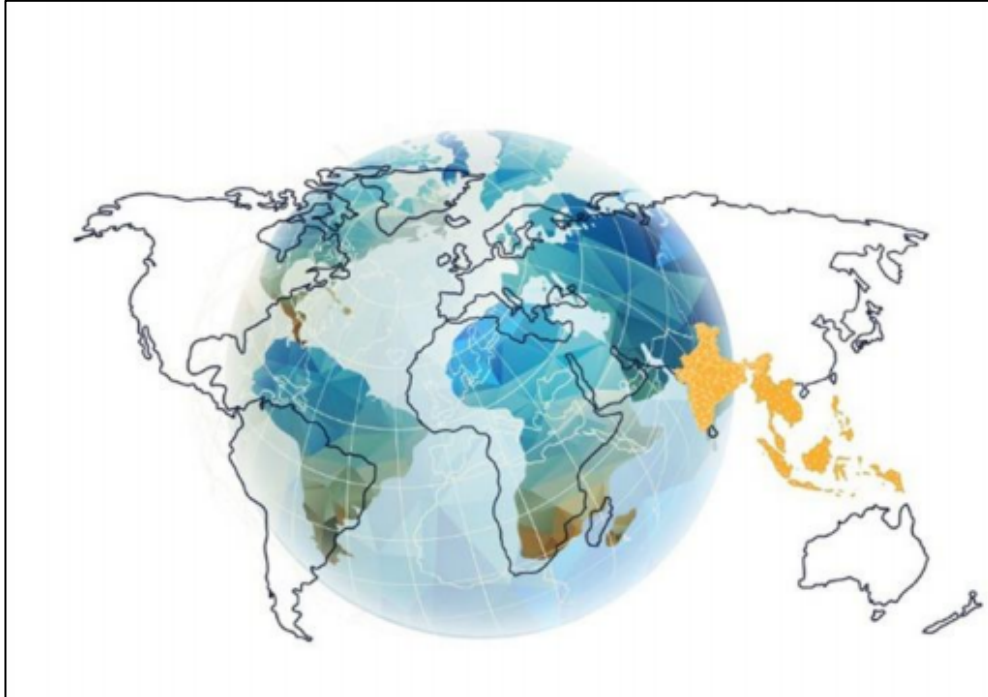


India- ASEAN Knowledge Report

October 2020



Federation of Indian Chambers of Commerce and Industry (FICCI)
Federation House,
Tansen Marg, New Delhi, India

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India- ASEAN Relations- Overview

India and Southeast Asia share a long cultural history, which over the years has helped shape economic and commercial relations between them. This partnership garnered an impetus following the launch of India's 'Look East Policy' in the early 1990s, rechristened 'Act East' in 2015.

The launch of 'Act East Policy' ushered in an era of reinvigorated partnership between India and Southeast Asia. Indian policymakers had long ago realised the strategic importance of the ASEAN region. The Act East Policy was a push in the right direction, focused on strengthening relations through greater economic and cultural exchanges.

India-ASEAN relations have evolved over time, with India graduating from the Southeast Asian grouping's Sectoral Dialogue Partner in 1992 to a Summit-level Partner in 2002. Since then, both sides have been actively engaged in fostering economic, security, political, and cultural cooperation.

ASEAN is central to India's overall external engagement with the Indo-Pacific region. India is committed to further strengthen partnership with the ASEAN through stronger surface, maritime and air-connectivity and digital-link.

The economic relations between India and ASEAN, especially in the areas of trade and investment, have strengthened over the years. Although the two regions share a dynamic relationship that goes well beyond economics, the easy movement of goods, services, and capital across borders remains the foremost concern for both. Both sides have agreed to review the ASEAN- India Trade in Goods Agreement.

The global pandemic has created significant opportunities for collaboration between the two regions especially in the technology sector. The industry today is at the cusp of technology-led solutions, infrastructure and skilled resources, which, in the forthcoming period, will usher in greater efficiency in operations, thereby ensuring better quality of services and customer management.

Technology has also become the backbone for sectors such as e-commerce, healthcare, transportation, education and others. The increasing role of technology, artificial intelligence, data analytics and digitisation of healthcare in India, present a huge opportunity for collaboration between India and ASEAN countries.

Technology and Digital Transformation of ASEAN Countries

Association of Southeast Asian Nations (ASEAN) has one of the most robust economies in Asia, with a combined GDP of more than \$2.5 trillion. There has been steady growth of 6%



per year in the region and this growth has been propelled by the rapid penetration of smartphones and smart technology in the ASEAN countries. This trend is known as the ASEAN digital transformation.

The digital transformation of this region is characterized by a well-developed and innovation-driven information and communications tech infrastructure. The middle class in this region is expanding by the day, e-commerce and social media are gaining popularity at a steady rate, and tech devices are becoming more and more affordable. Also, the region has a huge youthful population and a strong startup sector. All these factors combined give birth to a digital wave that is promising to transform Southeast Asia.

The internet economy is taking shape in ASEAN. The region's small and medium enterprises now have a strong platform from which they can launch themselves into global supply chains. The region's diverse economies are also on the verge of uniting and forming one inseparable economic bloc. When this happens, the region will be ripe for economic take-off.

Multinational companies are already trying to penetrate the ASEAN market in readiness for this takeoff. To aid this, the ASEAN member countries are working towards creating a seamless e-commerce space that will allow traders in the region to market and sell their products without any tariff or international trade restrictions. There is also the ASEAN Economic Blueprint 2025 that seeks to tap technology and leverage its power in an effort to close the gap between the member states and the top economies such as China, the US, and the EU. The ASEAN economic takeoff is also boosted by a Smart Cities Network that comprises of 26 cities in the region. If these cities become smart by 2025, the region will be ripe for industrial transformation.

The master plan on connectivity (MPAC) 2025 and industry 4.0

MPAC 2025 is focused on promoting economic integration amongst member nations for creating an inclusive and competitive trade bloc before the year 2025. This goal will only be achieved by improving cross-sectoral connectivity across the region. The plan has already given birth to an ASEAN digital data governance framework that seeks to drive digital innovation and create a stronger digital agenda in the region.

The Masterplan on ASEAN Connectivity 2025 identifies digital innovation as one of five strategic areas to achieve a seamlessly connected ASEAN, as well as a significant potential source of economic activity, and points to the need for backbone infrastructure, regulatory frameworks for new digital services, support for sharing best practice on open data, and equipping micro-, small- and medium-sized enterprises with capabilities to access new technologies.

If the MPAC 2025 is implemented successfully, digital technologies in ASEAN will have grown to more than \$500 billion by 2025. Technology will be adopted in the region in a bigger



scale, efficiency in business and governance will be a notch higher, and products and services from the region will stand a stronger chance of competing in the global market.

The digital transformation wave of this region is also supported by the Industry 4.0, a digitisation phase that seeks to transform the way ASEAN citizens live and work. It is a building block that has led to increased adoption of the Internet of Things (IoT), augmented reality, 3D printing, blockchain technology, and artificial intelligence (AI), among other revolutionary technologies. This widespread adoption of new and advanced tech tools will help the region to leapfrog many regional trade blocs in terms of customer satisfaction and service delivery.

Emerging Digital Technology Trends in ASEAN Countries

- 1. Internet of Things:** IoT is one of the technologies that would help ASEAN participate in the Fourth Industrial Revolution, which could increase wealth, empower SMEs and provide more inclusive forms of economic growth for its members. The growth of IoT sector varies for each ASEAN country.
 - In Thailand, where most IoT spending is in logistics and manufacturing, the Thailand 4.0 initiative serves as a guide. In line with this initiative, the government announced plans to set up an Internet of Things (IoT) Institute to develop IoT in automation and robotics, bio-energy, healthcare and aerospace, among other sectors, which can serve as growth engines to accelerate Thailand's future growth.
 - Malaysia created the National Internet of Things (IoT) Strategic Roadmap in 2015, with the mission of creating a national ecosystem to enable the proliferation of use and industrialisation of IoT as a new source of growth for the national economy. The IoT industry is expected to contribute RM9.5 billion to the gross national income of Malaysia by 2020 and RM42.5 billion by 2025.
 - IoT is central to Government of Singapore's Initiative " SMART Nation", wherein it envisages converting the country into a digital innovation hub. The project focuses on combining smart mobility, smart healthcare, smart building, smart industry, and smart governance for better future and development of Country.
 - The President of Vietnam signed Resolution No.52-NQ/TW on September 27, 2019 on a number of guidelines and policies to ensure active participation in the Fourth Industrial Revolution. By 2030, Vietnam will strive to be among the top 40 countries in the world in the Global Innovation Index (GII)rankings; aiming for everyone to have broadband access at a low cost and the digital economy to account for over 30% of the GDP; and labour productivity to increase about 7.5% per year.



To attain rapid and sustainable economic development, Ho Chi Minh City is focusing on areas such as E-Government, Intelligent Transport Systems, Flood Control and Environment Monitoring. The city government is looking to implement an Integrated Operations Center which will be the ‘brain’ of the city by integrating daily information and resources across all sectors in the City.

- The Ministry of Communication and Information Technology of Indonesia (KOMINFO) is looking to build digital infrastructure, to enable increased broadband access in Indonesia. As an accelerator, KOMINFO is rolling out the Next Indonesian Unicorns (NextICorn) program, which will act as a bridge so that local start-ups can grow into new unicorns. Indonesia, is implementing the IoT solutions to develop smart cities, including traffic and transportation systems, waste management and law enforcement.
- Cambodia see the potential in harnessing the internet of things (IoT) and machine learning in transforming farm management, especially in areas such as disease detection, irrigation planning, yield prediction, water management, livestock management and weather forecasting. For instance, they have adopted drone technology for spraying pesticides and increasingly automating irrigation, giving farmers remote control over their irrigation systems via their mobile phones.

IoT development and adoption in ASEAN is growing and could change the playing field altogether. Governments of ASEAN Countries need to foster awareness of the benefits of the IoT to businesses and provide the necessary funding and expertise. Businesses, on the other hand, need to take advantage of every available opportunity to grow their IoT expertise and implementation because they stand to gain the most when the fourth industrial revolution takes off.

2. **Big Data Analytics:** Big data analytics is an increasingly integral part of the tech ecosystem in ASEAN and is fast disrupting the financial services and various other sectors such as agriculture, manufacturing. The ability to transform raw data into meaningful insights is the cornerstone of cross-industry development. The companies are making use of big data analytics to improve their customer experiences based on predicting the behaviour.

The digital banks in South East Asia are leveraging on data analytics and artificial intelligence technologies to sort and analyse transaction data and provide a customized financial solution that caters specifically to a consumer’s needs and wants. The banks are helping their consumers to attain financial aspirations by providing solutions to save strategically and perform sensible financial choices.

Big Data also plays a vital role in agriculture- based economies of ASEAN countries as the process of collecting and analysing huge amounts of data obtained from various stages, a vital first step is to digitalize the agricultural value chain. There is the potential to build



predictive models that forecast price fluctuations, weather conditions and future yields, based on the data gathered on yields, practices and ground-level challenges. From crop recommendations to consumer buying habits, Big Data can take the guesswork out of farming and better the livelihoods of farmers.

3. **Artificial Intelligence:** In recent years, different industries across South East Asia have seen an increase in artificial intelligence (AI) utilisation. The influence of the technology is so prominent that it's drastically changing the way we work, communicate and even live. ASEAN countries have been embracing Artificial Intelligence across key sectors such as Agriculture, E-commerce, Education, Fintech, Healthcare and Transport to engage with customers and increase productivity gains.

Singapore has shown strong commitment to the development of the technology and is currently at the forefront of countries in the region in AI implementation. In November, Singapore launched its National Artificial Intelligence Strategy and committed over S\$500 million (c. US\$370 million) to fund activities related to AI under the Research, Innovation and Enterprise 2020 Plan.

While some of the ASEAN countries such Malaysia and Vietnam shows promising signs of AI utilization, there are other countries who realise the potential the technology has to offer but lack the important infrastructure to properly capitalise on the benefits. But, with start-ups continuing to flock to the region, a large millennial population and regional-wide commitments from governments to invest in and legislate for the Fourth Industrial Revolution (Industry 4.0); real change is on the horizon.

- a) **Agriculture**

Increasing consumption and rising requirement of better crop yields are estimated to be one of the major factors driving the demand for robots in agriculture. AI in agriculture is essentially used for precision farming, livestock monitoring, drone analytics and agriculture robots. Precision farming was the most widely used application in 2018, taking up about 35.6% of the global total. However, agriculture robots are expected to have a bigger share in the future.

Startups in the region are also developing innovative AI solutions to some of the most imminent issues affecting farmers and other agriculture sector workers, including sustainable crop management and financing.

- b) **Retail**

E-commerce is big business in Southeast Asia, especially Singapore, Malaysia, Philippines, Indonesia and Thailand generating big revenues through online sales. Digital consumers in ASEAN will be spending three times as much in 2025 according to a 2019 study from Facebook and Bain & Company. The report found that while consumers in



Southeast Asia spent US\$125 on average on online purchases in 2018, that sum is expected to more than triple to US\$390 in 2025.

Within the retail sector, AI can personalise purchasing recommendations for customers whilst helping retailers to optimise pricing and discount strategies, alongside demand forecasting.

c) Financial services

Southeast Asia's financial-services firms have thus far adopted AI primarily to improve the customer experience. AI-infused process automation in the financial services industry (FSI) will streamline customer facing processes, reducing cost and providing a better customer experience.

Singapore is leading the technological charge in this arena, but the rest of the ASEAN bloc need to accelerate basic digitisation efforts; streamlining their data collection, management and analytics processes before than can start feeding the information into complex AI algorithms and more advanced uses for artificial intelligence. Digital payments, digital banks, and fintech have gained prominence in banks of South East Asian countries. The banks in these countries have been embarking on digitization initiatives.

d) Transport

Rapid urbanisation is stressing transportation systems in cities around the world. Most major cities in the world are trying to address the problems associated with rapid urbanisation by embracing the Smart City vision, which seeks to integrate AI and the internet of things to improve network efficiency by managing infrastructure in a "smart" fashion.

Startup tech companies are emerging as part of this picture. Ride-hailing startup Grab and the National University of Singapore (NUS) launched an AI laboratory in 2018, aiming to develop solutions that can transform urban transport and prepare for "smarter" cities in Southeast Asia. Through the use of AI algorithms, Grab is using data from its rides to build richer maps, understand passengers' preferences, model of traffic conditions, analyse driver behaviour and detect real-time traffic events.

e) Healthcare

The changing demographics of Southeast Asia combined with the problem of understaffed hospitals means that an intervention is due for healthcare systems in ASEAN member states. The healthcare sector in the region needs to look for innovative solutions to figure out how to be more effective and efficient without spending excessively. Rapid developments in technology particularly in the fields of artificial intelligence (AI) and robotics can help supplement the healthcare industry in the region.



It has been seen that the complex ML algorithms have helped to speed up how long it takes to review data relating to serious illnesses, allowing doctors to diagnose and treat patients more efficiently than ever before. There has been increasing of e-health apps which are offering services such as telehealth solutions, practice-management products, data aggregation platforms, and consumer health portals.

In Southeast Asia, Singapore is the first country to have rolled out such a public electronic health records system, allowing patient health records to be shared across its national healthcare ecosystem. Similar developments in the rest of Southeast Asia have not been forthcoming so far.

On a macro level, countries are realising the importance of technology in healthcare, particularly the use of AI. In Thailand, the Bumrungrad International Hospital has integrated the IBM Watson supercomputer analytics into their oncology department. The IBM Watson has a processing power of 80 teraflops and can access 90 servers with data storage of more than 200 million pages.¹

In Singapore, the Saw Swee Hock School of Public Health and the National Environmental Agency have co-developed an AI agent that can forecast dengue incidences up to four months ahead. Thailand hospitals have deployed “ninja robots” to measure the fevers of its patients during Covid- 19 and reducing burden of medical professionals. These examples showcase the potential of using technology in the region’s healthcare systems.

There has also been increasing number of healthcare startups in ASEAN which are developing AI-based solutions to help people have access to healthcare professionals. Getdoc, Door2Door Doctor, Teleme, HomeGP, Healthmetrics, and BookDoc are all Malaysian healthcare startups that use AI algorithms to help predict your medical needs, customise your healthcare plan and increase your access to medical advice.

Although there has been some progress in AI in Healthcare, the majority of healthcare institutions throughout Southeast Asia still rely heavily on legacy systems and are often unable to cope with the data demands needed to successfully implement AI technologies. The adoption of AI technologies will certainly help to improve diagnostic outcomes and generate greater insights into potential treatments.

f) **Education**

There are only few countries in the region that have started to embrace the potential for AI in the education sector. One of the biggest current barrier is a lack of consistent quality in IT infrastructure throughout the region, with large numbers of the ASEAN population not having access to the internet.

¹ <https://theaseanpost.com/article/rise-digital-healthcare>

AI chatbots and even AI-enabled classroom assistants are proving useful in the education sector, as it is reducing the burden on educators and allowing them to focus more on the lessons and less on monotonous and repetitive tasks. In the field of AI analytics, universities in Singapore and Malaysia have started to experiment with predictive algorithms designed to reduce the number of dropouts by allowing for earlier interventions.

4. **Blockchain:**

The growth of blockchain in ASEAN Countries has been spurred by growing digital literacy and high internet penetration in the region. These factors, coupled with a region-wide emphasis on digitalization under the ASEAN Digital Integration Framework, have laid the foundation for blockchain to propel the Southeast Asian economy along its development curve.

Blockchain is likely to play an increasingly critical role in propelling Southeast Asian economies. Accordingly, it is imperative that blockchain startups in the region have access to an adequate talent pool to ensure that the demand for blockchain products and services in the region, particularly its financial services and manufacturing sectors, are properly met. The training of blockchain-skilled professionals is crucial to the growth and development of blockchain products and services in ASEAN.

Initiatives for the Growth of the Blockchain by ASEAN Countries²

- Singapore is leading in this technology, with 462 blockchain and crypto startups based in the country. The government and private sector have set up incubators and investment funds focusing on cryptocurrencies and other uses of blockchain.
- Thailand has been most eager to adopt blockchain technology and has already enacted laws that govern cryptocurrencies and is planning for a blockchain token for instant securities settlements. In Thailand, a collaboration between the country's Chulalongkorn University with Tezos Southeast Asia will undertake a blockchain education and research program.
- Malaysia houses the New Economy Movement (NEM) Foundation blockchain centre to educate the masses on the technology as well as accommodate burgeoning blockchain based start-ups via incubator and accelerator programs.
- Indonesia's blockchain sector is eager to take advantage of the opportunities and has witnessed an explosion of blockchain related start-ups – initially focussed on cryptocurrency that are now venturing into other areas
- In Vietnam, a fertile start-up ecosystem will likely pave the way for the development of blockchain applications. The government there recently kickstarted preparations for a fintech sandbox which could be utilised by blockchain-related start-ups.

² <https://www.asiablockchainreview.com/supply-and-demand-for-blockchain-in-sea/>



- The Philippines has also recognised blockchain as a revolutionary tool and with the inception of the Blockchain Association of the Philippines (BAP) in 2018.
- Blockchain technology is still in the early stages of integration in Lao PDR, Brunei, Cambodia and Myanmar. Its uses range from providing financial services to e-government initiatives.

Challenges to Southeast Asia's digital transformation

The digital revolution in Southeast Asia is far from completion due to many challenging problems. The greatest among these problems is the fact that the digital landscape in some of the member states is in deplorable conditions while other states are almost at par with the world's developed economies. Vietnam, Myanmar and Cambodia, for example, have been developing at a very slow pace as compared to their peers in the trade bloc, e.g. Malaysia and Singapore. This sharp contrast could easily lead to the ultimate failure of the digital revolution.

There is a clear challenge for ASEAN economies to harness the promise of digital technologies as they pursue growth and prosperity, including via their regional integration agenda. In doing so, they will face many of the same challenges faced by other developed and developing economies - boosting uptake of technologies across all firms and individuals, ensuring people have the skills to make the best use of them, and putting in place the right infrastructure, macroeconomic and regulatory conditions to enable their economies to adapt to and benefit from the new digital reality.

As ASEAN countries prepare for the digital age, albeit from different starting points and with different degrees of progression, different policies will need to be prioritised to manage change. However, in all cases, promoting digital readiness, through greater investment in digital infrastructure, hard and soft, and the uptake of digital solutions, both by firms and consumers, will be a precondition for access to the benefits offered by new technologies.

How India can collaborate with ASEAN in Technology and Digitisation

During India – ASEAN Commemorative Summit 2018, Honourable Prime Minister of India Mr Narendra Modi emphasized on the importance of information and communication technology sector for India and ASEAN and emphasised on a new area of cooperation through a regional high capacity fibre optic network to digitally connect remote areas of two regions.

Prime Minister Mr Modi had offered to undertake a pilot project on rural connectivity, which will create digital village in Cambodia, Laos PDR, Myanmar and Vietnam. Success of this project could be replicated in other ASEAN countries. Prime Minister had also put forth India's offer for a training programme for professionals from ASEAN countries on telecom and networking technology to share best practices in policy, regulation and technological development.



Prime Minister is particularly keen on the Digital transformation of India, and has been pushing forward through his Digital India, flagship programme aiming to boost digital infrastructure, such as a broadband highway, universal access to mobile connectivity and a nation-wide e-governance plan.

India's government has done much to encourage digital progress, from clarifying regulations to improving infrastructure to launching the Digital India initiative, an ambitious plan to double the size of the country's digital economy. However, much work remains to be done for India to capture its full digital potential.

Government measures **included** the rapid ramp-up of Aadhaar, the national biometric digital identity programme, and its subsequent linkage to the payment of welfare benefits. A suite of open application program interfaces (APIs) linked to Aadhaar—such as the Unified Payments Interface and Bharat Interface for Money/Bharat QR code for payments, eKYC for electronic verification of customers' identities, and DigiLocker for online document storage—makes up a large part of India's digital foundation and has propelled the country's digital evolution.

In addition to this, the introduction of the Goods and Services Tax Network, which brings all transactions by about 10.3 million indirect taxpaying businesses onto one digital platform, and the digitisation of records at the Ministry of Corporate Affairs are emerging as powerful platforms. The government also triggered a growth spike in digital payments through the launch, in 2014, of the Pradhan Mantri Jan-Dhan Yojana, the national financial-inclusion drive, which led millions of people to open Aadhaar-authenticated bank accounts linked to mobile phones.

India and ASEAN can collaborate for Advanced technologies and building digital ecosystems

Recognising the increasing role being played by digital technologies, India and ASEAN countries can cooperate in capacity building, research and development, security and resilience in the areas of Critical Information Infrastructure, 5G, Internet of Things (IoT), Artificial Intelligence (AI), among others.

- India and ASEAN can collaborate in **agri- technologies** for transforming agriculture across the value chain by connecting farmers to markets and shared equipment, automating farm management processes, and analysing data to drive actionable insights for farmers. The increasing availability of real-time data from a variety of sources can enable entities to offer customised advice to farmers, to improve productivity.
- Indian companies can collaborate with ASEAN Governments for improving the **healthcare technologies** especially telemedicine technologies for connecting with patients in rural areas and enabling them for cost – effective virtual visits to hospitals.



Technologies such as AI technologies for preventive healthcare, unified healthcare records are also areas where possible collaboration can be considered.

- Conventional sectors such as **banking, education, transportation, entertainment** are increasingly becoming online. This provides an opportunity for Indian tech companies to support these companies for building digital platforms and providing innovative tech solutions.
- Both India and ASEAN present innumerable investment opportunities for investors from across the globe, across multiple sectors. The common denominator being vibrant small and medium and business eco-system, booming technology-based start-ups, and progressive business friendly policies.
- Over the years National Informatics Centre (NIC) has developed generic and configurable e-Governance products which could be rolled out with minimal efforts in ASEAN countries. NIC has already implemented few projects under India - Laos ICT bilateral cooperation and proposed eGovernance activities implementation in Thailand, Vietnam etc.
- In the longer term, innovation in business models led by adoption of technology along with emergence of the digital economy will be a key factor driving overall economic growth in India and ASEAN. In India, it is being led by the government's dedicated focus on digitalisation, manufacturing, and skill development through various programs such as 'Digital India', 'Make in India', and 'Skill India'. This provides an opportunity for ASEAN countries to partner and collaborate with India to develop next-generation technology solutions to overcome the common challenges.

If the ASEAN region continues in the current digital trajectory, its member states will most likely join the largest global economies by 2030. Countries such as Singapore will edge closer to big economies and even leapfrog some economic giants. The region has a huge young and educated workforce which needs to be prepared to take on the new technologies for the better future of their economies and society. ASEAN countries have to focus on strengthening its digital infrastructure and train the talent pool with advanced digital skills. Indeed, the full potential of the ASEAN digital transformation still lies in the future and there is immense potential for collaboration between India and ASEAN in this sector. As strategic partners, India and ASEAN need to cooperate, consult and learn more from each other in crafting their approach and strategy on the use of digital technologies.

Key takeaways of Session on Reimagining Technology and Digitisation

Technology and Digitisation, has emerged as focus sectors in pandemic world and leveraging the advanced technologies and adoption of digital solutions became the topic of discussion among eminent business leaders at the ASEAN session of LEADS 2020: a 4-day global leadership initiative from FICCI.

"LEADS 2020" being organized on FICCI's in-house virtual platform, from October 12-15, 2020 featuring 11 power packed regional spotlights from East to West, curated in a time zone friendly series of sessions. It strives to be a confluence of global leaders for sharing their vision on how Leadership, through business excellence, needs to adapt to an evolving future, keeping Diversity and Sustainability as its foundation.

The Session on "Reimagining Technology and Digitisation" focused on the imperative for India and ASEAN to leverage technology and digital solutions, to upscale consumer connectivity and digital collaboration to the next level.

LEADS INDIA 2020
 LEADERSHIP EXCELLENCE ADAPTABILITY DIVERSITY SUSTAINABILITY
REIMAGINE THE WORLD
 12th - 15th October 2020 (Monday-Thursday)
 A FICCI -STAR India Initiative

SPOT LIGHT DAY 4
 15 OCTOBER, 2020

FICCI

64 COUNTRIES	25 GLOBAL SPEAKERS	1074 REGISTRATIONS	106 VISITORS AT LEADS EXPO
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ASEAN: REIMAGINING TECHNOLOGY & DIGITISATION
 TIME: 0945 - 1145 hrs (IST) / 0415 - 0615 hrs (GMT)

HIGHLIGHTS

- Digital now is a central part of broad based life in India and ASEAN. It is now a "utility". Investments in technology are not R&D any more, but rather a form of insurance against future shocks.
- India and ASEAN are similar and aligned with commitment to digitalisation as a path to economic growth. We are both mobile first, young and growing rapidly. But we will have to resist the temptations of becoming closed and insular, to partner together.
- Everyone must Innovate - how we do it can range from creating your own IP to aggregating IP by partnering with startups. We are excited about the opportunities for transformational change through technology including: financial services, healthcare, food, space, quantum computing. So you can see that the opportunities are deep and broad!

 Mr. Partha De Sarkar Whirlpool Executive Director and Global CIO Whirlpool Global Solutions India	 Mr. Rajesh Mehta Managing Director and Head of Trade & Treasury Solutions Asia Pacific, Citibank, Hong Kong	 Mr. Rohit Singhmalani Chief Investment Strategist Head - South East Asia Temasek, Singapore	 Mr. C P Gurnani Managing Director and CIO Tech Mahindra India	 Mr. Atwin Utomo Vice President, Engineering and Chief of Staff Technology Tokopedia, Indonesia	 Dr. Lim Jui CEO SISnewwave, Singapore	 Mr. Shalish Rao Advisor and Mentor Board Director, Ericc STX Singapore
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FICCI LEADS @FICCILEADS · Oct 15

Mr. Shailesh Rao, Advisor and Mentor; Board Director, Eros STX-Singapore, Session Champion emphasised that Digital will become a central component of life for everyone far faster than we ever expected.

#LEADS2020 #GlobalBusinessSummit #GlobalLeaders



Shailesh Rao and 7 others



FICCI LEADS @FICCILEADS · Oct 15

Mr. Shailesh Rao, Advisor, and Mentor; Board Director, Eros STX-Singapore and Session Champion highlighted the need for mechanism and tools for organisations in India and ASEAN to reskill people for the new world.

#LEADS2020 #GlobalBusinessSummit #GlobalLeaders



Shailesh Rao and 7 others



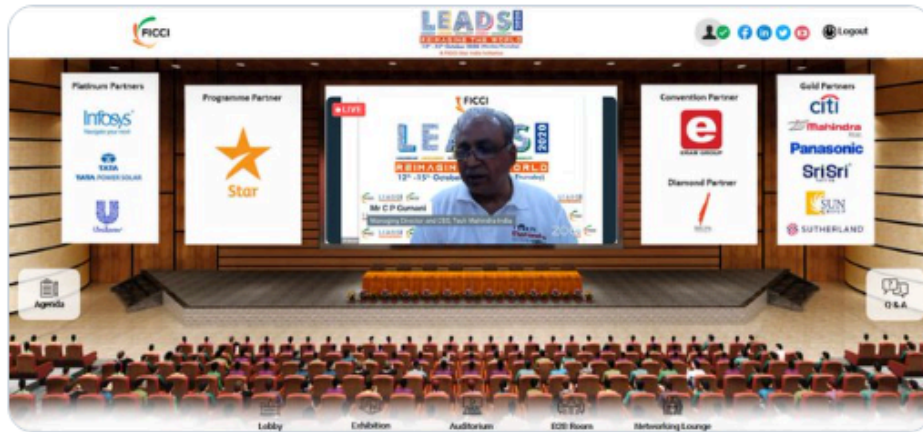
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FICCI LEADS @FICCILEADS · Oct 15

Mr. CP Gurnani, Managing Director and Chief Executive Officer, Tech Mahindra highlighted the centrality of Artificial Intelligence in defining Industry 4.0

#LEADS2020 #GlobalBusinessSummit #GlobalLeaders



CP Gurnani and 7 others



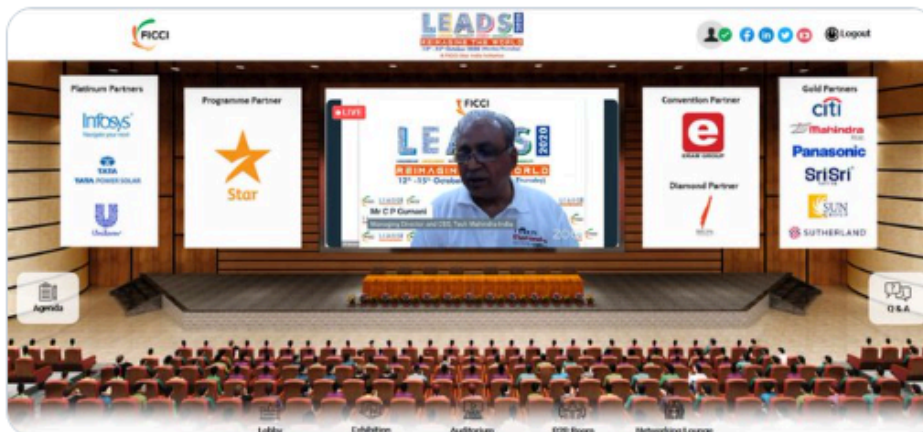
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FICCI LEADS @FICCILEADS · Oct 15

Mr. Rajesh Mehta, Managing Director and Head of Trade & Treasury Solutions- Asia Pacific, Citibank- Hong Kong shared that banks are strategically aligning with startups for improving services and increasingly becoming participative in Hackathons in fintech.

#LEADS2020



Citibank and 7 others



FICCI LEADS @FICCILEADS · Oct 15

Mr. Rajesh Mehta, Managing Director and Head of Trade & Treasury Solutions- Asia Pacific, Citibank- Hong Kong highlighted the importance of resilience, agility, and redesigning of business models for last-mile connectivity in financial services.

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FICCI LEADS @FICCILEADS · Oct 15

Mr. [@partha_desarkar](#), Wholetime Executive Director and Global CEO, Hinduja Global Solutions emphasised on the importance of digital infrastructure for tier 2 & tier 3 cities as a large part of workforce has moved back to the cities where digital infrastructure has to be improved.



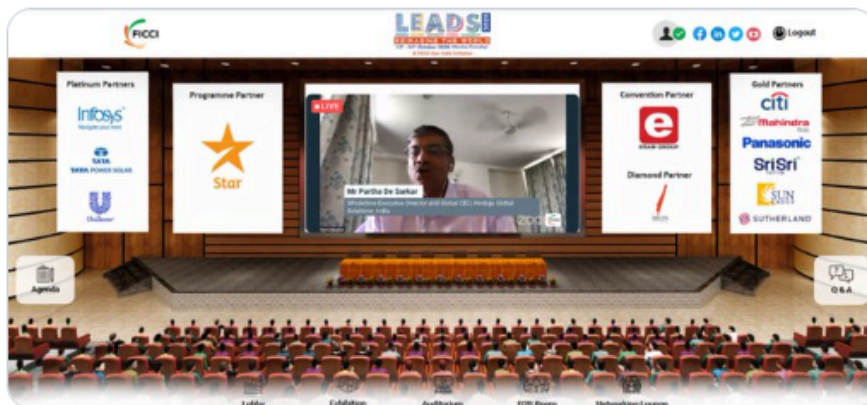
FICCI and 7 others



FICCI LEADS @FICCILEADS · Oct 15

Mr. [@partha_desarkar](#), Wholetime Executive Director, and Global CEO, Hinduja Global Solutions highlighted the collaboration in data sciences between India and ASEAN in view of the increasing response of societies towards digital-enabled sectors.

[#LEADS2020](#) [#GlobalBusinessSummit](#)



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FICCI LEADS @FICCILEADS · Oct 15

Mr. Rohit Sipahimalani, Chief Investment Strategist, Head – South East Asia, @Temasek - Singapore highlighted that non-traditional sectors were not embracing technologies earlier however the pandemic has given them the confidence to shift towards digitalisation.

#LEADS2020

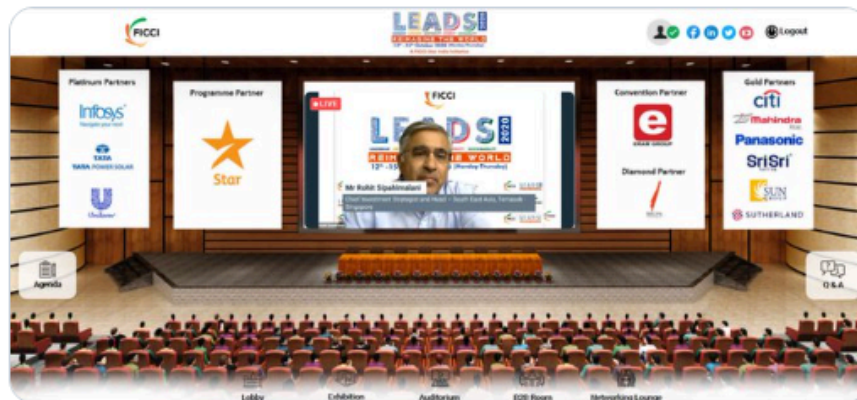


FICCI and 8 others

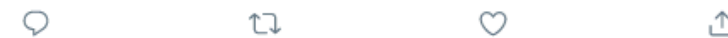


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Mr. Rohit Sipahimalani, Chief Investment Strategist, Head – South East Asia, @Temasek - Singapore pointed out that pandemic has enabled hospitals to develop their telemedicine consultation model with virtual consultations, digital medical records, & active monitoring of patients.



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Mr. Aswin Utomo, Vice President, Engineering and Chief of Staff Technology, @tokopedia - Indonesia shared the increasing trend of e-commerce and the role played by Tokopedia to empower the islands of Indonesia to be digitally empowered.

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Dr. Lim Jui, CEO, @SGInnovate - Singapore shares the importance of deep science and deep tech to solve the global challenges and the need to further investment in cutting-edge technologies especially AI, quantum tech, and space tech.

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Annexure 1: Press Release of ASEAN Session

Artificial Intelligence (AI) is a significant part of Industry 4.0: Global Business Leaders

NEW DELHI, 15 October 2020: Mr CP Gurnani, Managing Director and Chief Executive Officer, Tech Mahindra today said that artificial intelligence will be the driving force for Industry 4.0.

Speaking at the Session on Reimagining Technology and Digitisation at the ASEAN session of LEADS 2020 organized by FICCI, Mr Gurnani spoke about the aspects of artificial intelligence within the Industry 4.0 paradigm, and how this powerful technology is already being used by organizations to drive efficiency, improve quality and better manage supply chains. He also appreciated the role of governments across the world towards its inefficiencies and paving the way for future digital innovation.

Mr Rajesh Mehta, Managing Director and Head of Trade & Treasury Solutions- Asia Pacific, Citibank- Hong Kong said that the importance of resilience, agility and redesigning of business models are crucial for last-mile connectivity in financial services. He emphasized on the demographics and scaling up technologies, which will result in one trillion digital payments by 2025 in ASEAN. Mr Mehta further added that banks are strategically aligning with start-ups for improving services and increasingly becoming participative in Hackathons in Fintech.

Mr Partha De Sarkar, Wholetime Executive Director and Global CEO, Hinduja Global Solutions India, emphasized on the importance of digital infrastructure for tier 2 and tier 3 cities as a large part of the workforce has moved back to these cities. He stated that there is a need for improved digital infrastructure to drive major business from Tier 2 and Tier 3 cities.

Mr Rohit Sipahimalani, Chief Investment Strategist and Head - South East Asia, Temasek - Singapore said that non-traditional sectors were not embracing technologies earlier, however, the pandemic has given them the confidence to shift towards digitalization. Speaking on the development of health technologies, Mr Sipahimalani also pointed out that the pandemic has enabled hospitals to develop their telemedicine consultation model with virtual consultations, digital medical records and active monitoring of patients.

Mr Shailesh Rao, Advisor and Mentor; Board Director, Eros STX- Singapore said, "Digital will become a central component of life for everyone far faster than we ever expected." He also mentioned that there is a need for mechanism and tools for organizations in India and ASEAN to reskill the people for a new world.



Mr Aswin Utomo, Vice President, Engineering and Chief of Staff Technology, Tokopedia, spoke about the increasing trend of e-Commerce and the role played by Tokopedia to empower the islands of Indonesia to be digitally empowered.

Dr Lim Jui, CEO, SGInnovate- Singapore emphasized on the importance of deep science and deep technology to solve the global challenges and pandemic and the need to further investment in cutting edge technologies especially AI, quantum tech and space technology.

Media Releases:

<https://indiaeducationdiary.in/artificial-intelligence-ai-is-a-significant-part-of-industry-4-0-global-business-leaders/>

<https://aidevelopmenthub.com/artificial-intelligence-ai-is-a-significant-part-of-industry-4-0-global-business-leaders-india-education-news-indiaeducation-news/>

Annexure 2: India- ASEAN Bilateral Trade and Investments

- Trade target of USD 200 billion by 2022 between India and ASEAN region.
- India-ASEAN total bilateral trade is USD 86.9 billion for 2019-20. It has decreased from USD 96.7 billion in 2018-19.
- India's exports to ASEAN decreased to USD 31.5 billion in 2019-20 from USD 37.4 billion in 2018-19 and imports over the same period decreased to USD 55.4 billion from USD 59.3 billion in 2018-19.
- Exports from India to ASEAN includes mineral fuels and oils; animal and vegetable oils; electrical machinery and equipment and parts.
- Imports to India from ASEAN includes mineral fuels and oils; iron and steel; nuclear reactors, boilers, machinery and mechanical appliances.
- As per the official source (DPIIT), FDI Inflows from ASEAN to India amounted to USD 102 billion from April 2000 to June 2020. FDI inflows into India from ASEAN in 2018 was USD 16.41 billion, approximately 36.98 per cent of total FDI flow into India.
- As per ASEAN Secretariat, FDI From India to ASEAN amounted to USD 1.7 billion in 2018. The robust trade and investment relations has placed India as ASEAN's sixth largest trading partner and sixth largest source of FDI among ASEAN Dialogue Partners.
- India attracts FDI predominantly from Singapore that primarily invests in sectors such as financial services, telecommunications, computer software and hardware and trading sectors.
- Some of the prominent Indian Companies in ASEAN are: Wipro, Tata Consultancy Services, Tech Mahindra, Hinduja Global Solutions, GMR, Sun Pharmaceuticals, Lupin, Cadila Healthcare, Aptech, Aditya Birla, Biocon India, Tata Motors, Tata Steel, Indorama, Oyo Rooms, Infosys.
- Some of the prominent ASEAN companies in India are: PSA International, NOL Shipping, DBS Holdings, Ascendas-Singbridge, Sembcorp Industries, KKR Jupiter Investors Pte Ltd, Cube Highways, First Degree Global Asset Management, Maple Tree, Keppel Corporation C P Aquaculture (India) Ltd., Krung Thai Bank Pcl., Thai Development Pcl, Charoen Pokphand (India) Private Limited, Thai Summit Neel Auto Pvt. Ltd., Thai Airways, and Precious Shipping (PSL) of Thailand, CP Prima, Garuda Foods, Maxis Communications, Axiata, IJM (India) Infrastructure Limited, Malaysian Airport Holdings Bhd, Genting Lanco Power (India) Private Limited, Malaysia Airline System (MAS), Air Asia (India) Private Limited

Bilateral Trade with ASEAN Region in 2019-20 (In US\$ Millions)

S.No	Country	Exports	Imports	Total
1	Brunei	57.62	586.28	643.9
2	Cambodia	188.12	46.69	234.81
3	Indonesia	4,129.33	15,061.87	19191.2
4	Lao Pd Rp	25.08	3.09	28.17
5	Malaysia	6,364.66	9,782.28	16146.94
6	Myanmar	973.89	547.25	1521.14

7	Philippines	1,526.03	523.83	2049.86
8	Singapore	8,922.66	14,746.78	23669.44
9	Thailand	4,299.30	6,788.38	11087.68
10	Vietnam Soc Rep	5,059.90	7,283.42	12343.32
	Total	31546.58	55369.87	86916.45

Source: Export and import data, Ministry of Commerce and Industry, Government of India

FDI from ASEAN to India (from April 2000 to June 2020)

S.No	Country	Amount of Foreign Direct Investment Inflows		%age with Total FDI Inflows of India
		(In Rs crore)	(In US\$ million)	
1	Singapore	623409.03	99493.74	20.88
2	Malaysia	5916.72	1040.56	0.22
3	Indonesia	3006.61	638.23	0.13
4	Thailand	3530.95	557.2	0.12
5	Philippines	2045.16	317.12	0.07
6	Cambodia	351.97	50.17	0.01
7	Myanmar	35.78	8.97	0
8	Vietnam Soc Rep	34.52	5.18	0
9	Brunei	2.97	0.45	0
10	Lao Pd Rp	0	0	0
	Total	638,333.71	102,111.62	

Source: FDI Statistics, June2020, Department for Promotion of Industry and Internal Trade

India Investment in ASEAN

Flows of Inward Foreign Direct Investment (FDI) by Host Country and Source Country (in million US\$)							
Host Country	Source Country	2013	2014	2015	2016	2017	2018
ASEAN	Total ASEAN	18,464.2	22,180.9	20,819.3	25,728.8	25,484.3	24,543.9
	Total countries [99]	1,20,965.5	1,30,114.5	1,18,667.1	1,18,959.5	1,46,901.6	1,54,712.9
	India [IN]	1,731.17	1,163.50	1,473.43	-198.08	-107.51	1,734.96

Source: ASEAN Secretariat



Annexure 3: FICCI's Engagement with ASEAN

- **ASEAN India Business Council-** FICCI is the secretariat for AIBC from India. ASEAN-India Business Council (AIBC) is the institutional industry body constituted with the support of the Department of Commerce, Ministry of Commerce and Industry, Government of India to work on promoting trade between India and the ASEAN member states. Indian members to the Council are invited by the Government of India. President FICCI is the Indian Co-Chair of the AIBC. The ASEAN members are supported by their respective country governments and industry associations
- **Delhi Dialogue** – FICCI was the founding partner of MEA and had organised 10 editions.
- **Bilateral CEO's Forum** – FICCI has the secretariat of India- Singapore CEOs Forum and had organised the 1st meeting on 14 November 2018 in Singapore.
- FICCI is working with DST, GoI on Innovation programmes: **ASEAN-India Research Training Fellowship (AIRTF)** and **ASEAN India Innovation Platform (AIIP)**- to encourage Innovation Exchange, Technology Transfer, Knowledge Sharing, and Trade Facilitation
- **Flagship initiatives:** 1st (2011), 2nd (2012) and 4th edition of India -ASEAN Expo and Summit (2019) hosted by Government of India
- **Participation in International Exhibitions:** India Pavilion in MEDEX, 2017, 2018 and 2019 in Myanmar and India Pavilion in 19th Vietnam International Textile & Garment Industry Exhibition in Ho Chi Minh City
- **4th ASEAN India Business Awards:** 5 Indian companies were awarded for their contribution to ASEAN region- Wipro Ltd, Indraprastha Apollo Hospitals, TATA Consultancy Services, GMR Group, Oyo Hotels and Homes, at 4th ASEAN India Business Awards on October 19, 2019 in Manila, Philippines.
- Exclusive Interactions of Indian Industry with Ambassadors and High Commissioners are organised on regular basis.
- Regular interactions with MOU partners in each ASEAN member country
- Regular interactions with incoming delegations from ASEAN and outgoing delegations to ASEAN and Oceania Countries.