

## Charting New Frontiers for the Singapore Economy

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*The Institute of Policy Studies (IPS) and the Committee on the Future Economy (CFE) organised a conference last week to discuss the emerging global trends in industries and markets due to technological advancements, and the possible strategies that will help Singaporeans thrive in this new environment.*

**New Frontiers: IPS-CFE Conference on the Future Economy of Singapore** was held over one-and-a-half days from 12–13 July 2016. Around 300 people from the public and private sectors, trade associations, unions and academia attended the conference. There were 35 speakers, including academics specialising in computing, engineering and entrepreneurship; business and industry leaders; and economists. They discussed how government and business policies, social attitudes, existing organisational and work practices, and the nature of higher and lifelong education will have to change to support Singapore's future economic growth.

### Panel I: Industries of the Future

Chairperson:	Speakers:		
Associate Professor Tan Kim Song, Program Director, MSc Applied Economics, School of Economics, SMU	Professor Arnoud De Meyer, President, SMU	Associate Professor John Pang, School of Mechanical and Aerospace Engineering, College of Engineering, NTU	Professor Richard Liew, Department of Civil and Environmental Engineering, Faculty of Engineering, NUS
	Professor Russell Gruen, Director, Nanyang Institute of Technology in Health and	Dr Yu Han, Lee Kuan Yew Postdoctoral Fellow, Joint NTU-UBC Research Centre	Professor Lam Kwok Yan, School of Computer Science and Engineering, College of

Medicine NTU	of Excellence in Active Living for the Elderly, NTU	Engineering, NTU
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### Summary

Speakers on the first panel attempted to forecast the future industries that will flourish in Singapore. Most of them spoke about the promise of technology in creating new industries that Singapore can tap for economic growth. Prof. De Meyer gave some suggestions on which industries should be developed to fuel sustainable economic growth in Singapore, such as block-chain technology that could transform the banking industry and high value-added manufacturing.



*Professor Arnoud De Meyer*

As technologies like 3D printing can allow more people to design, make and sell products, Assoc. Prof. John Pang said that manufacturing-customised products is a new industry that Singapore could venture into. Prof. Richard Liew suggested that in awarding tenders to construction companies, the government should look not only at cost but the value and quality of work that companies can provide, which can help local companies secure more government projects. Local construction firms stand to gain experience and build competency.

While medical technology has helped provide better healthcare to patients, Prof. Russell Gruen highlighted how advances in medical care were also driving up costs.

Policymakers would have to evaluate if the effectiveness of adopting new medical technology could justify the added cost to the healthcare budget. Recognising that more can be done to engage seniors in Singapore and to keep them active, Dr Yu suggested that crowdsourcing is the way to go, citing examples from China and Japan. Prof. Lam explained how cybersecurity is crucial to Singapore's modern economy because numerous data systems are housed in cyberspace. A compromise on cybersecurity can threaten national security.

#### Q&A session

One question that came up was: Can the growth of new industries potentially reduce Singapore's reliance on multinational companies (MNCs) and foreign labour? The general consensus was that both MNCs and small-and-medium-sized enterprises (SMEs) could co-exist. Singapore needs MNCs to tap global markets. But for some sectors, there may be a greater proliferation of small firms. For instance, smaller companies already dominate the cybersecurity industry, said Prof. Lam. Dr Yu said that crowdsourcing has disrupted big corporations and could displace some MNCs. For the construction sector however, Prof. Liew said that the government has to make concrete policy tweaks for local firms to grow.

For more on Panel I: [Key highlights](#); [visual summary](#); [video](#)

#### Panel II: Ecosystem of the Future Economy

Chairperson:  Professor Euston Quah, Adjunct Principal Research Fellow, IPS	Speakers:		
	Dr John Powers, Research Fellow, Lee Kuan Yew Centre for Innovative Cities, SUTD	Professor Loh Han Tong, Deputy President, (Academic) & Provost, SIT	Dr Walter Theseira, Senior Lecturer, School of Business, SIM University
	Dr Francis Yeoh, Professorial Fellow for Entrepreneurship, School of Computing, NUS	Associate Professor Ng Teck Khim, School of Computing, NUS	Professor David Chan, Director, Behavioural Sciences Institute, SMU

#### Summary

Speakers on the second panel talked about how institutions and work can be

redesigned to capitalise on the future economy. Dr Powers suggested that companies could benefit from being near one another and this has implications for urban planning. Prof. Loh said that the government, SMEs and workers should look into the region for opportunities. Pointing out that Singapore has not been exporting as much tradable services as other developed economies, Dr Theseira said that Singapore could look into exporting services to the region to fuel economic growth. Dr Yeoh talked about the potential of the sharing economy and suggested that one way in which the government could support its growth was to share its facilities, such as meeting rooms. Assoc. Prof. Ng said that design and invention facilities, similar to TechShop in the United States, should be made accessible to the public to encourage Singaporeans to become makers and inventors. Prof. Chan rounded up the discussion by saying that Singapore needs to have the right infrastructure and institutions, and to implement the right policies to capitalise on emerging economic trends.



*Speakers on Panel II*

### *Q&A session*

A conference participant expressed his concern that over-involvement by the public sector was leaving no space for the private sector to develop. Assoc. Prof. Ng suggested that the private companies could look into having different business models to not directly compete with the public sector. Policymakers should also provide support so that both sectors do not compete, but work in a synergistic way. Prof. Chan added that the private sector could use feedback channels to

communicate with the government when such situations arise. Dr Yeoh ended the session by pointing out that government agencies do not seek to compete, but err on the side of doing too much. The sharing economy is a good alternative to disrupt current organisational structures and allow everyone play a part in the economy.

For more on Panel II: [Key highlights](#); [visual summary](#); [video](#)

**Panel III: Future Work**

<p>Chairperson:</p> <p>Mr Jonathan Asherson, Regional Director, ASEAN &amp; Pacific, Rolls-Royce Singapore Pte Ltd</p>	<p>Speakers:</p> <p>Ms Wong Su-Yen, Chief Executive Officer, Human Capital Leadership Institute</p>	<p>Dr Luuk van Breda, Managing Director, WWBS 4 Pillars Methodology Pte Ltd and Worldwide Business Solutions Ltd</p>	<p>Professor Tan Eng Chye, Deputy President (Academic Affairs) &amp; Provost, NUS</p>
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*Dr Luuk van Breda*

*Summary*

This panel was concerned with how Singapore could transform its labour force to be future-ready. Ms Wong pointed out that bosses should constantly redefine talent according to economic needs, which do evolve. How workers can be managed and how decisions can be made within a company also needs to be rethought, said Mr van Breda, who highlighted the value that insights from all levels of staff could bring to the organisation, rather than just input from senior management. Prof. Tan said that NUS was equipping its graduates to be future-ready; among the competencies they would have acquired before leaving university are communication skills and creativity in solving real-life problems.

### Q&A Session

A participant asked if the arts have a place in the future economy. Prof. Tan replied that while the arts are important, it is crucial that Singaporeans have a strong foundation in quantitative reasoning and Science, Technology, Engineering and Mathematics (STEM). Ideally, the new employees of the future would benefit from having a mix of skills and exposure to different ways of thinking. He cited the example of data scientists, who need to have the skills to gather, capture and present data but who also need to make sense of it.

A member of the audience asked the panel what they thought were the essential skills for a 21st century manager. Ms Wong answered that there would be increasing demands for business leaders to make ethical judgements. She cited possible breaches in privacy and contentious issues in medical science such as cloning as examples.

For more on Panel III: [Key highlights](#); [visual summary](#); [video](#)

### Panel IV: Productivity and Innovation

Chairperson:	Speakers:		
Mr Manu Bhaskaran, Adjunct Senior Research Fellow, IPS	Dr Alpesh Patel, Director, McKinsey Innovation Campus, McKinsey & Company	Professor Ivan Png, Distinguished Professor, NUS Business School	Mr Sanjeev Sanyal, Economist and Urban Theorist



*Speakers on Panel IV*

### *Summary*

With Singapore scoring low on innovation efficiency and needing to rely on productivity growth to fuel future economic growth, this panel was convened to speak about how to enhance productivity and innovation in Singapore. Dr Patel talked about how companies could tap on the Fourth Industrial Revolution to improve business models and enhance efficiency in their operations. Pointing out how current systems disincentivise companies to be more efficient, Prof. Png said that introducing more competition into Singapore's economy might be the way to greater productivity. Dr Sanyal ended the panel with a provocative idea. He said that Singapore can be a “second mover” — it can be an observer and learn from best practices elsewhere before adopting them and tweaking them to suit the Singapore context. This however, should be balanced with support for industries to experiment with new technologies.

### *Q&A Session*

Several people reacted to Dr Sanyal's presentation. A member of the audience said that as the product innovation life cycle gets shorter, it might be harder for the “second mover” to catch up. He added it often takes too long for policymakers to react to trends, design responsive policies and implement them — and that puts Singapore at higher risk of not catching up with the “first mover”. Another person said some companies need to be forerunners in their field to benefit Singapore's

economy. In response, Dr Sanyal agreed that companies can be “first movers” in their respective fields, but, as Singapore cannot afford a situation like Detroit where huge investments on specific infrastructure did not pay off, it might be more prudent to be a “second mover” in some instances. He did, however, acknowledge that Singapore would have to be flexible and nimble to be able to catch up with new innovations.

Someone asked why companies are not tapping new technology to improve business functions even when they have the resources to do so. Dr Patel suggested that it might be because there is no clear business case for it just yet; companies may not know exactly how to implement new technology. It could also be that companies are waiting for the costs of gadgets, for instance high-end sensors, to decrease.

A participant picked up on a point that Prof. Png had made, on regulations favouring innovators. He disagreed and felt that regulations favoured the incumbent instead, pointing to the example of Uber, which taxi companies are unhappy with. He said that existing regulations hinder innovation. Prof. Png acknowledged that existing regulations tended to favour parties that can take action collectively; in the case of Uber, individual taxi drivers are less likely to be able to organise themselves, thereby losing out. Dr Patel added that companies should be given a safe space to experiment, fail and learn from mistakes.

**For more on Panel IV: [Key highlights](#); [visual summary](#); [video](#)**

#### **Panel V: Globalisation and Regionalisation**

Chairperson:	Speakers:		
Dr Faizal Bin Yahya, Senior Research Fellow, IPS	Dr Deborah Elms, Executive Director, Asian Trade Centre	Dr Francis Hutchinson, Senior Fellow & Coordinator, Regional Economic Studies Programme, ISEAS-Yusof Ishak Institute	Dr Nungsari Ahmad Radhi, Managing Director, Prokhas Sdn Bhd

#### *Summary*

As a small and open economy, Singapore has to be keenly aware of economic opportunities and threats in the region. Dr Elms spoke about how the Trans-Pacific Partnership (TPP) could potentially benefit Singapore, but reminded the audience that these benefits are not automatic; companies will have to position themselves



strategically to reap those benefits. Speaking about the economic relations between Singapore, Malaysia and Indonesia, Dr Hutchinson suggested that investing more in Johor and the Riau Islands could be a source of economic growth for Singapore. Dr Nungsari pointed out that with better transport links between both countries, e.g., the High Speed Rail between Singapore and Kuala Lumpur, both Singapore and Malaysia could stand to gain.



*Dr Francis Hutchinson's presentation*

### Q&A Session

The audience discussed the implications of the TPP extensively. A participant asked if there were already too many Free Trade Agreements (FTAs). Dr Elms said that the TPP is not just an ordinary FTA — it has huge potential to alter global supply chains. Industries that are not usually included in FTAs (e.g., medical services) are included in the TPP, which opens up possibilities for Singapore companies to set up clinics in member countries. On whether the TPP would result in an influx of foreign labour and competition from foreign firms, Dr Elms said that local regulations would prevent that from happening. For instance, foreign doctors who would like to practise in Singapore need a local license.

A participant asked if the TPP project is in jeopardy since both frontrunners in the US Presidential Election, Hillary Clinton and Donald Trump, are not in favour of the TPP. In response, Dr Elms said that the Singapore government has been pushing for the TPP, but the agreement has run into headwinds that few have anticipated. She

added that the TPP would likely take effect in the near future, provided that Mr Trump does not become the US President.

A participant asked about the lessons that Singapore could draw from Brexit. Dr Hutchinson expressed worry that other countries would take their cue from the United Kingdom and become less open to free trade. This could hurt Singapore, which is highly reliant on trade.

For more on Panel V: [Key highlights](#); [visual summary](#); [video](#)

**Panel VI: Responding Together**

<p>Chairperson: Mr Chaly Mah, Chairman, Singapore Accountancy Commission</p>	<p>Speakers: Ms Janet Ang, Vice-President, Industry Solution Sales Team, IBM Asia Pacific &amp; IBM Industry Academy Member</p>	<p>Mr Edwin Khew, Chairman, Sustainable Energy Association of Singapore</p>	<p>Mr Patrick Tay, Assistant Secretary- General, National Trades Union Congress</p>
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*Ms Janet Ang and Mr Edwin Khew*

*Summary*

The panellists focused on the role of different parties, namely, the government, associations and the labour movement, in the future economy. Ms Ang said the government needs to coordinate the efforts of different institutions (businesses, workforce, educational institutions, etc.) so that they can collectively contribute to Singapore's economic goals. Trade and business associations could be partners of the state in growing the competencies of different sectors, said Mr Khew as they could provide training and networking opportunities to businesses. Mr Tay said that Singapore's future economy should leverage on the unique synergy between workers and employers made possible by tripartism in Singapore.

### Q&A Session

Participants were concerned with how to achieve inclusive growth where no one is left behind, amidst rising inequality worldwide and public dissatisfaction with the Establishment. A participant questioned if the NTUC represented foreign workers. Mr Tay responded that the NTUC does represent foreign workers in collective bargaining and helps them negotiate for better salaries, bonuses and public healthcare benefits. Another participant asked about the efforts to instill pride in every profession. Mr Khew cited the progressive wage model as a scheme that can help raise the profile of different professions. He also proposed that the upgrading of skills through SkillsFuture could help to professionalise each sector.

For more on Panel VI: [Key highlights](#); [visual summary](#); [video](#)

### Dialogue with the CFE members

Chairperson: Mr Lee Tzu Yang, Member, Academic Panel, IPS	Speakers: Mr S Iswaran, Co-Chairman, Committee on the Future Economy, & Minister for Trade and Industry (Industry)	Ms Goh Swee Chen, Chairman, Shell Companies in Singapore	Mr Cesar Sengupta, Vice President, Product Management Google	Mr Mark Lee, Chief Executive Officer, Sing Lun Holdings Limited
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### Summary

Members of the audience engaged the panel in robust discussion. Someone made the comment that the government gives selective help to certain companies and that this is akin to "picking winners". Mr Iswaran responded that as resources are limited, the government has to be strategic about which sector and business to invest in. It evaluates its decisions based on trends and also the capabilities of business players, but is always open to new ideas and will support those with promise. Another

member of the audience asked if the government should leave it to the market to decide which businesses should be supported. Explaining that the market might be only interested in the commercial potential of innovations, Mr Iswaran said that the government takes into account a range of factors in deciding which businesses to support. However, space is provided for businesses to experiment and pilot test their products.

A participant asked if there are resources and help for start-ups to grow. Mr Lee responded that there are more than enough resources for viable business models that can be scaled up. He also encouraged start-ups to build a good team and be open to expanding overseas. Mr Sengupta suggested that many innovations could be quickly scaled up with technology. He cited the example of Pokémon GO, the smartphone game that has sparked a worldwide craze.



Minister S Iswaran and the CFE members

As innovation is a huge part of the future economy, a participant asked how other sectors, such as education and the arts, could help instill a spirit of innovation. Mr Iswaran cited how partnerships between various sectors and different companies can be conducive for innovation. He added that students should not be afraid to try new things, even if they fail. Ms Goh also reminded the audience that innovations usually stem from using a creative way to address a need.

Participants were also concerned with the relationship between foreign and local workers. One participant asked if locals would be upset if more resources were used to upgrade the skills of foreign workers to increase productivity. Mr Iswaran

explained that the future economy will need a mix of foreign and local workers, and employers may want to hire foreign workers who already have the right skill sets. Another participant asked how the unhappiness that local workers feel towards foreign workers could be addressed. Mr Iswaran encouraged locals to rise above the differences. Assuring the audience that the government will ensure that locals are treated fairly in the workplace, he suggested that the long-term solution to this issue is to find a common spirit and endeavour that all workers share.

For more on the Dialogue: [Key highlights](#); [visual summary](#); [video](#)

Read the [executive summary of conference discussions](#) and view [presentation slides](#) by the speakers

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