in partnership with GIZ, the German development agency to support building the capabilities of healthcare professionals and improving healthcare delivery in diabetes. Cities Changing Diabetes aims to tackle the rise of the disease in urban environments and was launched in 2018 in Jakarta. In Malaysia, we are partnering with the Ministry of Health on a project called Sama-Sama, which aims to empower and build capability of family caregivers in diabetes management and disease prevention.

There are more initiatives running, and they all work to support and build the capabilities in diabetes management in the countries in which we

operate. Apart from partnering in disease management, Novo Nordisk is also investing in expanding R&D efforts, clinical trials, and enhancing supply chain systems to make products more accessible to patients.

What can you tell us about obesity and its place in Novo Nordisk?

In ASEAN, almost 43 million people were living with obesity⁷ in 2016, according to WHO. Although obesity is seen as a lifestyle disorder, it is important to understand that it has been linked to 200 other diseases – including diabetes mellitus, cardiovascular disease, fatty liver, osteoarthritis, sleep apnoea, female infertility, and certain types of cancer⁸.

The key challenge for Novo Nordisk and society at large is to ensure that obesity is recognised as a chronic disease across all leading health organisations and it is treated as a chronic disease. The American Medical Association, WHO and others⁹ already recognise obesity as a disease.

The significant burden of obesity and related complications is well documented¹⁰. As a company we are also acting on our mission to drive change to defeat obesity, by showing leadership in helping solve the global obesity pandemic. In Southeast Asia we have launched

several initiatives to address obesity together with local partners. One such initiative is “Your weight can’t wait” campaign in collaboration with the Singapore Association for the Study of Obesity (SASO). This campaign is aiming to increase knowledge of obesity as a complex and long term medical condition and encourages people with excess weight or obesity to seek more information from trained healthcare professionals. By challenging and addressing the stigma surrounding obesity, which can be inherent in society, the campaign aims to reduce its negative impact on the quality of life of people with obesity and obesity’s long term health consequences. Similar initiatives are also running in the Philippines and Malaysia and we will be engaging further with stakeholders in the region to work together to improve the quality of life of people with obesity, and to address its long term health consequences in ASEAN countries in years to come.

Does Novo Nordisk believe that diabetes and obesity can be defeated one day?

Defeating diabetes and obesity will take long term dedication and collaboration with policymakers, healthcare professionals, people with diabetes, employers and advocates. Together, we have a responsibility to make a positive impact on the health of our societies in ASEAN today and for future generations.

¹ <https://www.who.int/news-room/facts-in-pictures/detail/6-facts-on-obesity#:~:text=At%20least%202.8%20million%20people%20each%20year%20die%20as%20a,tripled%20between%201975%20and%202016>

² IDF. Diabetes Atlas, Ninth Edition, 2019

³ This content is sponsored

⁴ Diabetes Research and Clinical Practice, Direct medical costs of diabetes and its complications in Vietnam: A national health insurance database study, Volume 162, April 2020

⁵ The Lancet Diabetes & Endocrinology, October 2020. Covid-19 and diabetes: a co-conspiracy?

⁶ BASEA covers Bangladesh, Cambodia, Laos, Myanmar, Sri-Lanka, Maldives, Singapore, Brunei, Malaysia, Philippines and Vietnam.

⁷ Prevalence of obesity among adults, BMI \geq 30 (age-standardized estimate) (%) (who.int)

⁸ 5 Scott I. Kahan, MD, MPH. Practical Strategies for Engaging Individuals with Obesity in Primary Care. Mayo Clin Proc. 2018;93(3):351-359”

⁹ American Medical Association. A.M.A Adopts New Policies on Second Day of Voting at Annual Meeting. Obesity as a Disease. Available at: <http://news.cision.com/american-medical-association/r/ama-adopts-new-policies-on-second-day-of-voting-at-annual-meeting,c9430649>. Last accessed: December 2017. WHO. Obesity: Preventing and managing the global epidemic. Available at: <http://www.who.int/iris/handle/10665/42330> Last accessed: December 2017; EASO. 2015 Milan Declaration: A Call to Action on Obesity. Available at: <http://easo.org/wp-content/uploads/2015/06/EASO-Milan-Declaration-FINAL.pdf>. Last accessed: December 2017; Bray G, Kim K, Wilding J. Obesity: a chronic relapsing progressive disease process. A position statement of the World Obesity Federation. Obesity Reviews. 2017;18:715–723. 5. Guh DP, Zhang W, Bans

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Life sciences set to be fastest growing manufacturing sector

ASEAN countries are funding healthcare and extending state sponsored health insurance schemes. In turn this is creating a widening market both for drugs and innovative approaches to providing treatments.

In Singapore, 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, notes KPMG International Director, Andre Guedel.

The pharmaceutical sector is also undergoing rapid change and growth with the forecast to grow 11% per year over the next five years, making the region one of the fastest growing pharmaceutical markets in the world. Pharma analyst, Informa Connect, predicts that the region will be one of the few remaining areas of growth worldwide for Multinational Life Sciences companies.

The 2020 pandemic has heightened a need to not just produce effective safe treatments and preventatives, but also on development of many prospective drugs to treat diseases and chronic conditions.

A need for greater innovation in the sector is recognised by governments. Thailand has invested heavily in technology focused facilities in its science park at Tha Klong, north of Bangkok. A new anti-malaria drug has already been developed there by BIOTEC's research centre.

Corporate tax exemptions are also designed to make the country more attractive to international investors, especially those in research based industries such as pharmaceuticals, a market expected to be valued at US\$6 billion annually by 2022. One major change likely to accelerate development of Thailand's pharma sector is the removal of mandatory

purchasing of generics through the Government Pharmaceutical Organisation, enabling the market to set its own product prices, observes Informa Markets.

Few pharmaceutical manufacturers in the region currently possess the capability to produce Active Pharmaceutical Ingredients (APIs). According to Thailand's Food & Drug Administration, just 5% of Thailand's 142 domestic producers have API production capacity for example. This situation is mirrored elsewhere in the region with Vietnam importing 90% of its APIs.

This opens up investment opportunities for foreign companies, as local companies widen their search for partners to help them develop their production technologies and methods. Indonesia is becoming an important market according to Deloitte. Domestic life sciences companies are predicted to become more sophisticated in all aspects of their value train and increasingly become viable partners for international life sciences corporations.

Malaysia's pharmaceutical sector comprises more than 100 companies manufacturing generic drugs and over-the-counter medicines. However, local production only meets 30% of the country's pharmaceutical products requirements, thereby allowing substantial scope for growth in domestic manufacturing of drugs.

The Philippines is ranked third within ASEAN, next to Thailand and Singapore in terms of the number of pharmaceutical industry-sponsored clinical trials which are currently carried out. The introduction of a universal healthcare system is creating a fast-growing market both for generic drugs as well as innovative pharmaceutical products and opening up opportunities for both domestic and foreign players. Fourteen of the



The introduction of a universal healthcare system is creating a fast-growing market both for generic drugs as well as innovative pharmaceutical products.



world's top 20 pharma companies, including the UK's GSK, currently operate manufacturing facilities in the country.

One lesson to emerge from the pandemic is a new appreciation of the importance of keeping parts of the value chain local and ensuring multiple sourcing close to consumers. Companies and governments around the world are building large inventories of active pharmaceutical ingredients and drugs to ensure supplies remain uninterrupted and can be made close to markets, says How Ti Hwei, President of the Singapore Association of Pharmaceutical Industries.

They have experienced a huge surge in demand for its pharma products with output rising 86% in 2020, according to Reuters. Singapore is one of the few countries that exports more pharmaceuticals than it imports. There are some 55 manufacturing facilities employing around 24,000 people. The sector includes plants owned by eight of the world's ten largest pharma firms.

In 2019, GSK opened a fully automated continuous production facility and an expanded manufacturing plant at its Jurong site, involving an investment of some US\$95 million. The new facility is an improvement on conventional batch production methods and enables continuous manufacturing of medicines. This allows for active pharmaceutical ingredients for clinical trials to be produced far more rapidly and more precisely.

Regis Simard, President of GSKs pharmaceutical supply chain comments: "As one of the most innovative cities in the world, Singapore is home to an ecosystem of companies and organisations that are creating and exporting innovative solutions."

Singapore's focus on pharmaceuticals coincides with a long term Government strategy to develop innovative pharmaceutical products. Its Experimental Drug Development Centre (EDDC) was established in 2019, integrating the Agency for Science, Technology and Research's (A*STAR's) drug discovery and development bodies.

EDDC aims to co-ordinate PPPs and nurture greater ability to translate discoveries into new medicines. Together, with the National University of Singapore and a number of major pharmaceutical companies, it has developed the country's Pharma Innovation Programme. The aim is to make public sector research bodies more competitive by creating synergies with major pharmaceutical companies by leveraging novel manufacturing technologies and data analytics.

The cooperative programme is designed to help develop continuous production for active pharmaceutical ingredients and considerably enhance the supply of APIs as well as implement bio-catalysis technologies to produce complex and valuable chemicals.

Such initiatives have encouraged major global players including GSK, WuXi Biologics and Novartis to expand and upgrade their investments in Singapore over recent years. As a result, the country has developed as a global research hub.

A team of hospital clinicians, academics and researchers at the Agency for Science, Technology and Research, for example, are combatting antibiotic resistance, using DNA sequencing technology, assembling novel resistance combinations, and extracting genome sequences from metagenomic data.

The expanding advanced pharma R&D ecosystems are increasingly attractive to venture capital investors. Denmark's Novo Holdings announced in 2020 that it is to set up its Asia office in Singapore. The company, which has US\$62 billion in assets, is expected to focus on making sizeable investments in leading life sciences companies, providing expansion capital to high-growth life sciences firms and investing in venture stage biotech and medical technology operations (Straits Times).

Novo CEO, Kasim Kutay, is quoted by the Straits Times as saying: "We have followed the life sciences markets in Asia closely, and the growth, the demographics and the increased focus on innovation and R&D make the region a compelling area for us to explore investment." The company says it was drawn to Singapore in part due to the talent pool and innovation in biotechnology and medical technology companies.

Medical device producers seek high-tech partners

ASEAN is forging a significant niche in the global manufacture of medical devices. Overall, the industry is expected to generate up to US\$8 billion of revenue for producers in the region in 2021, according to BMI Research.

The sector's output is extensive, ranging from surgery tools, syringes and needles, orthopaedic products, optical lenses, blood transfusion sets, first aid kits to hospital furniture. Increasingly, manufacturers are seeking partners to move towards developing higher value products.

Malaysia leads in this strategy. According to the Association of Malaysian Medical Industries, exports of medical devices were valued at US\$5.6 billion in 2019. It's largest markets are the US, Germany, Japan and China.

Already ranking as the world's leading manufacturer of medical disposable items such as medical gloves and catheters, the Malaysian Government has identified medical device manufacturing, as an area offering high growth potential.

The particular focus is on developing processes and applications related to manufacturing's fourth industrial revolution, with Malaysia's medical devices sector looking for ways to shift production into more value-added items and services.

Areas of interest include components for magnetic resonance imaging, X-ray equipment, medical scanners and nuclear imaging systems. There is also an ambition to produce robotic surgical equipment and implantable devices. The global market for such equipment is predicted to be valued at some US\$33 billion.

Malaysia continues to attract major international specialist firms. In 2019 the UK's Smith & Nephew established a manufacturing facility in Penang for knee and hip implants, while Japan's Top Corporation set up a facility to manufacture syringes, needles, catheters and infusion sets.

Tobias Seyfarth, President of Siemens Healthineers says, "anything that drives top-line growth is a better value proposition and a real opportunity of growth for medical device companies. In ASEAN there are opportunities both to develop existing manufacturing areas as well as to expand into new higher margin segments."

A PwC report advises companies to drive frugal innovation – as opposed to production of premium products – in order to create more value-based devices, which are manufactured in ASEAN markets and suited to the local and regional economy, infrastructure and environmental conditions. There is considerable potential for reverse innovation and developing products in an emerging market and then distributing that product in developed markets, it states.

The Covid-19 emergency has shown that manufacturers in the region have the agility to move quickly to fresh challenges, with Vietnam's Vingroup drawing on the capabilities of its automobile unit and telephone production facilities to fast-track assembly of both invasive and non-invasive clinical ventilators to supply hospitals in the region.

Manufacturing advances technology for global role

In just two decades, the ASEAN region has become an international hub for offshore manufacturing. An estimated 2.5 million people are employed in electronics manufacturing alone. Much of the world's consumer electronics including TVs, radios, computers, tablet devices and mobile phones are produced as well as more than 80% of the world's computer hard drives.

The role in global manufacturing is set to be further enhanced as the Covid-19 pandemic recedes and the world's economies begin to return to normality. A combination of rising labour costs, supply chain issues and geopolitical tensions are driving multinational companies as well as Chinese firms to relocate a growing proportion of their manufacturing to the region.

Firms involved in electronics, chemicals, engineering, construction and healthcare consumable items are among the producers finding the region an increasingly attractive location for their plants. Lower labour costs, for example, have motivated a huge shift towards Vietnam in the textiles, automobile industry and consumer goods sectors, including electronic multinationals such as Taiwan's Foxconn Technologies and South Korea's Samsung.

In 2019, the region received US\$150 billion in FDI, behind China's US\$200 billion but well ahead of India's US\$50 billion. There is more expected as the EU seeks a trade agreement with ASEAN based on its and the UK's existing deal with Singapore. A post-Brexit UK strives for a

stronger presence in the region with its application to join the Asia-Pacific free trade pact (CPTPP).

The pandemic has revealed the vulnerability associated with an over concentration of supply chains in China, prompting companies such as Google's mobile phone, and Apple's earphone manufacturing, to speed up their shift in production to Vietnam. Joseph Soo, Vice President of Sales at National Instruments in Singapore says, "China today is no longer a low cost production space and those companies that entered the country due to cost will now leave. This has made ASEAN more attractive."

Malaysia has also experienced a move of US semiconductor and integrated circuit manufacturers to its "Silicon Valley" state of Penang. Vietnam's increased attraction as a manufacturing base helped it rank as one of the few countries worldwide to achieve positive economic growth in 2020, with the General Statistics Office reporting 2.91% GDP growth.

FDI to Vietnam in the first 11 months of 2020 totalled US\$17 billion, of which around 48% was directed to manufacturing activities. One of the big players to arrive has been Apple. Foxconn is reported by Reuters to be building an assembly line in Vietnam's Bac Giang Province to produce Apple iPad's.

Japanese firms such as AEON, Uniqlo and Mizuho have all recently opened up and expanded their operations there joining multinational



Thailand is seeking to enhance its role as a broadly based manufacturing hub with huge investment in connectivity improvements.



firms already established including Toyota, Honda, Canon and Sumitomo. Companies from Singapore, South Korea, Thailand and China are also expanding their operations.

Samsung is estimated to have invested US\$17.3 billion in its Vietnam based factories. Another indication of the company's long term commitment is its development of a US\$220 million R&D centre near Hanoi, due to open in 2022. The facility is designed to enhance Samsung's research capabilities in areas such as AI, Internet of Things (IoT), Big Data and 5G. The centre is expected to employ up to 3,000 people and comprise the largest of its kind in the region.

Healthcare is also a growing focus of manufacturing investment. Japan's Nipro, a major medical equipment manufacturer, has invested US\$300 million to build a plant in Saigon High-Tech Park to produce catheters, infusion sets and blood circuits.

The UK's Smith & Nephew is also planning to establish its first production site in the Malaysian state of Penang and seeks to position itself as a medical equipment manufacturing hub. Thailand is also seeking to increase FDI in the medical sector by extending the corporate tax exemption period for companies involved in production of active pharmaceutical ingredients, drugs, vaccines, industrial chemicals and medical equipment.

Thailand is seeking to enhance its role as a broadly based manufacturing hub with huge investment in connectivity improvements in the south and centre of the country, in particular its three eastern provinces, Chonburi, Rayong and Chachoengsao.

The aim is to develop these provinces off the coast of the Gulf of Thailand, into a leading economic zone with its East-West Corridor creating an innovation hub for technological manufacturing and service providers with strong connectivity to neighbouring countries by land, sea and air.

An important long term element in the grand design is a sector specific investment policy called Thailand 4.0, which is geared to towards innovation and technological transformation of the country's manufacturing base over the long term.

Industry 4.0 is the latest evolution where factories integrate production machines, wireless connectivity and sensors and link them to a system platform ecosystem which oversees the whole production line process and executes decisions autonomously. Factories can be aided in this by an increasing adaptation of technology including sensors, machine learning, cloud computing, robotics, 5G infrastructure and leading edge computing techniques.

Indonesia's Ministry of National Development Planning is also focusing on a strategy to develop niches in value-added complex manufacturing

activities that would help diversify its export products. In March 2018, it launched “Making Indonesia 4.0.” This identified five major sectors; automotive, textiles, electronics, chemicals and food and beverages, which would be encouraged to raise their use of technologies and digitisation in order to increase capabilities and productivity.

In 2019, Malaysia launched its digital strategy for manufacturing and related services known as Industry4WRD. The policy is focused on a digital overhaul of the country’s manufacturing sector in order to position Malaysia as an attractive base for companies embarked on technology driven production processes with an emphasis on skilled employees.

The highly ambitious strategy is aimed to increase the contribution of manufacturing in the economy by more than a third from US\$61 billion to US\$94 billion. This will mean automation of many processes through computer based technology and data analytics. “It’s all about making sure we are more efficient and more productive so that we can be the new greenfield which China used to be,” says Shidah Ahmad, General Manager of the US’ Keysight Technologies’ operation in Penang.

Rohit Girdhar, Vice President at Infineon Technologies in Singapore says that “Industry 4.0 really brings its benefits when you are already at



a stage similar to Singapore or where Malaysia is getting to.” For other countries the question is whether it is advantageous to take a capital heavy approach when labour costs are extremely low.

Some predict that in the long term, manufacturers operating in the region will seek to adopt Industry 4.0 operating procedures to become more agile and mitigate production and distribution shortfalls should an event like the pandemic occur again.



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100 Years
Bosch in SEA | 1919-2019



Sustainable “Like a Bosch”

Robert Bosch SEA Pte Ltd

Living through the global health crisis these past years, Bosch had the opportunity to reflect on the broader meaning of “invented for life”. If anything, paying attention to the global existential threat posed by the pandemic has strengthened our resolve to play our role in the greater existential threat we face: climate change. In many ways, these two challenges require tremendous effort and collaboration to change direction. Bosch believes that it is particularly important for the company to continue its comprehensive sustainability work. After all, while climate action costs money, doing nothing will cost more.

Bosch’s journey in climate protection started a long time ago, even before the Paris Climate Agreement was ratified in 2015. In 2007, Bosch undertook to reduce the carbon emissions of its locations by 20% relative to value added by 2020. We achieved this goal as early as 2014. We decided to take a step further in our initiative by raising our target to a reduction of 35% by 2020. In 2019, we raised our targets even further – to make all our locations carbon neutral by the end of 2020 – a pledge that no other industrial company has made so far on this scale or timeline. To make this possible, Bosch has adopted four strategies: increasing energy efficiency, expanding the production of renewable energy, procuring more green electricity, and offsetting unavoidable CO₂ emissions. By the end of 2020 and according to internal calculation, all Bosch locations are now climate neutral, which means that all our 400 locations worldwide no longer leave a carbon footprint.

Now that we have met our carbon neutrality goal, we are not slowing down. In fact, we are shifting our focus to the next challenge by making

the company’s upstream and downstream activities along the value chain as climate neutral as possible, from the goods purchased to the products sold. By 2030, the company aims to reduce the emissions associated with these activities by 15%, or more than 50 million tons a year. Bosch is also the first automotive supplier to commit to a measurable goal under the Science Based Targets initiative. That same ambition also carries through to the development of products and services that Bosch offers. For Bosch’s mobility business for example, it means making further advances in electric mobility and combustion technology, exploring hydrogen fuel cells and synthetic fuels, known as “e-fuels” that can be produced on a carbon-neutral basis. Another aspect is developing mobility trends such as automated parking and systems for driverless taxis into realistic options, alongside technologies for smart mobility management that show users the best possible forms of mobility for the journey ahead of them, both ecologically and in economic terms.

Sustainability anchored in product portfolio

Our products themselves are a major focus of our sustainability efforts. On the consumer side, they help reduce environmental footprint. An example of this is our dishwashers. Equipped with Zeolith technology, it can offer energy savings of up to 20%. Our durable power tools feature intelligent power management technology that increases their lifespans which in turn reduce electronic waste. Besides commercial products, Bosch also considers energy efficiency to be the decisive criterion in the development of machines and systems. Take Bosch Rexroth’s CytroBox, for example. This connected hydraulic power unit comes into its own in use cases that demand robustness and the application of large amounts

of pressure, for example when forming sheet metal. Preset controllers in the variable-speed pump drives, adapt the energy consumption of the CytroBox to the requirements at the given time. This means speed is reduced to save energy at zero or partial loads and increased at full loads. Compared to power units with non-variable drives, such flexibility reduces energy consumption by up to 80%. New approaches to control technology also play a role in making manufacturing resource efficient.

Whether the products are for home, on the road or in manufacturing, Bosch offers product and solutions that are engineered and manufactured to contribute to a more sustainable lifestyle: they use less water, consume less energy, generate fewer emissions, and have longer lifespans.

Reducing energy consumption by means of efficiency and intelligence

The company is also taking measures to achieve climate neutral manufacturing in our worldwide sites. One such way is to generate power on location. Leveraging on Southeast Asia's proximity to the equator and high exposure to solar radiations, Bosch installed photovoltaic systems on the rooftop of our plants in Malaysia and Thailand, with Vietnam in the pipeline. To-date, in Southeast Asia alone, a total of 10,500 rooftop solar panels were installed covering an area of approximately five standard FIFA football fields. With close to 6,000MWh of clean energy generated on site, it is estimated to reduce approximately 3,760 tons of carbon dioxide emission a year, equivalent to almost 1,000 cars driven annually. Once the plant in Vietnam completes the installation of approximately 4,000 solar panels, these benefits are estimated to grow by 30%.

We are also leveraged on our Internet of Things and sensor-driven solutions to make our campuses a smart working environment while serving as a live showcase for visitors. This is best exemplified in our Southeast Asian headquarters in Singapore.



Already equipped with solar panels and smart air conditioning, Bosch Assist, the first cloud-based text and voice-based, contactless personal assistant for buildings, is one of the key enablers to make our office building smarter. Bosch Assist connects several Bosch proprietary solutions within the building such as cameras, sensors, building management software, to offer real-time notifications, actionable insights, and a multitude of services and benefits to its users including staff, facilities management operators, contractors and building owners.

In other words, Bosch Singapore building is not only eco-friendly with energy consumption 30% lower than comparable industrial buildings, but it is also interactive and user-friendly. For example, at the Bosch canteen, diners can experience smart air-conditioning. Just by connecting to Bosch Assist, or a simple tap on a small control box at their tables,



diners can easily regulate temperature by adjusting the speed of the ceiling fans closest to their tables without having to leave their seats. Smart air conditioning at Bosch canteen alone is recorded to reduce carbon dioxide emissions by more than eight tons annually, the equivalent to two cars driven.

Sustainability and competitiveness are two sides of the same coin

Bosch continues to invest in promising technologies, in our workforce, and in our operations. We are doing this to ensure our competitiveness in a world where climate change and a global pandemic are accelerating transformation and change. Our investments underscore the commitment we have to our role in creating a sustainable world for future generations, as well as our commitment to the future of our business. And in fact, we see no conflict between these: in our view, sustainability and profitability are two sides of the same coin.

First, pursuing sustainability is obliging us to pursue energy efficiency, which in turn drives cost efficiency and gains independence from rising energy prices. It also opens new markets as we strive to satisfy growing demand for eco-friendly products by unlocking innovative potential as we are challenged to think outside the box to develop climate-friendly solutions. And finally, new business opportunities for us are emerging from these new green technologies in the form of carbon-neutrality consulting and services. To this end, we’ve established our new Bosch Climate Solutions subsidiary, which provides an advisory service for companies to help them become climate neutral. Our aim here is to pass on the knowledge and experience we’ve gained from achieving carbon neutrality and from projects we have successfully carried out worldwide.



Conclusion

At Bosch, we firmly believe that technological innovation, business success, and climate action are not mutually exclusive. But more than that, we believe that all three are interdependent: only companies that pursue sustainability today will be successful tomorrow, and only by harnessing the potential of technology will we succeed in combatting climate change and challenges like Covid-19. This belief is the bedrock of our corporate strategy – and it’s the motivation behind our extensive portfolio of products, services, and business models that are true to our strategic imperative “Invented for life” in every possible sense of the term.

Transport upgrades accelerate

ASEAN governments have long recognised that efficient logistics and connectivity of supply chains serve to reduce trade costs and can boost integration of their economies in regional and global value chains.

The ASEAN Masterplan on Connectivity proposes the development of transnational transport corridors to facilitate the movement of goods and people. The undertaking is immense in scope ranging from construction and development of new seaports, airports, roads and railways to mass urban transit systems.

Thailand is aiming to mould the country into a major regional logistics centre by improving all modes of transportation infrastructure. Integration of all aspects of transportation are the core of this strategy. One of the principal elements is development of ten double-track railway routes to link with neighbouring countries.

Malaysia also has a comprehensive infrastructure development strategy, which includes future expansion of airports, development of ports including a third terminal at Port Klang on Carey Island, a new Malacca gateway port, redevelopment of the Sepanggar port in Kota Kinabalu, as well as the development of a new deep-sea port in Kuantan.

Vietnam's port development strategy aims to expand 39 ports and develop six regional port groups by 2030. While the last decade has seen its trade volumes surge, the expansion of ports has struggled to keep pace. A major development programme for the period 2020-2030 projects building deep-sea ports in the north and central coastal areas as well as in the south where currently most container traffic is handled.

In order to gain from such investment there is also a necessity to vastly improve road and especially railway links, which is why there is so much

focus on transport infrastructure. The ASEAN Highway Network (AHN) strategy aspires to connect capital cities, seaports, airports and other areas with high potential for investment and tourism.

A focus on implementing significant improvements is also evident in Cambodia. Despite the obstacles brought about by the Covid-19 pandemic, construction of its ambitious and first four-lane highway has continued to make good progress.

This US\$2 billion project, part of Beijing's global infrastructure development strategy known as the Belt and Road Initiative (BRI), has been described as the future artery of Cambodia's economy and will link Phnom Penh with the deep-sea port province of Preah Sihanouk. Work on the 190km expressway is being carried out by China Road and Bridge Corporation and began in March 2019.

Financing such huge projects is a challenge, with overseas development assistance playing a significant role and, increasingly, the private sector. A consortium of Thai companies, for example, has won concessions to operate the country's 196km M6 and its 96km M9 highways.

These are due to be opened at the end of 2022 and 2023 respectively, and involve investments of US\$2.3 billion and US\$1.1 billion. In return, the consortia will receive 30 year operating concessions.

New railways

Railway development is seen as paving the way to integrate and provide for seamless transportation in and between ASEAN countries, notably through improvements to existing long distance routes and facilities, as well as the development of double track railways, commuter trains, metro systems and high-speed trains. Whilst improving the region's railway

programmes, they have also created the added potential to stimulate commercial and residential development along the new routes.

What have been viewed as almost insurmountable problems in the past, such as land acquisition and technical difficulties, are being steadily overcome. ASEAN countries have been hindered, for instance, by the limitations of existing metre-gauge networks built in the late 19th and early 20th centuries.

Vietnam's North-South railway project envisages a double-track standard-gauge electrified railway with a track length of 1,570km. This would replace the current single-line metre-gauge track, which was first laid during the colonial era. Despite subsequent improvements, journey times are around 30 hours, but a new railway could reduce this time by half.

A decision is moving forward and in August 2020, the Ministry of Transport reported the new line would involve a US\$58.7 billion investment and a three-stage construction programme, with final completion in 2045.

The Philippines Department of Transportation is also seeking to move forward on its own 653km North-South rail project. This is designed to link metropolitan Manila with Legazpi City and the under-served regions of south Luzon and will eventually inter-connect with a 147km commuter railway. Construction work for the first US\$2.88 billion phase of the latter, connecting Tutuban in Manila and Malolos in Bulacan Province, began in February 2019.

The Philippines aims to extend the amount of useable track in the country from 1,144km to 1,900km by 2022, increasing the number of stations from 59 to 169 and rolling stock from 221 to 1,425 units.

Cambodia is being heavily assisted by China in the building of a 414km standard-gauge electrified line designed to carry both passengers and



freight, which is currently being constructed between Vientiane and Boten on Lao PDR's border with China.

This US\$6 billion project is a key BRI investment and is 96% funded by Chinese loans and grants. Around 150km of track has been laid, while work began in July 2020 on Vientiane's new railway station, the largest of 20 planned stations on the route. There are plans to construct a new railway bridge between Thanaleng to Nong Khai over the Mekong River to connect the line into Thailand.

A number of inter-city rail links are planned or under construction. These include Malaysia's 640km double track East Coast Railway Line (ECRL), which is set for completion in 2026.

Malaysia's Gemas-Johor double tracking and electrification project is expected to be completed by October 2022. The US\$2.4 billion project



One of the HSRs is designed to connect Bangkok and Nakhon Ratchasima, one of four major cities in the northeast of the country.



involves the construction of 192km of double track, 11 stations and laying electrical cabling between Johor Bahru and the town of Gemas.

An upgraded line will improve freight capacity between Malaysia's two largest ports, Port Klang and Port Tanjung Pelepas, helping movement of farm produce and creating more passenger capacity, also allowing for potential urban development in and around Johor.

While a proposed High-Speed Railway (HSR) project to connect Kuala Lumpur and Singapore City was postponed by the two governments early in 2021, the HSR concept continues to be active elsewhere in the region.

Indonesia's US\$6 billion Jakarta-Bandung HSR was reported to be over 60% completed in December 2020, following the boring of the project's fifth tunnel. The 142km railway, financed by Chinese interests, is being constructed by China Railway Engineering Corporation and will allow passenger trains to travel from the capital to Bandung in 40 minutes. The line will run through 13 tunnels with 80km built on elevated structures.

HSR is also a major component of Thailand's extensive railway development programme. In addition to some 25 double track railway improvements, six HSR projects are due to be implemented. The aim is to connect regional centres and link major cities to provide an efficient and modern national 5,561km network.

Thailand's Ministry of Industry sees transportation projects as essential to promoting development of the country's Eastern Economic Corridor as a leading ASEAN economic zone. Under Thailand's Transport Infrastructure

Development Strategy 2015-2022, the value of railway development projects takes up around half of the US\$64 billion total budget.

Around 43 railway development projects are planned for implementation by the State Railway of Thailand and the country's Mass Rapid Transit Authority. A major indication of the country's expansive railway strategy is seen in Bangkok's Bang Sue Grand Station, the capital's new US\$3.1 billion central railway station, which is expected to open in July 2021. The new terminal, which replaces the city's historic century-old Hua Lamphong station, is designed to act as a hub for long distance, medium distance and local commuter lines.

One of the HSRs is designed to connect Bangkok and Nakhon Ratchasima, one of four major cities in the northeast of the country. The planned line is seen as a key component of China's BRI and designed to run to the city of Nong Khai on the border with Lao PDR. The railway is envisaged as eventually extending through Lao PDR to Kunming in China and via Thailand to Singapore.

The country's private sector is also heavily involved in the HSR strategy. Charoen Pokphand Group, the country's largest industrial conglomerate is building a high-speed line designed to connect four major airports. These include Don Muang Airport, the old Bangkok international airport now served by budget airlines, the current Suvarnabhumi International Airport for Bangkok and U-Tapao, a former military airbase now used by charter flights. The 220km route is expected to be completed in 2026.

Creation of dual track railways is as, or arguably even more important, than HSR to enhance the region's transportation efficiency with projects

in Thailand, Malaysia, as well as in Indonesia demonstrating the trend. The latter saw the first 550km section of southern Java's new double tracked railway inaugurated in October 2020, with the remaining 65km section due for completion in 2023.

In Thailand, a 187km double track line between the cities of Nakhon Ratchasima and Khon Kaen opened in 2019, with further upgrading due to provide a link from the north and northeast to Eastern Economic Corridor provinces.

Mass transit projects are vital to address urban congestion

Heavy traffic congestion is a severe problem for Southeast Asia's major cities that has impacts not just on economic development, but also on the health and welfare of residents. ASEAN already features some of the world's most heavily populated conurbations including Jakarta, Surabaya, Bandung and Medan just in Indonesia alone. Traffic congestion in Jakarta, home to some 13 million people, is particularly severe.

In varying degrees, the problem is similar in other large capitals such as Manila, Bangkok, Ho Chi Minh City, Kuala Lumpur, Yangon, Hanoi and Singapore. As urban areas continue to expand rapidly, transportation issues have taken centre stage.

Malaysia's metropolitan area of Kuala Lumpur-Klang Valley is one of the locations experiencing significant growth in population. The area is at the core of the country's economic growth and its administrative axis and is where the Government is investing heavily in mass transit solutions.

Line 1 of the Klang Valley Mass Rapid Transit (KVMRT) system opened in 2017. Construction of a second line continues, with excavation for the 13.5km underground section of the overall 52km line now completed. Installation of track, signalling systems as well as mechanical and electrical equipment is progressing and aimed towards the line opening in early 2023.

Meanwhile, funds were allocated for a third KVMRT line by the Malaysian Government in November 2020. The 40km line is expected to cost US\$11 billion, with much of the track to be installed underground in Kuala Lumpur.

Thailand is also set on a path to be a prominent player in Southeast Asia's rail transport industry and Bangkok is already benefitting from its elevated BTS Skytrain and MRTA Metro underground system.

The metro strategy was unveiled in 2010 and designates eight primary routes across the city, consisting of two commuter rail lines, an airport rail link, as well as five rapid transit lines and five additional feeder lines.

The plan is designed to provide a total network of over 556km, with 312 stations to serve and connect outer suburbs to central Bangkok by the end of 2029.

In Vietnam, the first line of Ho Chi Minh City's new metro, stretching over a 19.7km route, is due to begin operating at the end of 2021, according to Japan International Cooperation Agency (JICA), which is funding the project.

In the north of the country, Hanoi plans to build eight metro lines to improve traffic congestion in the city of 7.5 million people. An initial 12.5km line is due to begin operations in 2021, for which France's Alstom has already delivered the first trains. A second part of the project, involving more than US\$2.8 billion of investment, is expected to start in 2022. The line will feature 21 stations, six underground and 15 elevated, and will connect central Hanoi across 39km to outlying suburbs of the city.

Jakarta, Southeast Asia's most populous city, has a pressing need to reduce congestion and entice people from car and motorcycle use. At present only 20% of journeys in Jakarta are made using public transport, according to William Sabandar, President of the city's Mass Rapid Transit (MRT). MRT Jakarta wants to see that increase to 80%, he says.

The first line of the city's US\$1.2 billion MRT and extending over 16km was financed by JICA and opened in March 2019. A second phase expected to cost US\$1.6 billion will run for a further 8.2km and is due to be completed by 2024, with a third 31km East-West rail system planned.

According to Sabandar, innovative financing mechanisms such as PPPs are being looked into for the work. The goal is to build 230km by 2030 including the second phase North line, the third phase East-West line, and then the inner and outer loop lines, he says.

In heavily populated Manila, the city's Metro Rail Transit Line 7 was reported in July 2020 to be 60% completed. The 22.8km system will have 14 stations and run across the city in a northeast to southeast direction.

Meanwhile, JICA and Asian Development Bank are funding the Philippines' North-South Commuter Railway system. The 147km 17 station plan is designed to connect central Luzon, metro Manila and southern Luzon.

The system will also connect with Manila's Light Rail Transit systems and the planned US\$7.4 billion Metro Manila Subway. The latter, a 35km underground railway is due to be completed by 2025. Meanwhile, contracts valued at US\$2.4 billion have been awarded to South Korean, Spanish and Thai companies to build an elevated railway to connect Clark International Airport with Manila.

Singapore has the smallest land area of ASEAN's ten countries and continues to invest in advanced transit systems, making the best use of its constrained geography. In March 2020, Singapore's Transport Minister, Khan Boon Wan, announced a ten year programme costing



US\$43.5 billion to expand the country's MRT railway network from 230km to 360km. The strategic plan is designed to bring 80% of the population to within walking distance of a railway station.

The plan involves Singapore's North-South and East-West lines being completely overhauled while the entire 43km Thomson-East Coastline will enter service. A North-East line is due to open in 2023 and the Downtown line soon after that. By completing the planned improvements, Khan Boon Wan believes that the Government would have achieved or exceeded the level of train connectivity enjoyed by the residents of Hong Kong, Tokyo and New York today. "This is our commitment to build a liveable city and to reduce traffic jams as well as carbon emissions," he says.

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GEODIS
KEEP RISING

GEODIS offers comprehensive logistics solutions across the ASEAN region

GEODIS

Businesses across the ASEAN region that need to move goods between the ten nations, as well as those importing or exporting from the rest of the world can benefit from the range of transportation services provided by GEODIS, one of the world's leading logistics providers.

The French-based group, which has more than 41,000 employees and annual sales of over €8 billion, is a top-rated supply chain operator that is recognised for its commitment to helping clients overcome their logistical constraints. It has a direct presence in 67 countries, a world-wide network spanning 120 countries, and is ranked #1 logistics provider in France, #6 in Europe and #7 worldwide.

Services offered by GEODIS comprise Supply Chain Optimisation, Freight Forwarding, Contract Logistics, Distribution & Express and Road Transport. Through these five complementary activities the Group can manage a customers' entire Supply Chain, providing end-to-end solutions enabled by its team, infrastructure, processes and systems.

Among its services in the ASEAN region is GEODIS Road Network (GRN) which provides a scheduled, fixed departure offering between Bangkok, Kuala Lumpur and Singapore, giving customers the certainty of security, availability and transit time. Customers are able to ship any

cargo of any size on GRN, small and big, for less than the cost of full truck load shipments.

A range of enhancements to the GRN service are planned during 2021, including an expansion into Vietnam, with weekly or bi-weekly departures scheduled to begin in Q3. Other improvements will see the opening of a new warehouse at Bangkok airport Zone 3, allowing for truck shipments to Bangkok to travel bonded, and an expansion of the trucking fleet through the acquisition of seven new Mercedes Actros vehicles in Malaysia to increase fleet reliability.

Air cargo

In addition to the GRN service, GEODIS also provides customers with scheduled Air Freight services, using its own controlled network known as AirDirect flights. These would traditionally be making use of the belly space on passenger flights, but with airline schedules dramatically cut during the Covid-19 pandemic, GEODIS has increasingly been chartering its own aircraft.

Prior to the pandemic GEODIS had begun flights from Hong Kong to Guadalajara in Mexico, a service which proved a great success at a time which available belly space on scheduled flights has fallen by 80%. This



GEODIS is transforming from the traditional freight forwarder to a logistic provider enabling integrated end-to-end solutions.

Rene Bach-Larsen, subregional Managing Director, GEODIS ASEAN



has led to an increase in flights and the launch of air freight links between Asia and Europe, and GEODIS is now planning to bring its AirDirect service to ASEAN countries during 2021 with its own chartered flights operating to a fixed schedule.

In January 2021 GEODIS announced an extension of its AirDirect service, with the addition of a weekly flight from Shanghai to Guadalajara, starting on 3 March. The service is planned to continue until at least the end of 2022 and offers the only direct access to Mexico from North & Central China. It complements the existing Hong Kong to Guadalajara schedule, which was launched in November 2019 and has also been extended until the end of 2022.

Shipping

Seaborne trade has, like air traffic, been disrupted by the global pandemic, with an imbalance of vessels and containers. This has forced logistics providers such as GEODIS to make their own alternative arrangements, by chartering cargo tonnage and, in its case, providing its own Less than Container Load (LCL) consolidation services connecting Asia-Pacific (APAC) with key markets in Europe, to help minimise any disruption to its customers' supply chains.

In February 2021 the Group announced that an initial 1,000TEU1 capacity vessel, operated exclusively by GEODIS, was on its way from China and scheduled to arrive in Hamburg on 28 February. This ship carried a total of 435 forty-foot containers for customers who had found it increasingly difficult to secure space with regular carriers at a viable rate.

E-commerce drives demand for contract logistics

Another fundamental change brought on by the pandemic has been the accelerating trend towards e-commerce and online shopping, given the varying degrees of lockdowns that have happened in countries around the world. GEODIS has risen to this challenge through its contract logistics solutions, including warehousing.

This has become a key crucial success factor for customers who have a global distribution centre (DC) strategy, by enabling them to respond to their customers' demands through the use of different locations, even with the movement control/lockdown orders implemented in different countries and cities. With its multi-user facilities across ASEAN, this enables GEODIS to provide customers with flexibility around storage, warehousing and distribution solutions as required.

Project Logistics capabilities in ASEAN

GEODIS Project Logistics believes in providing out-of-the-box logistical solutions, as in the case of the solution offered to a customer to handle delivery of 280 tonnes of hydraulic hammers from a supply vessel at Batam Anchorage to the customer warehouse in Singapore. The customer had requested GEODIS to provide a solution requiring the placement of one barge against another barge, using a mounted crane to unload the cargo from the supply vessel onto a flat top barge, and then ship the same to Singapore.

GEODIS worked out an alternative and more effective solution to arrange a heavy-lift vessel with required crane capacity to offload the cargo from

the supply vessel directly onto the heavy lift vessel. For the first time, we managed a vessel to vessel tandem operation at Batam Anchorage.

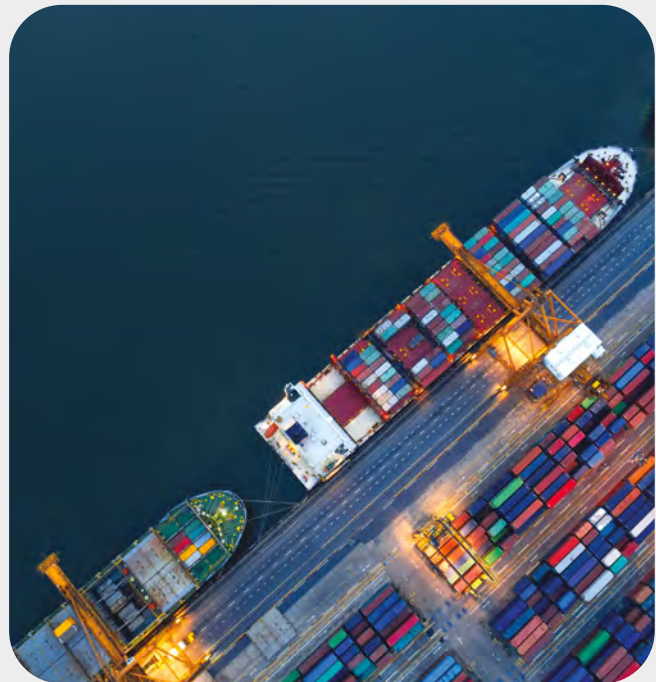
GEODIS Project Logistics is very well-positioned in the ASEAN market, with dedicated and highly experienced teams in all ASEAN countries. The business is passionate about assisting customers with difficult and challenging projects, focusing on a number of key sectors - Oil & Gas, Capital projects (refinery/infrastructure/rail/renewables/power) & Marine Logistics.

Technology enablers

GEODIS' own E-solution system called IRIS, gives clients transparency and access to all documentation, KPI's and reports, as well as complete visibility of all milestones from when the product leaves the manufacturing plant to final delivery point, and with its new Transport Management System (TMS), these milestones are fully automated from the first mile to the last mile, with a digital sign-off on the delivery agent's handheld device.

In summary, Rene Bach-Larsen, sub-regional Managing Director for GEODIS ASEAN commented: "The pandemic is changing the end economic environment in ASEAN, which is also having a major impact on our clients supply chain, as it is altering their logistical requirements, simultaneously we are faced with major changes in the global transport infrastructure, in terms of capacity availability and equipment displacement.

"At the same time, we are seeing an accelerated growth in some areas, which is fuelled by trade wars, supply chain diversification and manufacturing sites moving from China to ASEAN. As a logistic provider, it is vital that we stay agile and process driven, as this will enable us to be flexible and rapidly adapt to any changes the market throws at us.



"We initiated a major transformation programme about two years back, this transformation would prepare us for the future and enable us to achieve our Ambition 2023 goals. This programme is transforming us from the traditional freight forwarder operating on a point-to-point "cost plus" model, to a logistic provider providing integrated end-to-end solutions, focused on scaling up our own controlled capacities."

"With our new strategy we aim to achieve recognised regional leadership status in each of our key vertical markets; Automotive, High Tech, Industrial and Fashion, with a focus on driving value to our clients' supply chain."

For more background on the Group and its range of services, go to www.geodis.com

Innovative technology to enhance logistics

The global pandemic has given added impetus to efforts to hasten improvements in the movement of goods across the region. Driven by growing urbanisation, e-commerce in the region is accelerating rapidly. A study conducted by Google and Singapore's sovereign wealth fund Temasek, predicts that retail sales will almost double to US\$1.38 trillion in 2025 from US\$720 billion recorded in 2017.

This expansion is putting huge pressure on logistical networks to transport products in a timely way from suppliers to households. For their part governments are focusing on trade facilitation measures. By the end of 2019 all countries in the region had adopted the ASEAN Single Window (ASW) system, designed to simplify, automate and integrate trade procedures.

ASW grants preferential tariff treatment based on an electronic exchange of border trade related documents among member states. In addition, the ASEAN Customs Transit System (ACTS), which facilitates the road transport of goods under a unified computerised process also took effect at the end of November 2020.

The system is initially between Cambodia, Lao PDR, Malaysia, Singapore, Thailand and Vietnam with Myanmar expected to join next. It provides an online transit management scheme to make the overland transport of goods more efficient, and at a lower cost, without the need to make repeated customs declarations or change of vehicles at each border.

Meanwhile, the first project under the ASEAN Smart Logistics Network was launched in November 2020, with the inauguration of the US\$166 million Vinh Phuc Logistics Centre near Hanoi. The "Superport" project, a joint project with Singapore, is designed to help promote logistics chains in the region.

The centre, with rail and road connections to China's Yunnan Province, is designed to serve as a transit point for domestic goods, exports and imports transported on the Hanoi-Lao Cai economic corridor and from China via the Lai Cai border gate. It will also act as an inland container depot providing customs clearance services for exports and imports.

Such collaborative initiatives are benefitting the logistics industries of each ASEAN member state, however there is still scope for improvement. The latest World Bank Logistics Performance Index, which measures customs procedures, tracking and tracing efficiency and timeliness of systems in 160 countries puts Singapore in seventh place globally. Thailand is in 32nd place with Vietnam, Malaysia and Indonesia also ranked in the top 50 countries.

However, the challenge of improving infrastructure in such a huge archipelago means that Indonesia still has to overcome some of the highest logistics costs across Southeast Asia. These costs are estimated to account for 24% of the country's GDP, almost double those of neighbouring Thailand and Malaysia.

Supply Chain Asia, a Singapore based trade organisation, says the region's logistics eco-system is still in the infant stages of development. "Indonesia, for instance is made up of more than 17,000 islands and a large chunk of customers live in areas that don't have paved roads or clearly marked signage."

SMEs lack the understanding and access to smart logistics capabilities. In Indonesia only 25% have adopted supply chain management software. In Vietnam less than 10% of SMEs use technology to manage logistics and distribution, according to an A T Kearney report.

The regions sector is dominated by third-party logistics service providers. These 3PLs face the challenge of developing their digital capabilities in order to meet the needs of the region's rapidly growing retail sector, which presents an opportunity for tech-enabled start-ups to offer their expertise.

Technology will answer many problems by cutting down fuel costs and scaling up deliveries to the end customer and improving last mile fulfilment. Route optimisation, predictive alerts and smart shipment sorting methods are changing the traditional ways of supply chain operations.

The Internet of Things (IoT) which can connect physical devices that monitor and transfer data via the internet without human involvement is an emerging technology, with particular application in logistics. Integration of IoT technology into the supply chain can improve inventory management through real-time monitoring of goods and their condition, their location and by managing their transportation.

Integrating robotics into logistics increases the speed and accuracy of supply chain processes and reduces human error. Warehouses though will no longer just be locations for storing a wide array of items, but instead can be transformed into fulfilment centres that are able to analyse consumer purchasing patterns and anticipate demand for particular products. By shipping and storing selected items in advance, 3PLs can respond to orders faster and utilise bulk shipments at a lower cost.

New modes of delivery such as drones are being trialled. The relatively short last part of the distance of the supply chain, from warehouse, or

distribution centre, to a customer, is often the most difficult particularly in congested urban environments, and this last stage of the journey comprises a significant part of the total costs involved.

Kamarulazman Muhamed, CEO of Malaysia based drone developer Aerodyne, says it is active in Indonesia, Singapore and Brunei Darussalam with growing interest in international markets for the company's products. In March 2019, Airbus successfully trialled a shore to ship delivery in Singapore using a drone while Beijing based e-commerce company Jingdong has trialled a drone delivery in Indonesia to deliver books and other materials to students in a rural school over a distance of 250km.

The pandemic has also accelerated moves towards the use of parcel lockers to minimise direct contact between delivery personnel and customers. Singapore will have 1,000 such lockers completed by the end of 2021. Similar lockers have been installed in Malaysia's rapid transit stations.

The ambitious logistics improvements strategies are steadily succeeding. ASEAN countries outperform most other emerging markets in the tenth annual Emerging Markets Index published by Agility, a global Kuwait based logistics company.

This Index is a broad measure of competitiveness that ranks 50 countries by factors which make them attractive to logistics providers, freight forwarders, shipping lines, air cargo carriers and distributors. It includes a survey of more than 500 global logistics executives who select Vietnam, Indonesia and Malaysia as the emerging markets with the most logistics potential after India and China.

Future of agriculture will depend on new IT solutions

Agriculture is a vital component of the ASEAN economy, with the land also providing a major source of employment – 61% of all jobs in Lao PDR, 49% in Myanmar, 37% in Vietnam, 35% in Cambodia, 31% in Thailand, 29% in Indonesia and 10% in Malaysia.

The sector provides much of the staple food requirements for their populations, and also offers the basis for export and global food production. With an estimated 85% of global palm oil production, 75% of the world's rubber and 21% of its rice is grown in the region, according to Grow Asia, a partnership platform set up by the World Economic Forum and the ASEAN Secretariat.

While the agriculture sector initially faced uncertainties due to fears of interruptions to supply chains, it has generally coped well with the consequences of the pandemic and continues to supply both domestic and export markets. There are significant investment opportunities in a sector which needs to raise production levels as the population expands and prepares to adapt to changing consumption patterns.

The ASEAN region is not entirely self-sufficient and imports most of its corn and soybean for animal feed in addition to wheat from both North and South America, with Indonesia, Malaysia and Thailand the main importers of these products.

ASEAN nations score above the average on food security, according to the latest Economist Intelligence Unit's Global Food Security Index. However, there are wide variations, with Cambodia and Lao PDR ranked as the least food secure, despite agriculture playing the main role in both of their economies. The Index measures 112 countries on affordability of their food, availability, quality and safety of supplies.

Singapore ranks first in the world and this is attributed to its successful and resilient food safety net programmes. This includes a rice reserve

programme, ensuring that private sector importers supply the nation with adequate reserves.

As more and more people across the region move to cities there has been a decline in agricultural workers living in rural areas. In the period 2009-2019, for example, almost 1.1 million people are estimated to have left Vietnam's Mekong River Delta area, the main agricultural region of the country.

Issues requiring attention include a need to address large scale food waste, resulting particularly from inadequate storage, stagnating crop yields and resource management. Raising farmers' income is an essential factor in retaining a strong rural workforce. Strengthening and expanding the agricultural sector to meet evolving consumer needs and increase productivity can improve profits while enhancing food security.

Increasing affluence has led to food consumption patterns changing and a greater demand for animal protein and wheat. The UN Food and Agriculture Organisation (FAO) notes a declining per capita consumption of starchy staples in general including rice, accompanied by an increasing consumption of animal-source foods, fruits and vegetables alongside a rising demand for processed foods.

Dairy products comprise another key area where demand is expected to soar. A Rabobank report predicts that the shortfall in domestic production will rise to 19 billion litres by 2030, compared to 12.9 billion litres in 2020 in Indonesia, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

The Covid-19 pandemic has served to reinforce the value of both local and regional production, with the most promising solutions lying not just in producing more food, but doing so in a smarter way, using science to ensure that healthier, more nutritious food survives to reach the market. Agronomists believe that far too much agricultural produce is lost for a

lack of appropriate innovation from insufficient plant protection, leaving crops vulnerable to disease through to inadequate post-harvest storage.

Climate change and environmental degradation also threaten to exacerbate current food production challenges by reducing available arable land, crop yields and farm output. Grow Asia recommends that new technologies be increasingly deployed in order to improve yields, to reduce the environmental impact of farming, enhance safety, traceability and nutritional value of food, reduce waste, shorten supply chains and bring food to consumers.

In view of this, technology-related projects are developing steadily. TunYat, for example, is seeking to improve smallholder farmers' access to mechanisation in Myanmar by allocating the hire of tractors more effectively during land preparation. In Indonesia, CROWDE, a digital lending platform, says it has helped some 1,200 farms across ten provinces gain access to credit to buy critical inputs at the start of the country's cropping season.

There is ample room for further development though. Grow Asia has found that technology solutions are only being used by 2.5% of more than 70 million smallholder farmers in Southeast Asia. Smart sensors that collect data on soil and crop growth, or drones that provide imagery of field conditions in order to raise farm productivity, robotic harvesters and precision crop spraying are among such technologies.

All of this requires investment capital that is often beyond the reach of smaller farmers. McKinsey suggests that cooperatives among smallholders could be a factor in encouraging them to benefit from economies of scale, including sharing technology and management systems.

Development of regional agri-food technology hubs could become pivotal for investment and innovation. Singapore is thought to be among those Asian cities that have the potential to develop as agri-tech food hubs where development, funding and collaboration across the food and agriculture sector can be driven forward.



In November 2018, Singapore's Vanda Global Capital together with Raffles Capital and China's Dayshine Fund Management, launched a US\$1.5 billion fund to invest in start-ups, with a focus on introducing blockchain and information technologies to improve the livelihoods of farmers across Asia. Singapore's Grab Ventures Velocity is also focusing on Southeast Asia's agricultural businesses.

Grow Asia's Director of Innovation, Paul Voutier, says agri-finance is the most promising area for start-ups to focus on since farmers lack the access that other sectors have to a wide variety of loan products. They typically pay high rates of annualised interest of up to 40% when they obtain credit to buy items such as fertilisers and their only source of capital is usually the retailer selling the product or the trader who will buy their crops, he observes.

The scene is changing though with peer-to-peer lending platforms, such as Cropital in the Philippines and Indonesia's CROWDE making finance more affordable for farmers. Once farms have access to more sustainable loans, they can afford drones and other high-tech solutions, Voutier points out.

In Indonesia, Syngenta Corporation has co-developed an integrated supply chain partnership to provide micro-financing to farmers and help them access markets in West Nusa Tenggara. The partnership involved banks, local retailers and grain traders. Syngenta's ASEAN Regional Director, Tina Lawton says, that this helped farmers to increase their productivity by 10% while earning US\$1.28 more per hectare.

According to Pan Sopheap, Executive Director of Cambodia's Farmer Nature Net, only agricultural value chains can truly empower smallholder farmers and ensure food security and sustainable socio-economic growth.

Food processing industries reach out to global markets

The downstream agricultural sector is expanding rapidly as economic growth and urbanisation create new opportunities for processing industries, packaging, distribution and storage. In Malaysia, Thailand and Vietnam, agri-business now accounts for more potential in the economy than just the growing of food.

Significant export markets have also been developed. Many of the best known frozen food products, as well as canned meat, fish, fruit and vegetable items on supermarket shelves around the world are sourced from the region.

Thailand already has some of the largest companies in the sector including Thai Union Group, which supplies 20% of canned tuna sold worldwide and has annual revenues of more than US\$4 billion. Japan's

Ajinomoto employs 7,000 people in Thailand in 11 factories, producing a variety of products for local and international markets. Another Japanese producer, Yamamori along with Switzerland's Nestle and the US' Cargill, Kellogg's and McCormick also have major investments in Thailand.

According to the Thailand Board of Investment, a total of 116 investment applications with a value of US\$600 million for food processing and drinks manufacturing projects were received in the 18 months to June 2020, an investment that reflects international food companies' confidence in the country's innovation focused food and beverages sector, it says.

The country stands out as the world's leading exporter of canned pineapple, sweetcorn, coconut milk, cassava and durian, as well as canned tuna. It also ranks as the second largest exporter of rice and sugar and among the top five in chicken and shrimp globally, as well as a leading supplier of ready-to-eat meals and halal food products. In 2019, food exports were valued at US\$33 billion.

One of the main players in the Thai agri-food sector is Charoen Pokphand Food. The 100 year old company, which has extensive international operations, widened its presence in Vietnam at the end of 2020 when it opened the first poultry complex in the country dedicated to export markets.

The US\$250 million complex in Vietnam's Binh Phuoc Province will eventually produce and process 100 million chickens a year, making it one of the largest of its kind in the region. Pimchanok Vonkorpon, Director General of Trade and Strategy in Thailand's Ministry of Commerce, believes that "food will undoubtedly be the star product of the country in the years to come."



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We create chemistry

Sustainability is at the heart of chemicals giant's strategy growth

Dr Carola Richter, President - South & East Asia, ASEAN & Australia/New Zealand, BASF Southeast Asia Pte



Dr Carola Richter

We create chemistry for a sustainable future - BASF's corporate purpose aptly reflects its aspiration to contribute to a world that provides a viable future with enhanced quality of life for everyone.

BASF has subsidiaries and joint ventures in more than 80 countries, operating six integrated production sites and 390 other production sites across Europe, Asia, Australia, the Americas and Africa.

With more than 117,000 employees globally, the group supplies products and services to around 100,000 customers from various sectors, through a portfolio that is organised into six business segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions.

Strategic action areas to sharpen customer focus

BASF aims to be the world's leading chemical company for its customers to ensure success in an increasingly competitive market environment. The company puts the customer at the centre of its decisions and everything it does, positioning itself as a solution-oriented system provider by strengthening its performance in innovation and in operations, both supported by digitalisation and

sustainability. "By leveraging on digital technologies and data, we want to create additional value for us and our customers. We are embedding sustainability even more deeply into the steering of our business," stated Dr. Carola Richter, President - South & East Asia, ASEAN and Australia/New Zealand.

Fortifying presence in Southeast Asia

BASF's growth strategy is based on investment in strategic growth markets and innovation-driven sectors. The Asian market continues to be a particular focus of growth for the world's leading chemical company. In Asia Pacific, planned investments of around €9.6 billion [US\$11.35 billion] (41% of global investment of €23.6 billion [US\$28.8 billion]) between 2020 and 2024 will focus on areas where BASF is technologically leading, has a competitive advantage and expects robust market growth. Its ASEAN activities comprise a total of 16 production sites, more than 4,100 employees, and accounted for 13% of BASF's Asia Pacific sales in 2019.

Richter stressed that the company places great importance on being near its customers and is moving forward strategically to bolster its system of local production and innovation for local needs and consumption in Asia Pacific.

She also emphasised that despite the difference in size and degree of development, Southeast Asian countries have important qualities in common: dynamic markets, fast-developing customer needs, and overall energy and optimism, that propels the region forward.

BASF has made strategic investments in downstream businesses, among others, three new agricultural research and training centres, AgSolution Farms in Vietnam and Indonesia and a Crop Protection Formulation Plant in Singapore. These centres will help equip farmers with crop protection innovation and technical knowledge to increase productivity in a sustainable manner.

Supporting local sustainability topics

Staying true to its corporate purpose, BASF combines its unique expertise with customers' competence to jointly develop profitable, innovative and sustainable solutions to address social and environmental challenges. The most relevant sustainability topics in ASEAN countries currently are circular economy and thereof waste management as well as carbon footprint reduction.

A circular economy

BASF is driving the transformation towards a circular economy by developing solutions that make the most of the limited resources of our planet and minimise waste: enhance the durability of materials, innovate solutions that enable recyclability, overall shape new material cycles and create new business models. Linking sustainability commitments with digital solutions as well as material and process innovations is a key success driver in BASF.

BASF has launched a Circular Economy Programme which comprises the target to process 250,000 metric tons of recycled and waste-based raw materials annually by 2025, and by 2030 aims to double its sales generated from solutions for the circular economy to €17 billion [US\$20.7 billion]. The company is working with partners to further develop a technology that turns mixed plastic waste into pyrolysis oil as alternative feedstock in its integrated chemical production system. This means, many products will be recycling based without compromising on the highest quality for customers' most sensitive applications. BASF's ChemCycling™ project is a protected trademark.

BASF has also developed a range of bio-based products for a variety of applications serving as either a substitute for fossil-based materials to reduce the carbon footprint, or as new products using their unique properties. In 2019, BASF launched three active ingredients for cosmetic products derived from the peel, leaves and seeds of rambutan grown in Vietnam. Besides avoiding waste and minimising land use, the Rambutan programme also offers above-average incomes for growers, ensures gender equity and guarantees safer and healthier working conditions.

Another key driver of BASF's contribution to Circular Economy is its six integrated production facilities, which are known as "Verbund" sites, a German word meaning integrated system. The Verbund principle links production units and their energy supply, for example, the waste heat of one plant provides energy to others, while one facility's by-products can serve as feedstock elsewhere. This saves raw materials and energy, avoids emissions, lowers logistics costs and leverages synergy. BASF's first Verbund site in Asia is located in Kuantan, Malaysia, and is



BASF aims to be the world's leading chemical company for its customers to ensure success in an increasingly competitive market environment.



operated by BASF PETRONAS Chemicals Sdn. Bhd., a joint venture between BASF and Petroliaam Nasional Berhad (PETRONAS). It was incorporated in 1997, producing and marketing key raw materials for essential industries mainly in Asia.

Ending plastic waste

Plastics have proven benefits during their use phase but plastic waste as a mistreated and lost resource has become a major global challenge. Solving these challenges requires innovation and joint efforts globally across the value chain.

Founded in 2019, BASF is a member of the global Alliance to End Plastic Waste (AEPW) which comprises almost 30 major global companies who have committed to investing US\$1.5 billion over the next five years, to develop, deploy and bring to scale solutions that will minimise and manage plastic waste and promote post-use solutions. The four action pillars are waste management, infrastructure, innovation, education & engagement and clean-up.

AEPW partners with various collaborators to further scale up the development of more sustainable and circular waste management systems, engages local communities and conducts feasibility studies for chemical recycling plants in countries like Indonesia, Vietnam and India.

Reducing carbon footprint

BASF has already almost halved its carbon emissions since 1990, while doubling sales volumes. In the years up to 2030, BASF will continue

to grow, but strive towards carbon-neutral growth, limiting emissions to the 2018 level.

The group has established a Carbon Management Program that leverages new production technologies as well as the electrification of chemical processes based on renewable energy, with 23 production sites already sourcing emission-free electricity from suppliers. A significant reduction in emissions requires fundamentally new technologies, which BASF is developing as part of its R&D programme, which is focused on basic chemicals, as these account for around 70% of the chemical industry's greenhouse gas emissions.

In 2020, BASF announced that they will offer cradle-to-gate Product Carbon Footprint information for their portfolio based on process emissions, energy demand and upstream emissions by the end of 2021, making them the first chemical company to do so. This will enable customers to better measure and reduce their own CO₂ footprint of activities and end products.

Sustainable partner for long term success

"We want to be a thought and action leader in sustainability, which is why in BASF, business success tomorrow means creating value for the environment, society and business. This secures the long term success of our company, creates business opportunities and establishes us as a key partner supporting our local customers in the region. We want to accelerate driving the sustainable development of the region with our product solutions, innovations and technologies," concluded Richter.

Renewables take centre stage in energy strategy

Prior to the impact of Covid-19, electricity consumption in ASEAN countries was estimated to be rising at 6% a year. This growth is likely to resume rapidly when manufacturing and industrial activity recovers, driven also by urban expansion, transportation and surging demand for air conditioning.

The pandemic has given time for reflection in evaluating how electricity will be used and generated in future. As a consequence, the sector is entering a dynamic phase of development. Declining costs of renewables and mounting concern over emissions and pollution have begun to alter the balance of future additions to the power mix.

Over the last 20 years, the largest share of growth in electricity generation has been met by a doubling in fossil fuel use, with oil and coal the biggest elements in energy production. While powering the industrial expansion and development, the downside has been the accompanying risk to public health. A growing dependence on imported fuels is also a strategic incentive to upscale stated commitments to renewable energy projects.

While there is an abundance of coal still, the region as a whole has become a net importer of crude oil. Despite Indonesia, Malaysia, Thailand and Vietnam ranking as the main oil producers, all of them face gradually declining production levels from fast maturing oilfields. According to the ASEAN Energy Outlook, natural gas demand is also expected to exceed domestic supply by 2029.

The region is one of a few globally where coal-fired generation has until recently been expanding, with close to 20GW of new coal-fired generating capacity under construction, mostly in Indonesia, Vietnam and the Philippines.

Nearly 60% of Indonesia's electricity supply comes from coal-fired power stations. This is perhaps not surprising since the country is one of the world's largest coal producers. Up to 24.7GW of coal-fuelled electricity generation is currently scheduled, according to the World Resources Institute (WRI), a Washington based think-tank.

The WRI advises that continued reliance on coal is not the way to pull Southeast Asia out of the Covid-19 induced economic downturn. "Shifting energy systems onto a modern, low-carbon path cannot only secure the future as an economic powerhouse, but also create jobs, address climate change and improve public health in the process." it says.

A change is visible in near-term project developments, the Paris based International Energy Agency says. It notes a significant slowdown in decisions to move ahead with new coal-fired power station capacity and a rise in additions of solar and wind. In the first half of 2019, approvals of new coal-fired capacity were exceeded by increases of solar photovoltaic (PV) installations for the first time.

Many ASEAN countries have considerable potential for renewable energy. Indonesia, for example, has around 442GW of potential capacity from a range of sources such as hydropower, geothermal and solar, yet only about 2.5% of this has been utilised, according to the Abu Dhabi based International Renewable Energy Agency (IRENA).

The leading renewable contributor in the region so far is hydro-electricity, where output has quadrupled in the last 20 years. However, bioenergy in heating and the contribution of solar and wind are increasingly part of the energy mix. Indonesia has said that it aims to increase the role of renewables from 9.15% in 2019 to 23% by 2025 and to 31% by 2050.



The leading renewable contributor in the region so far is hydro-electricity, where output has quadrupled in the last 20 years.



Hydropower and geothermal capacity make up 57% and 21% respectively of Indonesia's renewable capacity. Biofuels consisting of ethanol production from molasses and biofuel derived from palm oil constitute 18%, with solar PV plants providing around 3%. There is an increasing focus on development of the latter.

Harris Yahya, Director of New and Renewable Energy at Indonesia's state-owned electricity producer Perusahaan Listrik Negara (PLN), said in October 2020 that the Government planned to fund the gap between pricing of solar energy and PLN's basic cost of electricity supply. Observers say that this approach will facilitate investor interest due to the long term certainty it provides on pricing.

One innovative new development is a 145MW solar PV project being installed on a floating structure in a reservoir linked to the Cirata hydro-electric plant in West Java. The project features a smart control system to enable it to balance intermittency of generation from solar cells, that can be especially variable during the rainy season.

According to PLN's President Zulkifli Zaini, "the floating PV project is a monumental renewable energy project for Indonesia and the largest floating PV facility in Southeast Asia. It will improve the capability of the power system and also increase the renewable energy mix in Indonesia. The potential of similar systems is endless and we anticipate commercial operation in 2022." The project is being developed by Abu Dhabi's Masdar, part of the Emirate's Mubadala investment fund.

Thailand is another of the major economies which also faces rising electricity demand, coupled with increasing reliance on imported energy.

At current usage levels, its oil & gas resources will deplete within the next decade. This is providing a major incentive to diversify into locally generated renewable energy.

Thailand's renewable energy target for electricity, excluding imported hydropower, is set at 29% of total generation by 2037 totalling 29GW. Nevertheless, with a more aggressive development plan, its renewable energy sources could reach more than 37% by 2036, according to IRENA.

Edinburgh based energy consultancy Wood Mackenzie says that, in fact, the region's cumulative solar PV capacity could nearly triple to 35.8GW by 2024 from 12.6GW in 2019. Analysts believe there is substantial potential in Vietnam for more investment.

A 257MW solar plant planned for Hua Hoi in the country's Phu Yen Province, is one of the region's largest solar developments. The project's US\$186 million costs are being provided by a syndicated commercial bank loan led by Asian Development Bank (ADB), who have commented that: "This project will support the rapid development of solar power capacity in Vietnam, advance the country's low-carbon growth goals, and we hope, catalyse further commercial bank financing for renewable energy."

ADB's investment is an indication that the economic case for renewables is growing as generating costs increasingly reach parity with current grid production and are seen as viable investments by loan and capital markets.

Malaysia has set a target to increase its renewable energy from 6% to 20% by 2025, with the majority driven by solar power. Singapore has

also targeted at least 2GW of solar capacity by 2030. The deployment of solar power is expected to see floating PV installations and an expansion of rooftop panels. Another policy strand is the development of electricity storage facilities.

In October 2020, Singapore announced a US\$49 million low-carbon energy research programme. The Minister for Trade and Industry, Chan Chun Sing stated: “hydrogen and carbon capture, utilisation and storage, are promising technologies that have the potential to transform Singapore’s energy landscape and help us achieve our long term emissions and reduction goals.

In 2020, Finland’s Warsila installed a 2.4MW energy storage system in Singapore which has identified energy storage as a game-changing technology. According to Ngiam Shih Chun, CEO of Singapore’s Energy Market Authority (EMA), energy storage systems are one of the most promising solutions to help the integration of more solar energy into the power grid. The EMA aims to eventually deploy 200MW of storage. This is seen as critical in supporting the target of at least 2GW of solar deployment by 2030, he says.

While solar technology is set to play a growing role in Singapore’s energy plans, wind power is also poised to play a big part elsewhere, particularly if Malaysia and Myanmar start investing in utility scale wind projects, comments Wood Mackenzie analyst Robert Liew. “Vietnam has risen to become the shining star in the region’s race to add wind power capacity,” he says. The surge in projects in Vietnam is largely driven by the Government’s decision to increase the guaranteed price paid to developers per MWh of energy produced from both onshore and offshore wind projects.

Expansion of the region’s electricity generation and distribution, as well as making systems more resilient, will not depend solely on development of renewable strategies. Major elements also include



progress on expanding multilateral power trade arrangements such as the Lao PDR-Thailand-Malaysia power integration project, in addition to grid modernisation.

The transition to sustainable energy is gathering pace, with renewable sources now at the forefront of planned investments in ASEAN countries. This strategy has growing international support. In November 2020, a consortium of governments, including Canada, Germany, the UK and France, launched the Southeast Asia Energy Transition Partnership (ETP), with an initial focus on Indonesia, Vietnam and the Philippines, all countries with significant coal consumption.

The aim is to help accelerate energy transition in Southeast Asia by increasing the deployment of renewable energy, energy efficiency and sustainable infrastructures. Remy Rioux, CEO of France’s Development Agency says the ETP also aims to scale-up green finance and provide financial support for technical assistance projects.

ASEAN embraces innovation to tackle water challenges

The pandemic has focused the attention of governments in ASEAN countries on the need to build improved resilience in public health infrastructure, yet issues concerning water insecurity and sanitation are also urgent and have presented ongoing challenges prior to the occurrence of Covid-19.

Some of the problems are due to the impact of nature and climate change, others are man-made though because economic development has tended to outpace infrastructure investment in key utilities including water supply and wastewater processing facilities.

Thirteen rivers flow through Jakarta, which makes the city prone to flooding due to wet season rains and inadequate drainage. Around 40% of the city lies below sea level which exacerbates the situation. A surging population of more than ten million and land subsidence are also major factors in increasing flood risk in the city.

Bangkok is another city facing critical resilience issues due to climate change. Farmland that once absorbed seasonal flooding and cycles of monsoon rain has been developed and paved over during the last 50 years. Today it has minimal green space and following huge construction development, has in recent years experienced severe flooding episodes.

In Cambodia, outside the capital Phnom Penh, less than 50% of the population have access to main water supplies and just over 10% have access to sewerage and wastewater treatment facilities, the Asian Development Bank estimates.

Securing clean water supplies and providing adequate treatment facilities is a growing problem even for the region's more advanced economies. According to the Global Climate Index published by Germanwatch, a Bonn based NGO, seven of the most likely countries to be impacted by climate change are in Asia.

Thailand, the Philippines, Vietnam and Indonesia are among countries that are facing water shortages with an increasing frequency. Coupled with a rising demand for water, factors such as environmental pollution, infrastructure constraints and climate change pose growing risks for the region's water security.

"We see water security in Southeast Asia threatened by a range of issues from continued migration to low-lying cities to high volumes of untreated wastewater discharged into rivers," says Nimesh Modak, Vice President of Strategy and Business Development at Imagine H₂O, a non-profit organisation which helps early stage water firms to develop. "These

interrelated challenges spell new opportunities for entrepreneurial solutions globally, particularly those that leverage data and analytics to improve real-time decision making.” he says.

The focus is therefore firmly on innovation and development of efficient and affordable ways to manage water resources. Estimates suggest that up to 30% of clean water is lost in the distribution systems due to leaks and ageing pipes. Analytics products can help to provide smart management of water networks, monitor and predict pipe failures. Cloud-based operational intelligence platforms can help engineering staff reduce chemical and energy use to treat more water at less cost.

In Vietnam, substantial investment in water supply is ongoing in major cities including Ho Chi Minh, which has digitised its water supply network, in Hanoi and in the provinces of Da Nang, Bin Thuan and Phan Thiet. There are now plans to accelerate improvements in the country’s secondary cities as well.

Improvement of wastewater treatment facilities is vital to combat growing water pollution by domestic sewage. Japan’s JFE Engineering, for example, is constructing Hanoi’s largest wastewater treatment plant at Yen Xa, able to provide 270,000m³ of sewage treatment per day, sufficient for up to 900,000 people. Funded by a loan from Japan International Cooperation Agency (JICA), the plant is expected to be completed in 2022 and will feature advanced treatment processing to remove nitrogen and phosphorous.



In Malaysia, Veolia Water Technologies is in the final phases of completing its Tun Razak Exchange sewage treatment project in Kuala Lumpur. Veolia will operate the plant, which is described as the first fully commercial water reclaim project in the region. The French company says that it will provide non-potable water for Kuala Lumpur’s new financial district and will be a third of the size of conventional treatment facilities.

As investment in water infrastructure develops, the region is transforming into a dynamic testbed and marketplace for innovative water solutions. When safely treated, wastewater can be a source of energy and nutrients.

The organic substances contained in wastewater can also be used to produce biogas and other recoverable materials in addition to water. As the cost of such systems are reduced with the application of new technologies, the wider their appeal and reach to lower income communities.



Analytics products can help to provide smart management of water networks, monitor and predict pipe failures.



Singapore's National Water Agency and the US' Evoqua Water Technologies have been trialling the use of electro-deionisation (EDI) technology in a demonstration plant in Singapore. Should these trials be successful, utilising an electric field to remove salt ions from seawater on a large scale could reduce energy consumption by half.

Singapore is at the forefront of water technology and has built a diversified and reliable supply from four main sources. These include local catchments, imports from neighbouring Malaysia as well as treated water that is additionally purified using advanced membrane technologies and ultra-violet disinfection. Desalination is a further important element providing 25% of current needs.

Teo Chee Hean, Co-ordinating Minister for National Security, has cautioned that Singapore needs to do more. "We need to be prepared for potential threats to our water supply, like extreme weather conditions, or major oil or other pollutant spills that can affect our desalination plants. That is why water security has always been a national priority. To turn as many drops of water into drinkable water as we can."

This strategy involves developing new technologies and trialling these while planning for future needs. By 2060, the country's total

water demand could almost double, with the non-domestic sector accounting for nearly 70%. The International Water Association predicts that by then ultra-treated water and desalination will meet up to 85% of Singapore's demand.

Vietnam is in the process of transforming its water sector from state-owned supply organisations to joint stock companies, with the Government holding less than 51%. Observers believe that the sector has considerable potential for investment because of fast growing consumer needs, with some 80% of the population living in urban areas. There are more than 64 joint stock provincial water supply companies seeking finance to accelerate investments to improve operational efficiency and service quality.

In the Philippines, the Government has supported two successful PPP concessionaires – Manila Water and Maynilad Water – to provide water supply services and wastewater treatment in the Manila Bay area.

Rodney Chapin, a member of Imagine H₂O Asia's Advisory Council says: "This is an exciting time for entrepreneurial innovations to take root in the region. I am optimistic about their role in solving critical challenges while creating opportunities within the region's innovative economy."

The spirit of progress: Doing business the right way

Conversation with Preeti Razdan, Managing Director, Diageo SEA.



Preeti Razdan

It may seem as though sustainability has taken a backseat in ASEAN countries as they focus on managing the Covid-19 crisis.

But delve deeper, and that is far from the truth. In fact, the World Economic Forum believes [sustainability will be non-negotiable](#) in this region, backed by a growing group of consumers who continue to prioritise social and environmental responsibility.

It is not just consumers who want to see change. As a global business with storied brands including Johnnie Walker, Guinness, Bailey's and Talisker, Diageo is one company that is committed to doing business the right way.

Continued success, says Diageo's Managing Director for Southeast Asia Preeti Razdan, will depend on all people and a flourishing planet. She shares more about the spirits giant's vision for success in an ever-changing world, and how Diageo is committed to protecting our shared future, creating value for communities while paving the path for others to follow.

Why is sustainability important to Diageo? What does it mean for the business in Southeast Asia?

At Diageo, we have always set sustainability and corporate social responsibility goals that are among the most ambitious in our industry. We want to make a positive impact wherever we live, work, source, and sell. It's about creating enduring value not just for the company but the larger society – because our long term commercial success and financial sustainability will depend very much on this.

As one of our [fastest-growing markets](#), Southeast Asia is dynamic and constantly changing. More consumers come of drinking age each year, with more disposable income, and they're waking up to greater social and eco-consciousness. Since 2020, the region has also been grappling with the impact of the Covid-19 pandemic.

We want to make sure that our priorities are aligned with that of consumers here by placing sustainability right at the heart of the business. There's no better time than now to contribute to a better world.

Can you share more about Diageo’s new ten year action plan ‘Society 2030: Spirit of Progress’?

‘Society 2030: Spirit of Progress’ is our ambitious and exciting blueprint for a more inclusive and sustainable world. It’s designed to drive change both within the company, and for communities and society.

We will focus our action over the next decade in three core areas that are closely aligned with the United Nations’ (UN) Sustainable Development Goals (SDGs):

- 1| Promoting responsible positive drinking
- 2| Championing inclusion and diversity
- 3| Pioneering grain-to-glass sustainability

These efforts will build on our strong track record in environmental and social governance to lay the groundwork for a **brighter future**. It means working with our entire value chain to ensure that our people, our communities, and the environment continue to thrive.

How will Diageo make a difference in addressing the harmful use of alcohol?

We want to change the way the world drinks by celebrating moderation. We take huge pride in our brands, which are best enjoyed when consumed responsibly – “drink better, not more”. Our aim is to reach one billion people with a dedicated message of moderation by 2030.

To this end, we are expanding programmes that tackle alcohol-related harm, from underage drinking to drink-driving and binge drinking. We recently expanded our flagship ‘Smashed’ programme to combat underage drinking in the region – creating an online program as an



alternate option to the live theatre productions presented by professional actors on the negative impact of alcohol on youths, combined with interactive workshops at schools. We have run it alongside local partners in Thailand, Cambodia, Vietnam, and Indonesia, reaching out to over 41,000 young people, parents, and teachers. The programme will be rolled out shortly in the Philippines.

Tell us how inclusion and diversity is central to Diageo’s purpose of ‘Celebrating Life, Every Day, Everywhere’.

We want to celebrate differences and help shape a society where everyone can succeed. This is why inclusivity and diversity are deeply embedded within our business.



‘Society 2030: Spirit of Progress’ is our ambitious and exciting blueprint for a more inclusive and sustainable world.



Each market has its own inclusion and diversity plan, with a focus on developing a strong pipeline of female talent. In 2020, 39% of Diageo’s leadership roles were held by women, exceeding our initial target. Our next milestone is to hit 40% by 2025.

Improving representation at every level remains a priority, and we hope to lead change in the industry with our policies and practices. In many markets, including Singapore, Thailand and the Philippines, parents have equal maternity and paternity leave of up to 52 weeks. The goal is to achieve 50-50 gender equity in each Asia Pacific market across the employee base and across leadership roles by 2030.

What does grain-to-glass sustainability mean?

Grain-to-glass sustainability is about advancing sustainable technologies and practices across the full lifecycles of our brands. This means working across our entire value chain – from grain to glass, from start to finish – in a way that respects the environment, be it by preserving water, moving into low-carbon operations, or becoming more sustainable by design. Because real success comes from pioneering innovation and solutions that will benefit our business, communities, and the environment.

By 2030, every drink made by Diageo will use 30% less water. We pledge to replenish more water than we use in water-stressed areas – the equivalent of over four billion litres of water – through 150 community water projects, and by improving water quality and access to sanitation and hygiene.

In April, we partnered global non-governmental organisation (NGO) WaterAid on a unique female-led project that supplies safe drinking water and improves livelihoods in Yangon, Myanmar. It is our largest single investment in an Asia Pacific sustainability and society project to date. Providing access to safe drinking water is not only a key UN SDG but also a priority in the Myanmar Sustainable Development Plan.

These are big strides we are taking. But we won’t stop until we do more. Our new Sustainable Solutions programme is testament to this. With it, we will design the change that the industry needs, building innovative partnerships for a truly circular economy.

One example in the region is in Bali, Indonesia where we have a production facility. We are supporting the village of Nyambu towards becoming the first plastic-free village in Indonesia.

In Thailand, we have a pilot project that provides, free of charge, used Johnnie Walker bottles to the Bangkok Flowers Centre Co, an orchid exporter to support the company's orchid tissue culture. To date, Diageo has given 23,000 Johnnie Walker bottles to the Bangkok Flowers Centre. It is a creative way for Diageo to reuse its Johnnie Walker bottles and reduce waste, while supporting Thailand's important orchid industry.

What are some initiatives you have rolled out across the region to help businesses affected by Covid-19?

Besides making donations and contributions to healthcare workers and communities affected by Covid-19, we launched the 'CleanServe' programme in Southeast Asia to support the safe re-opening of bars amid the pandemic.

Through the programme, we offer training to bartenders and funding for sanitising equipment and thermometers. It supported 393 outlets in Singapore, Malaysia, and Vietnam in 2020, with plans to launch in the Philippines. This is a difficult period for many people and businesses in the region, and we do what we can to keep the industry going.

For the longer term, we aim to train 52,000 people in Asia Pacific by 2030 through the Learning for Life programme, in line with the UN SDG of achieving employment and decent work for all. We will provide tools and training in four key areas: hospitality, retail, entrepreneurship and bartending.



What is Diageo's vision of success?

Our vision of success is simple: to do well by doing good. We want to make a positive contribution to the world. This is part of our Performance Ambition to become the best performing, most trusted and respected consumer products company globally – all while keeping to our core purpose of “Celebrating Life, Every Day, Everywhere”.

How can we all celebrate when not everyone has equal access to opportunities to succeed and the planet is too polluted for future generations. Getting the social and environmental equation right is a non-negotiable requisite to business success. Going forward, our ten year plan will drive the trust, respect and commercial success that defines the company.

Striving to rebuild tourism industry on sustainable basis

Tourism is at the core of Southeast Asia's economic health, with the sector contributing to 12.1% of GDP in 2019 and being a major source of employment totalling 13.3% of jobs, according to London based World Travel & Tourism Council (WTTC).

After a decade of sustained expansion in all aspects of tourism, the impact of Covid-19 has been severe on every country in the region. Many are highly dependent on their tourism sectors to provide hard currency revenues. For Thailand alone, tourism has been contributing 18% of GDP, and attracted almost 40 million international tourists in 2019.

The dire effects of the pandemic has continued into 2021. The Tourism Authority of Thailand predicts just 6.9 million tourists were recorded in 2020 and only slightly recovering to eight million in 2021. Despite the damage to such a vital sector, ASEAN countries have been especially cautious in opening their borders to international travellers and prioritised public health matters over foreign visitors.

Singapore saw visitor arrivals plummet by 86.7% to reach 2.7 million, with almost all of the those recorded in the first two months of 2020.

Tourism receipts in turn declined by 78.4% to US\$4.4 billion in the first three quarters of 2020.

Cambodia stands to lose 70% of its tourism revenues, which stood at US\$4.9 billion in 2019. More than 3,000 related businesses in Cambodia have been forced to close with an estimated 45,000 job losses. Malaysia also saw its visitor numbers fall 68% in the first half of 2020.

Indonesia's tourist arrivals fell more than 73% for the first ten months of 2020, to record just 3.89 million visitors compared to a pre-Covid-19 estimate of 18 million visits. Bali has been particularly affected with an estimated 70% of its SMEs closed.

"Assuming all travel barriers are lifted, a vaccine appears, and fear of travel dissipates, it will still take time for tourism to return to the pre-Covid-19 levels. Tourism will certainly be the bright light on the horizon in ASEAN, as pent-up demand is released, but that is likely to be a 2022 story," BNP Paribas's ASEAN Economist, Arup Raha predicts.

However, there are clear indications of revival as the industry readjusts. The WTTC expects that domestic travel and tourism, local business travel

and budget leisure trips will be the first parts of the industry to show recovery, with safety concerns playing the key role in both domestic and international tourists' travel decisions.

The World Economic Forum announced in February 2021 that its annual meeting of global leaders, normally held in Davos Switzerland, would be staged in Singapore from 17-20 August 2021. The event is encouraging for the whole region since it will be the first to bring world leaders together to discuss the challenges of recovery from the pandemic.

According to Keith Tan, Chief Executive of the Singapore Tourism Board (STB). "Singapore's tourism sector has had to fight for survival in 2020. Our tourism businesses have displayed immense resilience and adaptability throughout this difficult period, reinventing their business models and leveraging technology to find solutions in a Covid-19 world."

At the end of January 2021, STB approved the resumption of operations for 45 attractions, 270 hotels and 1,686 itineraries. In November 2020, Singapore had already begun piloting enhanced-safety protocols and ports of call for two home ported cruise lines – Genting and Royal Caribbean International. "While mass international travel is unlikely to resume in a major way in 2021, STB will continue to stand with the industry to prepare for recovery and to start building a better and more sustainable future for tourism," Tan says.

In order to provide relief, governments are endeavouring to promote domestic tourism with support programmes, travel deals and marketing support until international visitors return. In May 2020, Vietnam launched its "Vietnamese people travel in Vietnam" campaign, encouraging locals



to explore their own country with discounted fares and increased domestic flights.

As part of this strategy Singapore has launched a US\$32.4 million domestic campaign. Thailand in addition has introduced a US\$64 million project to boost local tourism through subsidies on accommodation, transport and vouchers which can be used to purchase travel related services including food. Cambodia, Thailand and Vietnam have also introduced stimulus packages, ranging from tax exemptions, to financial bailouts to help businesses.

Promoting domestic tourism builds on a trend that has been growing for a decade, as a rising middle class with greater disposable incomes have been able to spend on travel, often for the first time. In Vietnam,



At the end of January 2021, STB approved the resumption of operations for 45 attractions, 270 hotels and 1,686 itineraries.



domestic tourists reached 80 million in 2019, compared to 15 million foreign tourists in the same year, according to Asian Development Bank (ADB).

ADB believes that Covid-19 could be used as a reset to strike a better balance between domestic and international tourism. For inbound tourism to be successful and sustainable in the long run, domestic tourism needs to thrive as well, it says. Domestic tourism can help to increase respect for the environment, attract young people to work in the sector, and attract entrepreneurs and investors.

Rural tourism can also contribute to destination diversification strategies and holds substantial potential for poverty alleviation and protection of natural resources and cultural heritage. The Tourism Authority of Thailand has launched a rural tourism awards scheme with an investment fund to support local communities to preserve arts, culture, heritage and promote local cuisine.

In Cambodia, there is demand for adventure travel. In Lao PDR, promotions are focusing on nature and adventure breaks. These types of investments can also be beneficial when international visitors return with changed preferences post-Covid-19.

Until recently, many countries, grateful for the new jobs created by tourism and the surging hard currency revenues the sector produced,

have tended to downplay the growing threat to the natural environment from largely unregulated mass tourism.

Following a Hollywood film in 2000 that used Thailand's Maya Bay as a location, the beauty spot was overwhelmed by tourists causing half of the local corals to be damaged. Similarly, in the Philippines the small island of Boracay was overwhelmed by two million visitors in 2017, many of them from cruise ships forcing authorities to close off the island because of pollution.

Vietnam's key attraction, Ha Long Bay, with its unique limestone islands has also been under severe pressure from millions of tourists each year, often arriving by ship. As the industry and its attractions diversify with tourists seeking more off the beaten track destinations, SMEs have an opportunity to become more significant in building longer term resilience and sustainability.

Despite facing its toughest ever trading year, the region is increasingly attempting to take a new look at its offerings and the experiences it provides for visitors, while its participants position themselves for future growth opportunities. Before the pandemic, tourism businesses were pre-occupied with addressing a growth market with little time to focus on developing new products and innovation. "Now is the time to deepen and build new skills," STB's Keith Tan maintains.

Lifestyle changes propel consumer markets

Vacations and travel in general have been curtailed by the global pandemic but other areas of discretionary spending have held up well in almost all ASEAN countries and are set to rebound strongly in 2021 and beyond.

The region is expected by the IMF, Asian Development Bank and World Bank to rapidly recover its upward economic trajectory, with its consumer market reflecting this progress.

Led by an increasingly educated and young workforce, ASEAN's middle class is estimated to constitute two-thirds of its total population by 2030. McKinsey forecasts that the number of middle class households will reach 120 million by 2025, doubling the level in 2010.

While unevenly distributed, the region's populations are already estimated to have around US\$300 billion disposable income per year. HSBC predicts that per capita GDP will have seen a threefold increase from around US\$3,000 in 2010, to more than US\$9,000 in 2030.

In every age group, the population growth rate will be faster than the global average, and will contribute 34% to consumption growth by 2030, compared with the global figure of 25%, according to a McKinsey report. Over the next decade, an estimated 70% of the population could have reached middle class status with consumer spending doubling.

As this trend continues, manufacturers and suppliers of consumer goods are advised to avoid concentrating their marketing efforts on relatively affluent purchasers in narrow urban corridors. The middle class is increasingly more widely dispersed and now reaches through to consumers outside the principal urban conurbations such as Bangkok, Jakarta, Manila and Ho Chi Minh City.

Many middle class households now also reside in Tier-2 cities, in Ambon and Samarinda in Indonesia, Chanthaburi and Lop Buri in Thailand, Imus and Santa Rosa in the Philippines, Can Thoi and Thu Dau Mot in Vietnam, and Alor Setar and Kota Kinabalu in Malaysia, for instance. Their increasing spending power is also being propelled by greater access to a flourishing digital economy. This is providing consumers with a broader view of what is available in markets and with price comparisons.

The resulting cumulative positive effect is instilling a greater willingness to buy goods and services at all levels from food, drink and clothing, electronics to expensive designer items. Over the next few years, many of ASEAN's new consumer class will buy their first luxury product.

The pandemic has not stopped purchases of high-end fashion and luxury items albeit online, with sales of Rolex watches reportedly up 160%. Bernard Arnault, CEO of LVMH, has said that businesses have shown

remarkable agility in implementing measures to adapt their costs and accelerate the growth of online sales.

Kuala Lumpur, Jakarta and Bangkok, have maintained three Louis Vuitton stores and Singapore with five. The French luxury goods giant also has outlets in Surabaya and Manila, in addition to outlets in Ho Chi Minh City and Hanoi.

International brands, especially high-end European and US products have seen sales soar across the region in recent years. However, in some areas there is a trend for South Korean, Japanese and Chinese brands gaining popularity over Western brands in categories such as beauty, fashion and smartphones, according to Euromonitor.

The changing lifestyles of people are seen in their evolving food preferences. Rising disposable income levels have been accompanied by a fast expansion of advanced food delivery services, which have been further enhanced during the pandemic in countries such as Indonesia, Thailand and Singapore.

Goods focused on convenience and well-being are thought likely to experience continued high growth post-Covid-19. Convenience is a big factor for food consumers in the Philippines for instance. A Nielsen survey in 2019 on shopper trends found that Filipino consumers are buying more ready-to-consume food and drinks.

A move towards greater purchases on convenience and processed foods is seen in other parts of the region. This trend is also accompanied by greater focus on food origin and provenance as well as hygiene and safety, with tamper-proof packaging. Consumers in Vietnam are increasingly demanding foods with natural ingredients and fortified nutritional values, according to market research firm Kantar Worldpanel.



The steadily increasing demand in the region for processed food products is driving companies in the sector to expand and modernise manufacturing methods, with food processing companies forecast to spend US\$1.2 billion on new equipment by 2023.

Food manufacturers are investing heavily to expand production and gain market share. In December 2020, Thailand's Charoen Pokphand Foods finalised its acquisition of Tesco Asia Group, a major brand in Thailand and Malaysia, in a US\$10 billion deal.

Thailand is one of the largest markets for beverages and one of the reasons why Japan's Suntory and the US' PepsiCo have formed a joint venture to produce soft drinks there. Suntory has speeded up its strategy



Goods focused on convenience and well-being are thought likely to experience continued high growth post-Covid-19.



to expand its food and beverage business following the establishment of its regional headquarters in Singapore. Expansion of its beverage business in Thailand is said to be a key part of the corporation's long term plans.

In addition to population growth and a rising middle class in ASEAN, consumerism is also being accelerated by the adoption of technology. A study commissioned by Facebook, and conducted by Bain & Company forecasts a digitally connected population would reach 310 million by the end of 2025, placing 70% of the region's people online. This predicted level of penetration is taking place faster than expected as a result of the pandemic.

Praneeth Yendamuri, a Partner at Bain, says: "Southeast Asia is a dynamic region and is fast growing as one of the top growth engines for the global digital economy. Looking forward, online spending is expected to triple by 2025 and reach close to US\$150 billion."

With a huge number of consumers now online, they are able to access goods and services previously beyond their reach. Financial technologies are allowing many people to access basic payment services as well as banking for the first time. The result is that e-commerce is taking off and creating a vast new consumer base for companies.

Where cashless payments have been widely promoted during the pandemic, technology has also advanced with an increasing use of 5G, which will further enhance and power changes to how people make their purchases.

The Bain study says that during 2020, a majority of first time online purchases had been groceries and food delivery. Online purchases of apparel, electronics, and personal care products also increased significantly. As contactless and home based consumption is expected to continue post-pandemic, consumers appear more receptive to continue making online purchases across numerous product categories.

As rural and low-income communities gain new exposure to digital services and information, consumers have increased access to larger markets for popular products.

Christina Chong, MD of Singapore creative agency We Are Social says: "Every year, Southeast Asia demonstrates a thriving digital landscape. From social media use, mobile adoption, and more. The pandemic has accelerated a shift towards digital, whether that's connecting on social platforms, shopping via mobile devices, installing smart devices or playing online games. It's more important than ever that brands understand how to connect with online audiences."

Opportunities grow for foreign investment in education sector

ASEAN countries have achieved considerable educational advances over the last 20 years, although standards are not consistent throughout. The disparities that still exist have been highlighted by the impact of Covid-19 on schooling and the severe disruptions caused to teaching at all levels. Radically new approaches to providing educational services have become imperative, driven by a growing need to expand education.

One consequence is the greater encouragement being given both to private sector involvement and foreign investment in education. Consequently, investment opportunities for private sector participation are increasing. These range across the whole educational spectrum including higher education, vocational training, teacher training, qualifications, assessments and quality assurance, educational technology, to English language training and international schools.

The size of the potential market is illustrated in Indonesia, which has the fourth largest education system in the world, with some 50 million students and three million teachers in more than 300,000 educational institutions nationwide. Education has seen an increase in private firms' participation since the sector was opened up to foreign ownership more than a decade ago.

The Indonesian Government is particularly focused on finding ways to raise standards to at least meet the average score in the OECD's tri-annual global, Programme for International Student Assessment (PISA) report.

This measures attainments by final year secondary school students in 72 countries in mathematics, science, reading and problem solving.

Indonesia and its national educational budget is now decentralised to the country's 34 provinces and local administrations are able to make independent decisions on school spending. This enables foreign firms to approach provincial decision makers directly. Schools offering foreign language based education are in especially high demand. There are now some 150 bilingual schools in Indonesia which offer international qualifications.

Opportunities are also growing for foreign universities to expand into the region. The US' Duke University has a graduate medical school in Singapore. In 2021, Australia's Melbourne based Monash University will become the first overseas higher education institution to open a campus in Indonesia.

Monash already has a campus in Malaysia, which also hosts campuses established by Melbourne's Swinburne University of Technology and the UK's Nottingham University. RMIT, another Melbourne based university and Australia's largest tertiary educational institution, also has Vietnam based campuses in Ho Chi Minh City and Hanoi.

Vietnam has around 3,000 private schools nationwide and there is scope for many more to be established. Vietnam's Deputy Minister of Education and Training, Nguyen Van Phuc, has said that the inclusion

of international involvement in education is contributing to enhancing the quality of teaching and helping to improve the country's ranking in global education classifications. At the end of 2019, around US\$4.4 billion of foreign investment had reportedly been made in Vietnam based education projects, with most of the investments made in the previous five years.

Improving education standards, especially in STEM subjects is a priority as the region transitions to more technology oriented modes of educational delivery. As institutions have been forced to close during the pandemic, internet connected methods of teaching have been a vital tool throughout the world. Remote learning is becoming established as an essential method for educational providers.

A McKinsey report concludes that despite the challenges involved “new innovations based on the mobile internet, the cloud and big data can improve the quality of education at all levels. Massive open online courses can expand virtual enrollment, complement classroom teaching and can be combined with interactive coursework that uses big data driven adaptive learning tools.”

ASEAN also faces a widespread shortage of teachers. The recruitment of additional English teachers will be of particular importance as economic integration progresses and English becomes entrenched as the language of business and manufacturing, McKinsey predicts.

In recognition of such trends, governments are increasingly focused in applying technology to connect students and teachers. New technology applications including video streaming, up and downloading of audiovisual files, education gaming and live virtual tutoring are all part of the mix.

Gamified learning is also emerging as one of the popular applications of education. Thailand's Taamkru provides gamified lesson content for



pre-school children in Singapore, Vietnam and Thailand, focusing on English, mathematics and science linked games.

The online learning market in all its manifestations is expanding rapidly as a result of the pandemic. In this area Malaysia is expected to reach more than US\$2 billion and Vietnam US\$3 billion by 2023, according to Ken Research.

Even before the pandemic struck, educational technology was drawing increasing investor interest. The UK's Pearson, through its Affordable Learning Fund, has also invested US\$2.2 million in Indonesia's HarukaEdu, an online platform connecting students to digital degree courses.

Over the last five years, some US\$480 million of venture capital funding has been directed to 200 individual investments for education technology. In 2018, Indonesia's Ruangguru raised US\$150 million of investment and now reportedly has more than five million students on its platform.

The scope of educational technology is fast evolving, with mobile applications providing videos and practice tests as well as chat functions enabling students to connect with a standby tutor directly when needed. These functions as well as referrals for longer term help are all part of the package offered by firms such as Ruangguru.

With the shift towards online learning over the course of 2020, Malaysia's Ministry of Education launched its Digital Education Learning Initiative Malaysia. The new system builds on previous digital education programs with inputs from Google Classroom, Microsoft 365 and Apple Teacher Learning Centre. The system is reported to have an average 1.7 million users monthly.

Stanley Han, Founder and CEO of Singapore's Koobits is quoted by Forbes: "I believe that a learner-centric platform, facilitated by technology, will help democratise access to quality content and teaching."

He maintains that the platform will build easily across the region. Educational technology development in Asia has seen platforms that are able to successfully engage learners at scale. As a result, these students' learning is becoming self-directed and collaborative in nature. Teachers benefit from such platforms because their time is freed up to do more important coaching and mentoring, he says.

Artificial Intelligence (AI) powered learning apps and programs offer personalisation at a scale no human teacher could replicate.

Singapore's Geniebook, founded in 2016, says it can tailor individual worksheets based on a student's performance by using AI technology to identify where each person has room to improve and then delivers customised assignments based on which areas need more practice.

Educational software based firms such as Singapore's XSeed and Vietnam's Yola are among a number of fast expanding entrants to digital education. The latter's CEO, Tu Ngo, says the company's blended approach provides a template for future education in all subjects. Ngo, a US Stanford University graduate and co-founder of the company, envisages educational technology serving as supplementary tools for schools and teachers. "I see many experimental innovative schools working with technology to redefine the school experience altogether," she says.

A vital factor in the extension of online learning is the use of smartphones using 4G and increasingly 5G networks to connect with internet services. These devices are the bare minimum required for teachers and fellow classmates to work in a virtual setting. They have become a tangible alternative to computers as a result of their portability and ease of use.

An estimated 40 million people across the region came online for the first time in 2020. This development has in turn increased the number of internet users to almost 400 million, which represents 70% of the population.

The availability of e-learning applications in smartphones is helping to expand and accelerate the growth of ASEAN's education technology market. Ed-tech promoters believe that technology can and will expand access to education for students and also deliver more effective teacher training, development and support programs.



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Risks to business in the ASEAN region

Ian Betts, Head of Risk Intelligence, Hill & Associates



Ian Betts

Assessing and managing business risk is vital to any business seeking to enter or expand in the ASEAN region. Ian Betts, Head of Risk Intelligence at Hill & Associates, looks at the key economic and political issues for companies to consider.

The emergence of ASEAN

Asia today is one of the world's most important economic regions, encompassing enormous manufacturing powerhouses that export around the globe. To the west in South Asia is India, a regional giant with growing influence on the sub-continent; to the east, China, a world superpower, staking a claim to a seat at the highest table in matters of international affairs, commerce and industry.

Between them, the Association of Southeast Asian Nations (ASEAN) has emerged as a vigorous and growing trading bloc, a global hub of manufacturing, production and export, a leading trade partner for the EU, the US, Japan and other regional powers, battered by the impacts of Covid-19 yet energised by the recent signing of the RCEP.

Challenges emerging to ASEAN's economic potential

A number of ASEAN members are still struggling with internal conflicts: Indonesia's Papua, Thailand's Deep

South and Myanmar's Rakhine, particularly following February's military coup, are three examples. In the Philippines there are prospects for peace in Mindanao, but what about for the other conflicts in 2021-2022? Terrorism continues to impact Indonesia, even though there has not been a major attack for many years, so does terrorism still pose a threat?

What impact will a new US President have on ASEAN economies?

A change of President could impact on US foreign and trade policy in Asia and raises a number of questions. What will a Biden presidency mean for ASEAN and broader political risk in the region? Will there be a "turning to Asia" following four years of Trump's "America First"? In terms of broader foreign policy, ASEAN countries must consider their positions with regard to developments such as the Quad, a new "alternative" power base, and the Japan-Australia defence treaty.

Response and recovery from the pandemic

Despite the positivity and magnitude of Asia, with all of its tremendous diversity and extremes, its teeming populations and challenging environments, the region's production, supply chains, populations and economies were severely impacted by the Covid-19 pandemic. The associated risks will continue to have an impact on ASEAN, so how is it poised to bounce back?

Facing up to the challenges of climate change

A number of significant stressors, both old and new, play on ASEAN and threaten the stability of its peoples and its economies. Among the greatest threats to the economies of the region are climate change and global warming. ASEAN continues to face their long term effects with damage to fragile environments and deep-seated social change as societies respond to new trends and developments in work and technology.

Political risks growing across ASEAN

National elections can have an impact on security too. Myanmar's in November 2020 was not approved by the powerful military there, resulting in a coup in February this year. Regional elections in Indonesia in December 2020 caused significant concern in what is ASEAN's largest economy. Malaysia too has seen some instability and is currently under a state of emergency, and Thailand is facing frequent political rallies, the likes of which have not been seen for years.

The growing need for greater cybersecurity

Data has emerged as an invaluable commodity, with entire industries and trillion dollar companies built on it. Indonesia is seeing a high number of "unicorns" emerge as innovators exploit the new online terrain and investors seek to benefit from e-commerce. But is the region safe from the cybersecurity threats and data theft which are becoming ever more prevalent?

A continuing threat of terrorism

Terrorism still poses a significant threat to ASEAN countries. Militant extremist groups operate throughout the Indian sub-continent and in prominent Southeast Asian nations such as Indonesia. Past terrorist attacks by groups affiliated with either al-Qaeda or the so-called Islamic State have targeted embassies, hotels, tourist attractions, shopping malls and houses of worship, where expatriates, travellers and visitors gather and meet. This is a risk that cannot be ignored.



Preparing for natural disasters

When considering risk factors in the ASEAN region, the threat posed by natural disasters cannot be ignored in a region impacted by tsunami, earthquakes and volcanic eruptions with the "Ring of Fire" at its core. The monsoon climate brings annual floods and landslides. Heat waves and other unusual weather patterns are increasingly prevalent and the impacts of global warming and climate change manifest in rising sea levels, erosion and other environmental phenomena.

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Region continues to enhance defence capabilities

ASEAN countries have varied their defence and security requirements to combat not only the threat of direct military aggression but also includes terrorism, piracy, smuggling, organised crime, and the provision for humanitarian assistance and disaster relief operations.

The task of patrolling and providing security to the vast land and maritime areas is particularly challenging. 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 north to south.

The Malacca Strait which connects the Indian Ocean and the South China Sea is one of the busiest shipping routes in the world and one of the most vulnerable, with more than 120,000 vessels passing through the sea lane annually.

China's fast expanding rise as a regional military power combined with its claims in the South China Sea are becoming an increasingly pressing security concern for many ASEAN states. Perceptions of growing insecurity have led them to raise their military spending and import increasingly advanced equipment, while cyber vulnerabilities are also of growing concern.

As a consequence of fast evolving strategic changes, armed forces within the region are seen to move away from an almost exclusive focus on counter insurgency and domestic stability, to external defence power projection and conventional warfare. According to The Stockholm International Peace Research Institute (SIPRI), ASEAN's military spending increased by a third between 2009 and 2018, with armaments' spending doubling over the previous decade.

An expanded modernised Singapore Navy is active in anti-piracy operations which extend to the Gulf of Aden. Singapore has also been supporting the international coalition against ISIS with the provision of refuelling aircraft, imagery analysis and medical personnel.

Over the period 1999-2018, the region accounted for 8.1% of the global volume of imports of major military equipment. A substantial proportion of imports were naval and combat aircraft, indicating a heavy focus on maritime security. The keen interest in acquiring submarines, advanced anti-ship missiles and long-range combat aircraft shows an emphasis on deterrence and being prepared for military confrontation.

Singapore has six Swedish designed submarines and a submarine rescue vessel. Malaysia has two French built submarines and Vietnam has six

Russian designed Kilo-class submarines. Thailand has acquired a Yuan-class submarine from China with a second under consideration, while Indonesia has two German-built Type 209 submarines.

Myanmar became the latest to acquire such vessels in December 2019, with the purchase of a Russian designed Kilo-class submarine from the Indian Navy. Two more vessels are reportedly to be supplied by Russia. Vietnam and the Philippines are looking at building their own.

According to World Bank data, defence spending by ASEAN member states, as a percentage of their GDP ranges from Lao PDR's 0.2% to Singapore's 3.2%. Alongside Singapore, Vietnam, Malaysia, Brunei Darussalam and Myanmar all recorded the highest figures.

The region is an active and expanding long term market for suppliers of military and security equipment and services. During the course of 2021, Southeast Asia is due to host some 24 exhibitions and conferences related to the military and security sectors in several countries including Singapore, Vietnam, Thailand, the Philippines and Malaysia. These events range from the Defence and Security Exhibition and Homeland Security Expo events in Hanoi and the Global Security Asia and Milipol exhibitions in Singapore.

Russian companies have for some time comprised the largest supplier of major military platforms, accounting for more than a quarter of all deliveries over the last twenty years. Russian suppliers have shown themselves open to barter trade to gain orders, with Indonesia purchasing Su-35 fighter jets in a US\$1.14 billion deal involving payment in agricultural, palm and coffee and other Indonesian commodities, according to Reuters.



China has also shown itself to be especially flexible in supplying the region's defence customers with highly competitive pricing in addition to technology transfers and involving local industry in the production and maintenance of equipment.

However, there is no joint procurement of equipment and no country is willing to rely on a single source for military imports. Vietnam, for instance, though it has been heavily dependent on Russian military equipment over several decades, is increasingly seeking to diversify by looking at defence equipment from Europe, the US, Israel and India among others. The local defence equipment production capacity is also being developed, notably in terms of naval vessels and armaments.



The incremental efforts by ASEAN countries to improve their wider external defence capabilities are set to continue.



Most ASEAN countries have traditionally sourced their equipment from a very wide range of countries and suppliers and are likely to continue to do so, to lessen the effect of political disputes and any potential embargo. The impact of the Covid-19 pandemic is yet to be revealed on defence procurement, at least in the short term. Future spending is likely to vary considerably between countries which have tended to link defence spending to the level of economic growth.

However, pre-Covid-19 threats have not receded while new concerns are creating opportunities for specialist technology providers. A single major cyber incident that blocks access to the internet can disrupt business operations, online education and healthcare provision as well as other key public systems and networks.

Several cyber-attacks in connection with the pandemic were reported in 2020. Taking advantage of increased app usage, hackers apply malicious

software to infect systems with spyware capable of collecting sensitive information about the respective users.

Risks are increasing even for relatively advanced countries such as Singapore, which in February 2020, was impacted when more than 14,000 people's details logged on the country's HIV registry were leaked less than a year after a major data breach at Sing Health, which compromised the data of one million people.

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 from other countries including France, Germany, the Netherlands, Japan, Poland and Ukraine, according to SIPRI assessments.

The defence market is widening as the region strives to strengthen in vulnerable areas, especially those concerning cyber security. They are

keen to adopt innovative technological and scientific approaches which take advantage of international expertise while also creating wider cooperative frameworks.

Singapore is playing a leading role to build the cyber security capabilities of other states. This involves courses and development activities to support capacity building on several fronts, from AI to Big Data through the ASEAN-Singapore Cyber Security Centre of Excellence.

Meanwhile the incremental efforts by ASEAN countries to improve their wider external defence capabilities are set to continue, particularly in naval areas and air defences against continuing tensions in the South China Sea.

Cooperation sought to develop local defence industries

The larger economies now routinely insist on acquisition guidelines which generally require suppliers to commit to direct offset investments in local enterprises, technology transfers and domestic involvement in some elements of production and after sales support.

Most countries have hitherto lacked the complex, interdependent capabilities in research, industry and organisation needed to design and produce advanced defence material. As a consequence, they still spend significant sums to import equipment or assemble under licence.

Indonesia has also acquired US F-16 combat aircraft and in December 2019 agreed a joint US\$7.36 billion project with South Korea to develop a new jet fighter designated the KAI KF-X, in which Indonesia would contribute 20% of the development cost. Netherlands shipbuilder Damen operates a shipyard in Vietnam and is reportedly negotiating orders.



Singapore has a well-developed arms industry capable of producing advanced weapons systems of its own design, including armoured vehicles, artillery and ships. Technology transfers and the involvement of local industry in production and support are common aspects of its weapons imports. Singapore Technologies, for example, is an established globally integrated engineering group with capabilities in aerospace, marine and land systems.

As countries strive to develop their own broader industrial capacities, partnerships with international defence players could provide an avenue for capability and knowledge transfers. This would enable countries to grow not only their defence industry base but also benefit adjacent industries, supply chains and local distribution networks.

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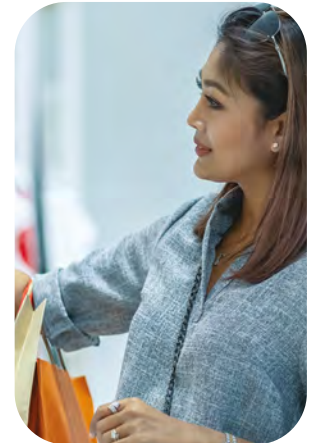
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