



Indo-Australian Chamber of Commerce

---

# Recommendations to build stronger ties between India & Australia in technology and innovation

---

- A call to action

(Agritech | E-commerce & Retail Tech | EdTech  
| Fintech | Health Tech | R&D and Innovation)

October, 2021

Indo-Australian Chamber of Commerce's  
Science & Innovation Leadership Forum

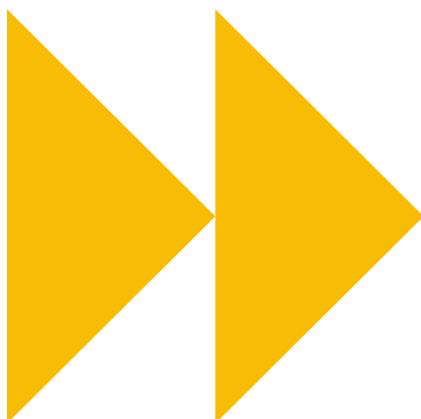


Report Partner



# TABLE OF CONTENTS

◆ Acknowledgements	1
◆ Foreword	2
◆ Introduction	4
◆ Recommendations - Focus Sectors	
Agri Tech	5
E-commerce & Retail Tech	6
EdTech	7
Fintech	8
Health Tech	9
R&D and Innovation	10
◆ Cybersecurity	11
◆ Conclusion	12
◆ ANNEXURE 1: IACC's 'Tech & Innovation' virtual trade mission to Australia, Feb-Mar 2021	
Partners	13
Event Summary	13
Speakers	14
Working Group	16
◆ ANNEXURE 2: References for Infographics	17



# ACKNOWLEDGEMENTS

We would like to express our deep appreciation to The Hon. Dan Tehan MP, Minister for Trade, Tourism and Investment, Government of Australia for inaugurating the Indo-Australian Chamber of Commerce's 'Tech & Innovation' virtual trade mission to Australia.

We would also like to thank The Hon. Stuart Ayres MP, New South Wales Minister for Jobs, Investment, Tourism and Western Sydney, Thiru M.C Sampath, former Minister for Industries, Government of Tamil Nadu, Mr. Gitesh Sarma, IFS, former Indian High Commissioner to Australia, Mr. Bryce Hutchesson, Former Deputy Australian High Commissioner to India, former Ambassador Mr. Anil Wadhwa, Author, Australia Economic Strategy (AES) report, and Mr. Peter Varghese AO, Chancellor, University of Queensland and Author, India Economic Strategy (IES) to 2035 for their participation in this initiative.

We would like to express our gratitude to all the Speakers/moderators for the Agritech, E-commerce & Retail Tech, EdTech, FinTech, Health Tech, R&D and Innovation sessions. This report would not have been possible without the invaluable contribution of our Knowledge Partner KMPG India, Mr. Bhavik Damodar and Mr. Saurabh Ranadive in particular, who led on drafting the recommendations for key sectors and provided useful insight throughout. We'd also like to thank Tata Consultancy Services for their support as Report Sponsor.

Special thanks to H.E. The Hon. Barry O'Farrell AO, Australian High Commissioner to India, Ms. Sarah Kirlew, Australian Consul-General for Southern India and Mr. Michael Costa, Deputy Consul General for their support. Mr. Costa was also a key member of the Working group for this initiative and we appreciate his guidance and invaluable contribution. We'd like to sincerely thank the Ministry of Electronics & Information Technology (MeitY), Government of India, Shri Ajay Prakash Sawhney, Secretary, MeitY and Dr. Ajai K Garg, Director, SPD and Innovation & Startup, MeitY. We'd also like to acknowledge H.E. Mr. Manpreet Vohra, Indian High Commissioner to Australia and the Indian Consulates in Australia for their support. A special thank you to the Government of New South Wales, State Government of Victoria, Government of Tamil Nadu and Government of Karnataka for being sponsors/partners for this event.

We also express our gratitude to all our Partners, Supporting Partners, Delegates, Working group members and the Secretariat team, who were critical to the success of this trade mission. We acknowledge the contribution from Narrative Asia for providing designing services to this report.

Finally, we're delighted that Mr. Deepak Padaki, Vice President, IACC and and EVP - Strategy, M&A and Chief Risk Officer, Infosys and Mr. Suresh Raman, Board/EC Member, IACC and VP & Regional Head, Tata Consultancy Services have taken on the roles of Co-Chairs of the 'Science & Innovation' Industry-sector leadership forum. They worked alongside the Chamber's CEO Ms. Petula Thomas in conceptualising and delivering on this initiative.

We have a large number of people to thank for their involvement in this initiative and we apologise if we missed anyone in this list.



**Sanjeev Bajaj**  
President, IACC



**Petula Thomas**  
CEO, IACC

**“** I take this opportunity to congratulate the Indo-Australian Chamber of Commerce for launch of the Science and Innovation Industry Sector Leadership Forum. This will be a wonderful opportunity for bringing about partnerships at all levels in Industry, Academia and Government and certainly there is a shared interest in technology and innovation.”

**Mr. Gitesh Sarma**, IFS, former Indian High Commissioner to Australia, Indian High Commission

## Co-Chairs 'Science & Innovation' Industry sector Leadership Forum



**Deepak Padaki**  
Vice President, IACC

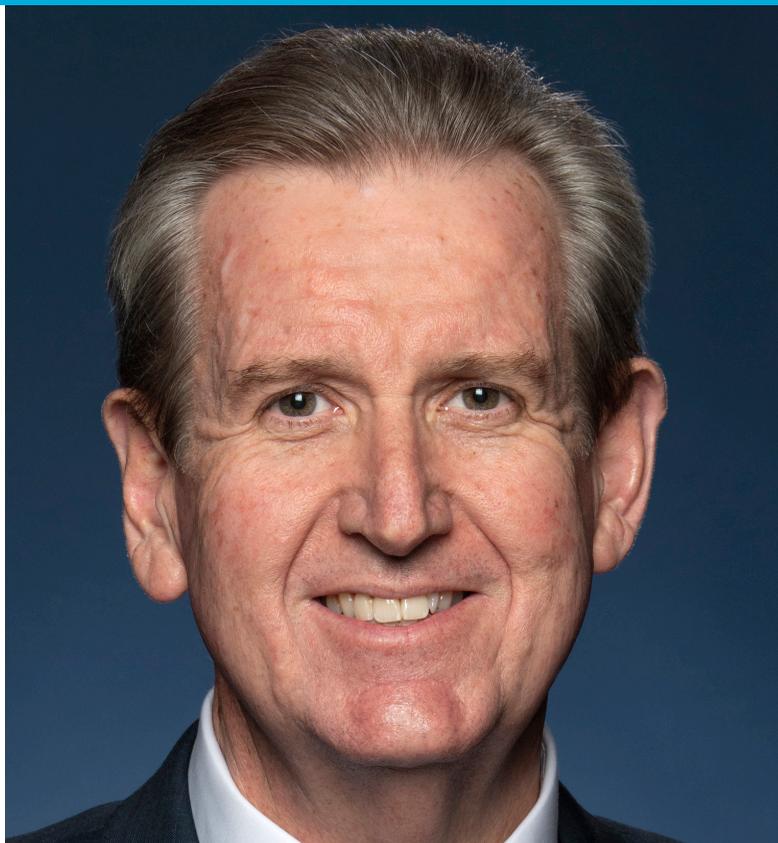
EVP - Strategy, M&A  
and Chief Risk Officer, Infosys



**Suresh Raman**  
Board & EC Member, IACC

Vice President and Regional Head,  
Tata Consultancy Services

# FOREWORD



**H.E. The Hon. Barry O'Farrell AO**  
Australian High Commissioner to India



I welcome this practical and action-oriented report from the Australia-India business community, brought together by the Indo-Australian Chamber of Commerce (IACC).

Australia is a nation of innovators and inventors. We are making pioneering advances in cyber security, artificial intelligence, quantum computing and 5G, as well as the policy frameworks governing these.

India has become one of our closest partners on science, technology and innovation. We have a shared vision for an open and resilient global technology marketplace, and we both want democratic norms and ethics to remain core to the next generation of technological advances. That's why Prime Ministers' Modi and Morrison elevated the bilateral relationship to a Comprehensive Strategic Partnership, and put in place a practical agreement on cyber and cyber-enabled critical technology.

As both countries embrace technology to recover, modernise and expand our economies in response to the challenges of COVID-19, increasing two-way trade and investment remains at the heart of the Australian Government's plan to boost jobs, growth and prosperity in the region.

I applaud India's ambitious program of economic reform, and its commitment to negotiating a high quality Comprehensive Economic Cooperation Agreement (CECA). This will maximise economic prosperity including through boosting business confidence, enhancing competitiveness and supporting regional economic integration.

Thanks again to the IACC for cultivating the important industry, government and personal linkages that will spur deeper and broader economic ties between Australia and India. We look forward to working with you to strengthen two-way collaboration from cyberspace to outer space."

# FOREWORD



**H.E. Mr. Manpreet Vohra**  
Indian High Commissioner to Australia



Technology and Innovation are hallmarks of both India and Australia today. There is a shared belief in both countries that our economic growth, further prosperity and future security can only be secured through these twin drivers of technology and innovation.

India and Australia have created sound ecosystems of research and development and each country ranks high on global indices. The exponential results possible through a synergy between our scientists, researchers, universities, innovation labs, private businesses and entrepreneurs is self-evident.

Building stronger ties in technology and innovation is, therefore, in our mutual interest and a pillar of our Comprehensive Strategic Partnership. India and Australia are collaborating on a host of ideas and issues through which many economic and societal challenges can be successfully addressed through science, technology and innovation.

This Report and its specific recommendations provide useful inputs to the joint efforts of both governments. The focus sectors identified in the Report are all exciting and very well-identified. I am delighted that the Indo-Australian Chamber of Commerce took the initiative to commission this timely study, and I thank the authors of the Report for the additional value they have brought to the bilateral economic strategies and fresh thinking before India and Australia.”

# INTRODUCTION

India and Australia share several commonalities than what meets the eye. Both share the presence of free media, have multi-faceted societal foundations and benefit from an abundance of natural resources. Additionally, both are liberal democracies and Commonwealth countries.

Technology is playing a pivotal role in framing industries and creating new opportunities. The current drive towards digitization and technology

in both countries has created new opportunities to advance collaborative efforts and discussions.

Thus, there are several opportunities for technological linkages between India and Australia across various sectors ranging from healthcare to education that will not only help strengthen the ties between the two countries but also enhance growth prospects for both countries.



*We continue to make world-leading advances in Cyber Security, Artificial Intelligence, Quantum Computing and 5G as well as the policy frameworks governing these. But innovation is a team sport and we are keen to pursue two-way technology exchanges, collaboration and investment with reliable like-minded countries. That's why Prime Ministers Modi and Morrison elevated the bilateral relationship to a Comprehensive Strategic Partnership and put in place practical agreements on cyber security, emerging technology and critical minerals."*

**The Hon. Dan Tehan MP,  
Minister for Trade, Tourism and Investment,  
Government of Australia**



*Our two countries have so much shared history, we share the same National Day, we share our love of Cricket, we share our passion for democracy and we also share a passion for growing businesses, creating new opportunities for future generations of Indians and Australians to prosper in our respective countries."*

**The Hon. Stuart Ayres MP,  
New South Wales Minister for Jobs, Investment,  
Tourism and Western Sydney**



*Prime Minister Modi and Prime Minister Morrison met at the Virtual Summit that again is a technology-based engagement where both sides committed to elevate our bilateral Strategic Partnership to that of Comprehensive Strategic Partnership. It's not just words, comprehensive means in any area. Really there's no area which is taboo and strategic means, it's not tactical, it's for the long haul. We are here to stay whether it's pandemic or anything else."*

**H.E. Mr. Gitesh Sarma, IFS,  
former Indian High Commissioner to Australia,  
Indian High Commission**



*We want a deeper and broader economic partnership, we want to establish more joint ventures, bring Australian expertise together with India's entrepreneurial culture and healthy appetite for risk. We want to conduct more research collaborations that involve practical problems in health, food, energy and climate change. We want to invest in India's modernisation and economic development in support of Australia's own growth journey in economic recovery. Now more than ever we both need trusted partners, who could work together to create jobs, drive growth and improved conditions for our businesses and citizens for productivity enhancements."*

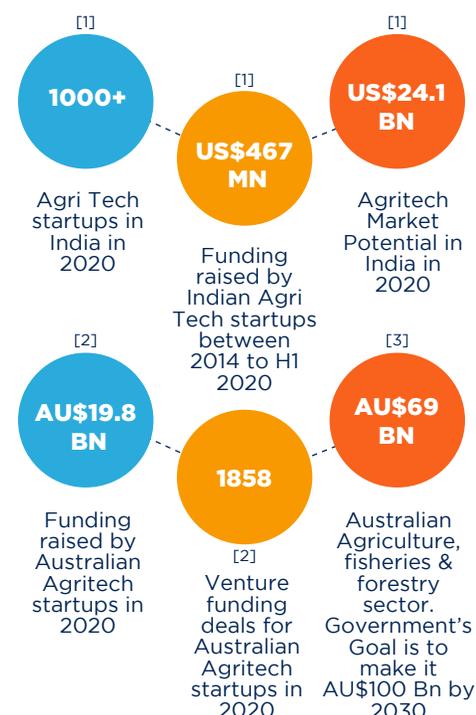
**Mr. Bryce Hutchesson,  
Former Deputy Australian High Commissioner to India,  
Australian High Commission**

# AGRI TECH

Australia is globally recognised for the productivity of its agriculture sector. The country has over 15 Agri tech and food tech innovators and accelerators spanning over urban, regional and rural centres. Therefore, in addition to Australia’s natural resources, its scientific and technological advances have helped farmers put themselves at the forefront of efficient and productive agricultural practices in the world.

While India is the leading producer of several commodities such as rice and wheat, it suffers from a relatively low yield (quantity of crop produced per unit of land). A few reasons for the low levels of productivity are fragmentation of farm-land holdings, infeasibility of implementing large scale solutions, lack of access to modernised technology such as for irrigation, automation using machinery, drone technology, etc. However, with appropriate implementation of innovative solutions, India’s Agri tech community can help in reducing costs and improving efficiency of this sector.

The Indian agribusiness sector has significant untapped potential that could be enhanced with access to Australian technologies. For instance, incorporating innovative technologies such as driverless tractors, drones to monitor crop health, use of data to drive solutions and farm management solutions such as hydroponics and aquaponics can revolutionise the country’s agricultural production process.



ACTION BODY	RECOMMENDATIONS
<b>Indian Government</b>	<ul style="list-style-type: none"> <li>In line with their ambition to increase productivity of agriculture, the Indian Government should seek Australia’s expertise and experience to set up a specialised Agri University in India.</li> <li>The Indian Government should encourage Australian companies to utilise India’s cost-effective manufacturing capability and large market to test Agri-based technology such as robotic and sensor technology.</li> <li>The Indian Government should encourage its Agri Tech community to leverage the Australia India fund to build physical and digital infrastructure in this sector.</li> <li>The Indian Government should encourage Australian companies to invest in Indian Agri-logistics space.</li> </ul>
<b>Department of Science &amp; Technology, Indian Government</b>	<p>Within the Indian Government, the Department of Science and Technology should collaborate with organisations such as CSIRO for research and development in water management technologies.</p>
<b>Department of National Centre for Management and Agricultural Extension &amp; Indian Council of Agricultural Research, Indian Government</b>	<p>The Indian Government (such as the department of National Centre for Management and Agricultural Extension, Indian Council of Agricultural Research, etc.) should collaborate with Australian research organisations to develop a collaborative Agri-food research program focused on farming in tropical conditions, greenhouse technology and fish farming. This program should also focus on improving agricultural productivity and logistics practices.</p>
<b>Indian &amp; Australian Governments</b>	<p>The Indian and the Australia Governments should collaborate across departments to facilitate the transfer of knowledge, skills, and technology for application in the Indian agricultural context.</p>
<b>Indian Companies facilitated by IACC</b>	<p>Facilitated by IACC, Indian companies could form joint ventures with Australian food processing and confectionary companies to import Australian based food-processing and segregation technology to India.</p>

# E-COMMERCE & RETAIL TECH

In the globally changing supply chain, we have witnessed consumers preferring online retail outlets. Retailers are developing omni-channel experiences to drive engagement with customers online. With the rise of micro-influencers, consumer behaviour and expectations are paving new ways in which products can be sold. The e-commerce industry has proved itself to be vital in face of the current pandemic and is only expected to further grow.

Australia has developed a vibrant startup environment over the past few years. E-commerce and Retail technology are one of the key industries in which Australian startups have established themselves. Multiple factors such as strong economic performance, establishment of incubators, favourable government incentives and excellent infrastructure facilities have contributed to the development of a rapidly growing e-commerce space.

The Indian startup ecosystem has scaled up significantly in the recent years on account of rising consumption, increased inflow of entrepreneurial and technology talent and increased internet and smartphone penetration, which has resulted in higher demand for online services. A majority of startups in India are a part of incubators and accelerators, which are known to foster innovation. Besides startups, e-commerce has extended its roots to various sectors of even traditional retail. Moreover, in light of the current Covid-19 pandemic, there has been an inevitable transition from traditional offline retail stores to online platforms. This has enabled Indian retailers to expand their e-commerce and digital presence within the country. India has also taken a route of innovation through public digital platforms.

Market testing can be helpful even when products are being launched online. Market testing especially becomes critical for a startup with new products and innovations and for cross-border enterprises. Given India's large market, Australian startups and retailers could explore the opportunity to enter the Indian market for growth opportunities. Similarly, Indian startups and retailers could also consider Australia as a test market for global expansion.

## E-COMMERCE REVENUE GROWTH

	2020	2025
[4] India	US\$64 Bn	US\$188 Bn
[5] Australia	US\$27.3 Bn	US\$35 Bn

- [6] Australia is the 11th largest e-commerce market in the world
- [6] Largest e-commerce platforms in Australia - eBay (AU), Amazon (AU), Woolworths, JB Hi Fi, Big W
- [7] India is ranked 9th in cross-border growth in the world
- [7] Largest e-commerce platforms in India - Flipkart, Myntra, Jabong, Amazon (India), Snapdeal
- [8] Indian retail sector estimated at US\$883 Bn (Projected to reach US\$1.3 Tr by 2024)

## ACTION BODY

## RECOMMENDATIONS

### Indian & Australian Governments

- The Indian and Australian Governments can collaborate to bridge disruptions in supply chains caused by the recent pandemic, Covid-19.
- The Indian and Australian Governments can work closely to address region specific issues such as policy regulations around IP, acceptable payment systems, etc. involved in delivering products online in each other's country.
- Government research collaboration on developing supply chain solutions and addressing challenges for retail products in the post-pandemic world can be mutually beneficial to both countries.
- Cross-government research collaboration should be encouraged to understand digital marketing and impact of sustainability on consumers' purchasing patterns.

### Indian Companies facilitated by IACC

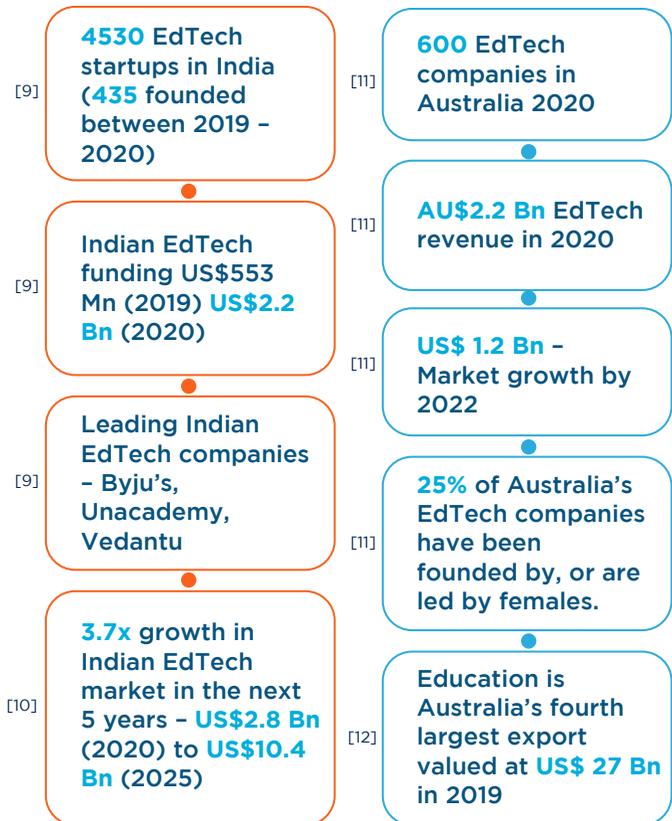
Facilitated by IACC, Indian retailers could consider partnering with Australian retailers and content-creation organisations to adopt and exchange advanced digital strategies.

# EDTECH

Over the years, Australia has been leading the way with innovative, world class solutions within the education sector. The expanding network and increased reliability of mobile technology have enabled educational institutions in Australia to offer continuous learning and reskilling opportunities. There has been an increased focus on vocational training and workforce training, which is becoming a core offering across universities in Australia.

India's current education infrastructure will have to be strengthened to support the fast-growing population. Therefore, online education will be pivotal in helping India meet its extensive educational needs. In the face of the current Covid-19 pandemic, India's nationwide lockdown created a paradigm shift in the delivery of education services. The lockdown accelerated the adoption of digital technology to resume continuity of learning for students. Moreover, structural changes in the system of imparting education and assessment methodologies are expected. This disruption in delivery of education in India is expected to drive policy makers to integrate e-learning solutions into existing curriculums and work towards increasing affordability of online systems and ensuring stability of internet connectivity.

Collaborations with Australia can help India in arriving at flexible and cost-effective educational solutions and also include coverage across areas with low or no internet connectivity. Additionally, with an aim to upskill 400 million workers by 2022, India's skill development program could leverage Australia's technological strengths in vocational education and training collaborating with its TAFEs.



ACTION BODY	RECOMMENDATIONS
<p><b>Indian Government</b></p>	<ul style="list-style-type: none"> <li>The Indian Government, through agencies such as the National Skill Development Corporation (NSDC) or National Council of Educational Research and Training (NCERT), should collaborate with Australian regulators, TAFE and other relevant organisations on curriculum development with key focus on human centric skills, vocational education and training.</li> <li>The Indian Government should encourage Indian educational institutions (such as the IITs, NITs, etc.) to partner with Australian organisations to offer joint programs, training programs, hybrid programs, micro credentialing, etc. to increase student participation from both countries.</li> <li>The Indian Government should encourage Australian companies to invest into the education tech space in India to advance K-12 learning management platforms, remote learning tools and supplement research funds focused on humanities and social sciences.</li> </ul>
<p><b>National Council for Teacher Education (NCTE), Indian Agency</b></p>	<p>Indian agencies such as the National Council for Teacher Education (NCTE) could collaborate with their Australian counterparts such as the Australian Institute for Teaching and School leadership (AITSL) to create India-specific teacher education/training programs.</p>
<p><b>Indian Companies facilitated by IACC</b></p>	<p>With IACC's support, Indian companies could collaborate with Australian EdTech companies and relevant organisations in arriving at flexible and cost-effective educational solutions in areas with low internet connectivity.</p>

# FINTECH

Fintech activity in Australia has witnessed rapid growth. Australia is very active in promoting newly launched fintech's and supporting them with established accelerator and incubator programs. Sydney and Melbourne are the most prominent fintech hubs in Australia.

India has developed a vibrant fintech sector owing to a large market base, innovative startup landscape and favourable regulatory and government policies. The adoption of fintech in the country has been rapid, driven by a surge in e-commerce, use of smartphones and growth in internet penetration. We expect this growth to uphold in the near future. Mumbai is the financial capital and we expect Chennai to catch up. Cities such as Chennai and Bengaluru are witnessing a growth in startup hubs for fintech.

The launch of government initiatives such as Smart Cities and Digital India have created infrastructural support for the sector. The Government has also extensively promoted the use of digital payments and introduced several tax incentives for fintech startups and merchants accepting digital payments. The Reserve Bank of India (RBI) has encouraged the development of fintech sector by providing several incentives.

India could leverage Australian technologies on SME lending and screening. In exchange, Australia can leverage India's extensive fintech talent pool needed to commercialise and develop their products. Furthermore, Australian fintechs can also consider testing their products in the Indian market.

550 active Fintech companies in Australia in 2021 (100 fintech's added since September 2019) [13]

AU\$2.67 Bn investments in Australia between 2018-2021 [13]

US\$1.04 Bn - Fintech investment value in Australia in Q4 2020 [14]

58% Fintech adoption rate in Australia 2019 (increase in 60% since 2015) [14]

Indian fintech market is valued at INR 1920.16 Bn (2019) & expected to reach INR 6207.41 Bn (2025) [15]

Key operative segments - Payments, Lending, Insurtech, Wealthtech and Banktech [15]

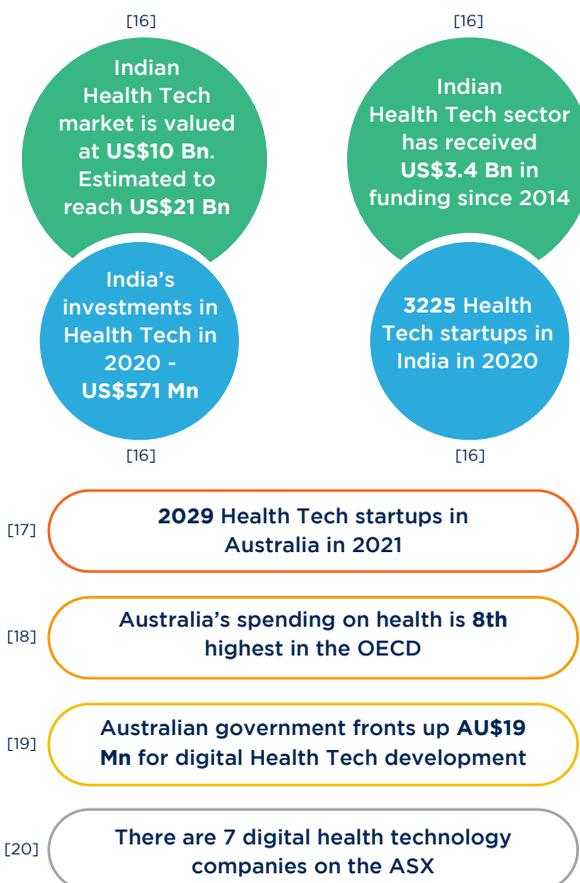
Top 5 fintech players in India (2019) - PayTm, Cred, Acko, InCred Finance, BharatPe [15]

ACTION BODY	RECOMMENDATIONS
Indian Government	<ul style="list-style-type: none"> <li>The Indian Government should engage with the Australian Government to create a technology platform for startups to enable cross-border knowledge transfer.</li> <li>The Indian Government should encourage Australian Venture Capital firms and investors to explore opportunities in India's fintech sector.</li> <li>Australia has a separate government body for FinTech, namely FinTech Australia. The Indian Government should develop a similar body responsible for monitoring and promoting innovation in this sector.</li> <li>The Indian Government should encourage Australian fintech startups to consider India as a source for talent acquisition.</li> <li>The Indian Government should initiate discussions with the Australian Government on creating knowledge and technology sharing agreements to foster innovation and enable mutual growth.</li> </ul>
Indian & Australian Governments	Given the past history of cyber-attacks, both countries should collaborate to strengthen cyber security systems.
Indian Companies facilitated by IACC	Indian fintech companies could collaborate with Australian companies to develop and design innovation solutions for banks. This collaboration can be facilitated by IACC.
Indian Banks facilitated by the IACC	Supported by IACC, Indian banks could collaborate with Australian fintech companies to set up innovation labs and fintech challenges to drive advancements.

# HEALTH TECH

Medical technology is a niche but rapidly growing market in India. India's growing capabilities in IT, data analytics, IoT driven solutions, AI and SaaS solutions are further supporting the growth of this emerging sector. The digital health startups in India are introducing new technologies such as wearable-tech, telemedicine, genomics and artificial intelligence to the Indian healthcare system that are trying to drive demand towards ICT-led delivery and consumption of healthcare services. In tune with this growing market, the Government of India has initiated several favourable policies to realise the full potential of the sector. A few of these policies include setting up of bio incubators and technology entrepreneurship parks, allowing 100% FDI in developing the quality of medical devices and infrastructure facilities, etc.

India's strengths in tertiary healthcare and low-cost manufacturing as well as Australia's expertise on research and development in MedTech and Biotech offer opportunities that could benefit both countries.



ACTION BODY	RECOMMENDATIONS
<b>Indian Government</b>	<ul style="list-style-type: none"> <li>▪ The Indian Government should collaborate with the Australian Government to adopt effective health technology assessment mechanisms.</li> <li>▪ The Indian Government should harness Australia's MedTech capabilities in preventive and palliative care, rehabilitation technology and home healthcare.</li> <li>▪ The Indian Government should encourage Australian companies and government to invest into its MedTech parks, bio-incubators, etc.</li> <li>▪ The Indian Government should collaborate with the Australian Government and MedTech companies to incorporate medical coding and data analysis to enhance patient outcomes and reduce healthcare costs.</li> <li>▪ The Indian Government should encourage Australian MedTech companies to not only manufacture but also collaborate with Indian companies to conduct clinical trials in India.</li> </ul>
<b>Indian Hospitals &amp; Clinics</b>	<p>Indian hospitals and clinics could also collaborate with various Australian clinics on raising awareness on women's healthcare space. IACC could solidify this collaboration, which could take the form of a knowledge consortium or annual conference.</p>
<b>Indian Companies facilitated by IACC</b>	<ul style="list-style-type: none"> <li>▪ Anchored by IACC, Indian companies could explore partnering with Australian MedTech startups and supporting them with funding requirements for large scale commercialisation to target the global market.</li> <li>▪ With the support of IACC, Indian private organisations could consider forming joint ventures with Australian geriatric centres to enhance skills and resources required in this sector.</li> </ul>

# R&D AND INNOVATION

The recent pandemic has drawn attention to a state of uncertainty of the future. Worldwide lockdowns in the past year have disrupted manufacturing operations across countries. We have already witnessed the success of global collaboration among scientists for the development of vaccines. With enhanced international coordination and targeted funding for research and development, the world will be better prepared to face uncertainties in the future. Hence, the future will demand not only human resilience but also the pressing need to leverage the experiential pace of innovation.

Data will be pivotal in preparing for such future uncertainties and disruptions. The European Commission is focusing on developing a trusted European data sharing framework, which will allow global innovators to leverage cross-sectoral and cross-industry data. India should focus on assimilating big data for public use as well. Moreover, in order to position itself as an enterprising digital economy, India will need to focus on big data for driving innovations.

Many businesses are gradually operating from the lens of sustainability. Going forward, businesses will need to transform their operations and designs to prioritise sustainability and build resilience. There will be further shift away from the use of fossil fuels to renewable energy. Moreover, the private sector has already started to focus on its key sustainability development goals, its impacts, targets and innovative ways to combine revenue and impact.

- At rank 48, India stands among the top 50 countries in the Global Innovation Index (GII) 2020 [21]
- 21% of innovation-active Australian businesses collaborated with others for innovation in 2019-20, compared to 14% in 2018-19. [22]
- Australia's R&D spending as of % of GDP - 2.2% [23]
- Australia's R&D spending in PPP\$ - \$23,129.7 Mn [23]
- 4532 number of researchers in Australia per million inhabitants [23]
- India's R&D spending as of % of GDP - 0.7% [23]
- India's R&D spending in PPP\$ - \$47,574.7 Mn [23]
- 156 number of researchers in India per million inhabitants [23]

ACTION BODY	RECOMMENDATIONS
Indian Government	<ul style="list-style-type: none"> <li>▪ In order to prepare for future pandemic disruptions, the Indian Government should integrate and assimilate citizen data needed to develop solutions (such as mapping simulations, determining field force effectiveness, etc.).</li> <li>▪ Cross-border collaboration across startups should be encouraged by the Indian Government, in collaboration with Australia, to widen target audience and fast track development of business solutions.</li> <li>▪ Given the recent success of the first India Australia circular economy hackathon, the Indian Government should encourage participation of Indian companies in such hackathons.</li> <li>▪ The Indian Government should collaborate with the Australian Government to tackle global issues such as climate change. They should focus on achieving carbon neutralisation to position themselves as circular economies.</li> <li>▪ Australian investors should be encouraged by the Indian Government to look at India for renewable energy generation and distribution projects</li> </ul>
Indian & Australian Governments	The Australian and Indian Governments should enhance cooperation and research collaboration to further develop innovations in renewable energy, energy efficiency, clean technology, low carbon technology.
Indian & Australian Companies facilitated by IACC	With IACC's support, Indian and Australian corporate companies could collaborate on CSR initiatives for tackling climate change and achieving carbon neutralisation to position themselves as circular economies.

# CYBERSECURITY

As mentioned in the Joint statement on a Comprehensive Strategic Partnership between Republic of India and Australia, “The Hon'ble Prime Minister of India Shri Narendra Modi and the Hon. Scott Morrison MP, Prime Minister of Australia jointly participated in an India-Australia Leaders' Virtual Summit on 04 June 2020. Affirming their commitment to strengthening India-Australia ties for the long term, they committed to elevate the bilateral Strategic Partnership concluded in 2009 to a **Comprehensive Strategic Partnership (CSP)**. One of the areas that both countries decided to work together in mutual cooperation was enhancing science, technology and research collaboration which included:

[24]

*“Both countries jointly decided to work together in the areas of digital economy, cyber security and critical and emerging technologies as identified by the **Framework Arrangement on Cyber and Cyber- Enabled Critical Technology Cooperation**”.*

[25]

**Excerpt from the article: ‘Priorities for critical technology cooperation between India and Australia’ by the Observer Research Foundation (ORF)**



## **CYBER SECURITY GOVERNANCE:**

As mentioned in Australia's Cyber Security Strategy 2020, the Australian Government is looking for international collaboration in holding cyber attackers accountable and building the capabilities of the agencies involved through international partnerships.

### **AI GOVERNANCE:**

Australia released their AI Ethics Framework in 2020 and India's NITI Aayog released Principles for Responsible AI early in 2021. While there is significant convergence in the values outlined within the two frameworks like fairness, transparency, explainability, and so on, Australia's framework has also proposed the ‘Principle of Contestability’.”

### **OTHER KEY AREA:**

[26]

Australia's 2021 International Cyber and Critical Technology Engagement Strategy was released in April 2021 by Minister for Foreign Affairs and Minister for Women, Senator the Hon. Marise Payne. Three main Pillars of the strategy include Values, Security, Prosperity.



*The new Australia India framework on cyber and cyber-enabled critical technology cooperation will support businesses to enhance digital trade, shape the norms and rules that govern global technology and address cyber security challenges in the Indo-Pacific region. This will support the strong existing business and research links between us. Australian firms like ANZ, Telstra and Atlassian are growing their footprint in India, while Indian tech heavyweights such as TCS, Infosys and Wipro are enhancing their investment and presence in Australia.”*

**The Hon. Dan Tehan MP,  
Minister for Trade, Tourism and Investment,  
Government of Australia**



*I am very happy to recognize that in the Covid context, the Australia - India strategic research fund has looked at special projects since December 2020. On the cyber side, Cyber and Cyber enabled critical technology cooperation is another sector, which in today's world if everything is digital then everything must be vulnerable in some way. So, with some of the best minds in Australia and India, I think there is merit that our societies which are rule-based democracies, transparent, at the same time we value privacy, and data protection which is very central to our fintech technologies.”*

**Mr. Gitesh Sarma, IFS,  
Former Indian High Commissioner to Australia,  
Indian High Commission**



*Make the opportunity to organize B2B meetings, better understand Australia's business environment, our innovation credentials and our track record as a reliable economic partner and take the opportunity to explore the mechanisms that can support two-way technology exchange collaboration and investment. This is crucial for forging new bonds in cyber space and beyond.”*

**Mr. Bryce Hutchesson,  
Former Deputy High Commissioner to India,  
Australian High Commission**

# CONCLUSION

The sessions in IACC's 'Tech & Innovation' virtual trade mission helped identify various opportunities available to the two countries in the digital age. From knowledge exchange initiatives to commercial joint ventures and government collaborations, India and Australia should jointly work towards building strong links in the field of science, technology, and innovation. Furthermore, the linking of innovation with investment strategies will substantially benefit the two countries.

This report shall serve as a roadmap for implementing the recommendations set out for stakeholders across government, industry and academia, primarily in six key sectors.

The Indo-Australian Chamber of Commerce's 'Science & Innovation' Industry-sector leadership forum that was launched in February 2021 will serve as a key facilitator, monitoring progress on this initiative. The indicators to measure the progress of these 41 recommendations will be developed as part of the implementation plan. The intent would be to engage all stakeholders within academia, industry and government at regular time intervals to develop a short term (6-12 months) and long term (2-3 years) strategy that provides a holistic picture and delivers on the recommendations made to create high impact. Those interested in getting involved can write to [trade@indoaustchamber.com](mailto:trade@indoaustchamber.com).

“

*Digital infrastructure has emerged pertinent to India's infrastructural requirement. India's pace of development will require the use of technology for financial inclusion and development of cost-effective medical, educational, agricultural, and housing solutions. This will require the attention of the private sector, in addition to the governments, of both countries. Owing to India's cost-effective manufacturing, Australian startups should consider India as a key destination for scaling up their technology use and production. This will in turn benefit India in accessing better technology and positioning themselves as a strong base for other foreign markets. The two countries should also focus on augmenting the Strategic Research Fund, which serves as an important platform for building research partnerships on areas of national concern. The Australia Economic Strategy Report" which was released in November 2020, has recommended the setting up of an India Australia start up fund with a modest contribution of US \$ 10 million each by the two governments in order to boost the start-up collaboration between the two countries. This needs to be implemented as soon as possible.*

**Mr. Anil Wadhwa,  
Former Ambassador & Secretary,  
Ministry of External Affairs, Govt. of India and  
Author, Australia Economic Strategy (AES) report**

“

*Since we are coming out of the post-pandemic world, many countries are seeking diversification of their trade relationships. Thus, it will be an opportune moment for India and Australia to strengthen their bilateral relationship to foster innovation. The Indian diaspora in Australia already testifies as a firm foundation of both the countries' long-standing relationship. Therefore, adoption of the detailed recommendations & co-operation strategies for various key sectors outlined in the India Economic Strategy and Australia Economic Strategy report and creating implementation plan for these recommendations will aid in further strengthening this relationship."*

**Mr. Peter N Varghese AO, Chancellor, University of Queensland and Author, India Economic Strategy (IES) to 2035**

“

*Congratulations to IACC on bringing together business, trade body representatives from India and Australia. The Government of Tamil Nadu has announced several innovative policies such as aerospace and defence policy, revised IT policy, electric vehicle policy, electronic and hardware manufacturing policy. Information and technology are an important sector in Tamil Nadu. Chennai is known as the SaaS capital of India."*

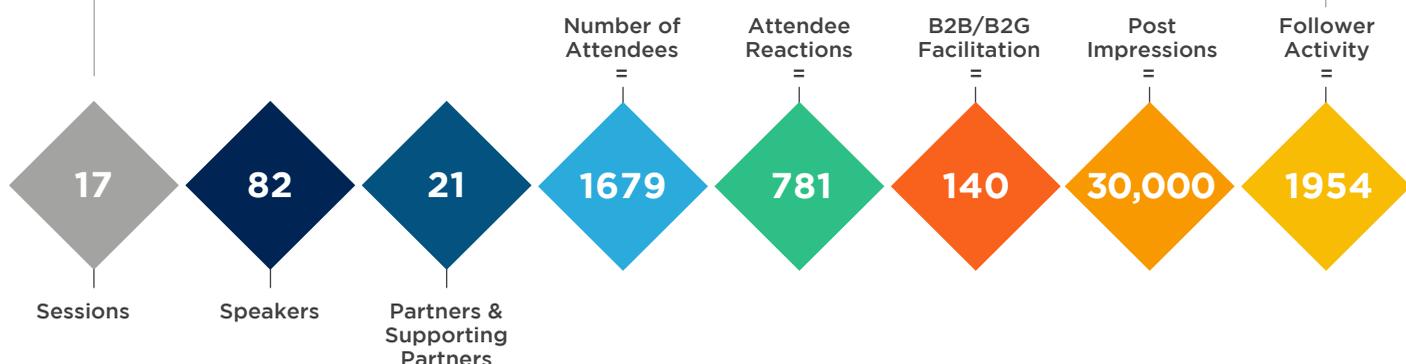
**Thiru M.C Sampath,  
Former Minister for Industries, Govt. of Tamil Nadu**

# ANNEXURE 1:

## IACC's 'Tech & Innovation' virtual trade mission to Australia, Feb-Mar 2021

<h3>PLATINUM PARTNERS</h3> <ul style="list-style-type: none"> <li>• Tata Consultancy Services</li> <li>• Telstra</li> <li>• Government of New South Wales</li> </ul>	<h3>SILVER PARTNERS</h3> <ul style="list-style-type: none"> <li>• State Government of Victoria</li> <li>• Guidance Tamil Nadu</li> <li>• Invest Karnataka</li> <li>• inQ Innovation Global</li> <li>• OneLenz</li> </ul>
<h3>GOLD PARTNERS</h3> <ul style="list-style-type: none"> <li>• Tractors and Farm Equipment Limited</li> <li>• NetApp</li> </ul>	<h3>KNOWLEDGE PARTNER</h3> <ul style="list-style-type: none"> <li>• KPMG India</li> </ul>
<h3>SUPPORTING PARTNERS</h3> <ul style="list-style-type: none"> <li>• Australian Government</li> <li>• Indian High Commission, Canberra</li> <li>• FinTech Australia</li> <li>• Export Council of Australia</li> <li>• Australia India Business Council Ltd</li> <li>• Confederation of Indian Industry</li> <li>• TiE Hyderabad</li> <li>• NAASCOM CoE IoT</li> <li>• Tourism Australia</li> <li>• Airmeet</li> </ul>	

### EVENT SUMMARY



# SPEAKERS

**“** *I am pleased to be joining you virtually today to inaugurate this 'Tech and Innovation' trade mission to Australia organised and hosted by the Indo-Australian Chamber of Commerce. Thanks also to my fellow panelists and high-profile delegates across all sessions, especially other senior officials, industry leaders and tech experts for taking the time to participate.”*

**-The Hon. Dan Tehan MP, Minister for Trade, Tourism and Investment, Government of Australia**

## Inaugural & Closing:

- The Hon. Dan Tehan MP, Minister for Trade, Tourism and Investment, Government of Australia
- The Hon. Stuart Ayres MP, New South Wales Minister for Jobs, Investment, Tourism and Western Sydney
- Thiru M.C Sampath, former Minister for Industries, Government of Tamil Nadu
- H.E. Mr. Gitesh Sarma, IFS, former Indian High Commissioner to Australia, Indian High Commission
- Mr. Bryce Hutchesson, Deputy Australian High Commissioner to India, Australian High Commission
- Mr. Manish Gupta, Consul General, Consulate General of India in Sydney
- Mr. Anil Wadhwa, former Ambassador & Secretary, Ministry of External Affairs, Govt. of India and Author, Australia Economic Strategy (AES) report
- Mr. Peter N Varghese AO, Chancellor, University of Queensland and Author, India Economic Strategy (IES) to 2035
- Mr. Deepak Padaki, Vice President, IACC and EVP -Strategy, M&A and Chief Risk Officer, Infosys
- Ms. Petula Thomas, CEO, Indo-Australian Chamber of Commerce
- Mr. John Kenny, Bengaluru Chapter Chairperson, IACC & Director, KAS Services India Pvt Ltd
- Mr. Suresh Raman, Board/EC Member, IACC and Vice President and Regional Head, Tata Consultancy Services
- Mr. Bhavik Damodar, Office Managing Partner - Mumbai and Partner - Deal Advisory, KPMG

## Roundtable Discussion between government, industry and academia on fostering innovation through collaboration

- Ms. Sarah Kirlaw, Consul-General for Southern India, Australian Consulate General in Chennai
- Dr. Ajai K Garg, Director, SPD and Innovation & Startup, MeitY, Government of India
- Mr. Deepak Padaki, Vice President, IACC & EVP - Strategy, M&A and Chief Risk Officer, Infosys
- Mr. Balaji Raghavan, Segment Head - BFSI TCS Australia & New Zealand, Tata Consultancy Services
- Mr. Gaven Standon, IACC Bengaluru Chapter Committee & Executive Partner Ecosystem, Telstra
- Mr. T R Kesavan, Co-Chair, F&B and Agribusiness Leadership Forum, IACC & Group President - Corporate Relations & Alliances, Tractors and Farm Equipment Limited
- Ms. Madhurima Agarwal, Director - Engineering Programs, NetApp
- Dr. Campbell Wilson, Associate Dean (International), Monash University
- Ms. Petula Thomas, CEO, Indo-Australian Chamber of Commerce

## Fireside Chat - TCS:

- Mr. Michael Costa, Deputy Consul General, Australian Consulate General in Chennai
- Mr. Vikram Singh, Country Head - Australia, Tata Consultancy Services
- Mr. Jim Giannopoulos, Head of Technology Channels, Ops & Marketing, AGL Energy

## **Fireside Chat – Telstra:**

- Dr. Ajai K Garg, Director, SPD and Innovation & Startup, MeitY, Government of India
- Mr. N.T. Arunkumar, Managing Director & Country Head (India) and Head of Innovation, Global Business Services, Telstra
- Ms. Petula Thomas, CEO, Indo-Australian Chamber of Commerce
- Mr. Gaven Standon, IACC Bengaluru Chapter Committee & Executive Partner Ecosystem, Telstra

## **Agri Tech, EdTech, E-commerce & Retail Tech, Fintech, Health Tech, R&D and Innovation**

- Mr. Ajit Rangnekar, Director General of Research and Innovation, T-Hub
- Mr. Andrew Davis, Ambassador, inQ Innovation Global
- Mr. Anshul Dayal, Founder & CEO, Neuromersiv
- Mr. Apurwa Sarve, Group Senior Strategy Manager, H&H Group
- Mr. Ashok Menon, Global Technology Leader, Life Cycle Assessment (Corporate Sustainability), SABIC
- Mr. Adithya DH, Manager – Membership & Business Development, Indo-Australian Chamber of Commerce
- Mr. Badrinathan S, Head – Innovation, Tata Consultancy Services
- Mr. Ben Ford, Advisor, OneLenz
- Mr. Craig Rowlands, Senior Executive, Information Management, Medibank
- Ms. Christie Whitehill, CEO, Techready Women
- Mr. Dan Smith, Lead – Online, Kmart Australia
- Dr. Darez Ahmed, IAS, Executive Director, Guidance Tamil Nadu
- Mr. David Davies, Founder & CEO, AgUnity
- Mr. David Jordan, Managing Director, Enteruptors
- Mr. David Linke, Managing Director, Edugrowth
- Mr. Deleep Murali, Founder & CEO, Zscore Technologies
- Mr. Eitan Bienstock, CEO, Techbench Capital
- Mr. Elliot Hastie, Finance Reporter, Ausbiztv
- Mr. Gerry Walsh, Program Director, Corporate Acceleration, Startupbootcamp Australia
- Mr. Hemendra Mathur, Venture Partner, Bharat Innovation Fund
- Mr. Irfan Malik, Co-Founder & CEO, inQ Innovation Global, Chair – Startup & Innovation, AIBC
- Ms. Jacqui Nelson, CEO, Dekko Secure
- Mr. James Miller, Group Chief Technology Officer, Tractors and Farm Equipment Limited
- Mr. Jamie Engel, CEO, Neutopia
- Mr. John Kenny, Bengaluru Chapter Chairperson, IACC & Director, KAS Services India Pvt Ltd
- Mr. John Southwell, Counsellor (Agriculture) to India, Australian High Commission, New Delhi
- Mr. Karl Mohan, General Manager for ANZ, NIUM
- Ms. Kate Quirke, Chief Executive Officer and Managing Director, Alcidion Corp
- Ms. Madhurima Agarwal, Director - Engineering Programs, NetApp
- Dr. Margaret Faux, Co-Chair, 'Health' Leadership Forum, IACC & Founder and CEO, Synapse Medical Services
- Mr. Michael Brown, Deputy Consul-General, Australian Consulate-General, Mumbai
- Mr. Michael Costa, Deputy Consul General, Australian Consulate General, Chennai
- Mr. Michael Read, CEO, Skybase
- Ms. Michele Lemmens, Head of Business Sustainability & CTO APAC, Tata Consultancy Services
- Dr. Michelle Perugini, Co-Founder and CEO, Presagen
- Ms. Michelle Wade, Commissioner, South Asia, State Government of Victoria
- Dr. Mike Briers AO, Founder, Food Agility

- Mr. Nitish Jain, President, S P Jain School of Global Management
- Mr. Nikhil Malhotra, Global Head of Innovation, Tech Mahindra
- Dr. Oommen John, Senior Research Fellow, The George Institute for Global Health
- Ms. Parul Aghi, Co-Founder / COO, AeroLogiks
- Mr. Pavan Panchamukhi, Founder, RDEP
- Ms. Petula Thomas, CEO, Indo-Australian Chamber of Commerce
- Mr. Phalgun Kompalli, Co-Founder, UpGRAD
- Mr. Pranay Kumar, Chief Executive Officer, State Bank of India - Australia
- Ms. Pratibha Sen, Associate Director - Australia, IDP Education
- Mr. Ramadhyani Renduchintala, AVP, Digital & Analytics, HCL Technologies
- Ms. Ravneet Pawha, Co-Chair, Education & Research Leadership Forum, IACC & Deputy Vice President - Global & CEO - South Asia, Deakin University
- Mr. Rohit Manchanda, IACC Western India Chapter Committee
- Mr. Saravana Mani, Head, Kmart Accelerator
- Mr. Saurabh Ranadive, Associate Director, KPMG
- Ms. Sowmya Tankala, Senior Associate, Guidance Tamil Nadu
- Mr. Srinivas Kuchibhotla, Partner - Food, Agri & Retail Practice, KMPG
- Mr. Stephen Rutter, Founder, The Scale Institute
- Mr. Sunil Menon, Network and Product Engineering Executive, Telstra
- Mr. Terry Hilsberg, Member, NSW International Education Advisory Board
- Mr. Tony Hackett, Global Account Manager, NetApp
- Mr. T R Kesavan, Co-Chair, 'F&B and Agribusiness' Leadership Forum, IACC & Group President - Corporate Relations & Alliances, Tractors and Farm Equipment Limited
- Mr. Tyler Spooner, CEO, The U Group
- Mr. Varun Sood, Head - Health and Medical Division, Motherson Medical
- Mr. Vidyanand Sagaram, IACC Bengaluru Chapter Committee & Director - Strategic Projects, Global Victoria, Victorian Government Trade and Investment
- Ms. Yvonne Power, Co-founder & COO, Village Energy

## Working Group

- Mr. Deepak Padaki, Vice President, IACC & EVP - Strategy, M&A and Chief Risk Officer, Infosys
- Mr. Suresh Raman, Board/EC Member, IACC and Vice President and Regional Head, Tata Consultancy Services
- Mr. Michael Costa, Deputy Consul General, Australian Consulate General, Chennai
- Ms. Petula Thomas, CEO, Indo-Australian Chamber of Commerce
- Mr. John Kenny, Bengaluru Chapter Chairperson, IACC & Director, KAS Services India Pvt Ltd
- Mr. Vidyanand Sagaram, IACC Bengaluru Chapter Committee & Director - Strategic Projects, Global Victoria, Victorian Government Trade and Investment
- Mr. Rohit Manchanda, IACC Western India Chapter Committee
- Mr. Gaven Standon, IACC Bengaluru Chapter Committee & Executive Partner Ecosystem, Telstra
- Dr. Prashant Pansare, Founder & Managing Director, Inteliment Technologies Pvt Ltd
- Mr. Nikhil Malhotra, Global Head of Innovation, Tech Mahindra
- Mr. Mark Milanese, Founder & CEO, OneLenz
- Mr. Paul Kang, Partner, OneLenz
- Mr. Adithya DH, Manager - Membership & Business Development, Indo-Australian Chamber of Commerce

# ANNEXURE 2:

## References for Infographics

### Agritech:

- [1] <https://inc42.com/reports/indias-agritech-market-landscape-report-2021/>
- [2] <https://hivelife.com/agritech-in-australia/>
- [3] <https://itbrief.com.au/story/technology-critical-for-the-future-of-australia-s-agriculture-industry>

### E-commerce & Retail Tech:

- [4] <https://www.statista.com/statistics/792047/india-e-commerce-market-size/>
- [5] <https://www.statista.com/forecasts/289742/e-commerce-revenue-forecast-in-australia>
- [6] <https://www.trade.gov/market-intelligence/australia-ecommerce#:~:text=Australia%20is%20the%20eleventh%20large%20st,3%20billion%20by%202024.>
- [7] <https://www.ibef.org/industry/ecommerce-presentation>
- [8] <https://www.ibef.org/industry/retail-india.aspx>

### EdTech:

- [9] <https://corporate.cyrilamarchandblogs.com/2021/05/indian-edtech-in-2020-the-effective-first-shot/>
- [10] <https://inc42.com/datalab/the-future-of-education-indian-startups-chase-10-bn-edtech-market/>
- [11] <https://australianedtech.com.au/sector-overview-and-statistics/>
- [12] <https://www.trade.gov/country-commercial-guides/australia-education-and-training>

### Fintech:

- [13] <https://gomedici.com/australia-fintech-report-2021-by-medici>
- [14] <https://www.statista.com/topics/5580/fintech-in-australia/>
- [15] <https://www.prnewswire.com/news-releases/indias-fintech-market-2020-2025-expected-to-grow-at-a-cagr-of-22-7-despite-covid-19-disruptions-301067857.html>

### Health Tech:

- [16] <https://inc42.com/datalab/telemedicine-preventive-healthcare-to-shape-indias-healthtech-landscape-in-post-covid-world/>
- [17] <https://innovationbay.medium.com/healthtech-sector-roadmap-for-australian-startups-9cf1fb29ce3f>
- [18] <https://www.digitalhealth.gov.au/about-us/national-digital-health-strategy-and-framework-for-action>
- [19] <https://www.zdnet.com/article/australian-government-fronts-up-19-million-for-digital-health-tech-development/>
- [20] <https://medicalrepublic.com.au/our-11-most-valuable-digital-health-tech-companies/35519>

### R&D and Innovation:

- [21] <https://www.ibef.org/industry/science-and-technology.aspx>
- [22] <https://www.abs.gov.au/statistics/industry/technology-and-innovation/characteristics-australian-business/2019-20>
- [23] <http://uis.unesco.org/apps/visualisations/research-and-development-spending/>

### Cyber Security:

- [24] <https://www.dfat.gov.au/geo/india/Pages/joint-statement-comprehensive-strategic-partnership-between-republic-in-dia-and-australia>
- [25] <https://www.orfonline.org/expert-speak/priorities-for-critical-technology-cooperation-between-india-and-australia/>
- [26] <https://www.foreignminister.gov.au/minister/marise-payne/media-release/launch-australias-international-cyber-and-critical-technology-engagement-strategy>



## Indo-Australian Chamber of Commerce

'Nawazish', 4th floor, Old No. 17, New No.  
30, Khader Nawaz Khan Road  
Nungambakkam, Chennai - 600 006  
W: [www.indoaustchamber.com](http://www.indoaustchamber.com)  
E: [trade@indoaustchamber.com](mailto:trade@indoaustchamber.com)

 Indo-Australian Chamber of Commerce

 @IndoAustChamber

 Indo-Australian Chamber of Commerce

