In 2018, the Association of Pacific Rim Universities (APRU) invited member universities, including the National University of Singapore (NUS), to undertake a research and publication project on “Automation and the Transformation of Work in Asia-Pacific in the 21st Century”. The report was published at the end of 2018, and a series of dissemination events was held in Hong Kong, the Philippines and South Korea attended by academics, policymakers and business leaders. Singapore’s dissemination event was held on 11 July 2019 and subsequent events are being planned for Indonesia.

Participants of the Dissemination Event including the speakers in the first row

With its international secretariat located at the Hong Kong University of Science and Technology, APRU is a network of leading universities linking the Americas, Asia and Australasia. APRU is the Voice of Knowledge and Innovation for the Asia-Pacific region, collaborating on effective solutions to the challenges of the 21st century.
The event in Singapore was opened for media coverage. Dr Faizal bin Yahya, Senior Research Fellow at IPS contributed Chapter 6 in this report, which highlighted the advances Singapore has made in introducing digitalisation in its economy and offered suggestions on future related initiatives. This report also emphasised the need for greater synergy between academia and industry to help workers remain employable.

**REPORT OVERVIEW**

The report discusses the uncertainty surrounding human capital development and employment in the age of the digital economy. The employment market is likely to experience large displacement of workers not only in the unskilled or repetitive and routine segments, but also in PMETs due to the advancement in artificial intelligence.

As industry prepares for the disruption and creation of new opportunities, companies that lack the necessary skills for automation, and the organisational structure and processes needed for digital transformation, will be driven out of business. However, the impact on industry will vary according to different sectors. The shift in skills required will also increase income disparity between workers with high-demand skills and low-demand skills.

The first part of the report explores the history, evolution and impact of technological changes on industry and society. The second part examines the social benefits of automation and the cultural impact of automation, especially on the quality of work and life. The third part highlights the impact of automation on future employment and the need to prepare the future workforce through redeploying, retraining and reskilling. Focusing on Singapore, the penultimate chapter discusses the challenges to worker reskilling and upgrading efforts and the effectiveness of government skills and grants in helping them to do so. In addition, the chapter examines whether graduates have the required relevant skills for industry and focuses in particular on the retail and information and communication sectors. In conclusion, the report outlines policy recommendations regarding future employment in areas such as education, healthcare and industry.

**DISCUSSION**

The key themes behind the ensuing discussions after the presentations clustered around mindset shift and industry transformation. Most participants agreed that it was important to have digital leaders within organisations to promote digital transformation in the workplace in an organic and non-hostile manner. It was noted that that people were unaware of the disruptions that were occurring. As such, most workers were unprepared when these disruptions impacted their work or displaced them.

It is also important to acclimatise people with transformation in the work environment. There has been an accelerated growth in technology advancements to the point that pessimism tends to dominate the minds of most workers and fearful that they might be automated away. It is, therefore, necessary to equip workers with industry relevant new skills that are needed for the digital economy.
The training of workers necessitates the transformation of educational institutions. Graduates now need to be equipped with broader skillsets to promote flexibility and agility in a transformative landscape. Computational skills are necessary in most fields such as human resources but must be taught in a way where there is buy-in from the staff themselves.

The report is available for download here.

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If you have comments or feedback, please email ips.update@nus.edu.sg