



中华人民共和国科学技术部  
Ministry of Science and Technology of the People's Republic of China



## INTERNATIONAL CONFERENCE ON EMERGING FOURTH INDUSTRIAL REVOLUTION (4IR) TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT

22<sup>nd</sup> July 2021

Guangzhou, China (Virtual mode)

### Organizers:

- Department of International Cooperation of the Ministry of Science and Technology, People's Republic of China
- Asian and Pacific Centre for Transfer of Technology (APCTT), United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

### Host:

- Asia-Pacific Regional Innovation Knowledge Network for 4<sup>th</sup> Industrial Revolution Technologies (APRIKNET-4IR) and Secretariat Office at Guangzhou University, People's Republic of China

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### BACKGROUND

Advancements in science, technology and innovation (STI) over last few decades have led to large-scale digital transformation of industrial manufacturing and processing across the world. In recent years, this transformation has been largely driven by the Fourth Industrial Revolution (4IR) technologies such as artificial intelligence (AI), Internet of Things (IoT), robotic operating systems, high-performance computing, 3D printing, machine learning, blockchain and Big Data. Robotic operating systems and high-performance computing have shown the potential for high-speed development of COVID-19 drugs.

The Asia-Pacific region hosts some of the fastest growing economies in the world. It also faces critical developmental challenges across socioeconomic sectors. To address these challenges, the 4IR technologies offer innovative solutions and opportunities towards supporting the Sustainable Development Goals (SDGs). According to a study by the World Economic Forum, 70% of the 169 targets under the SDGs could be enabled by existing 4IR technology

applications<sup>1</sup>. However, the advancement of 4IR technologies faces limitations including inadequate capacities, research and development (R&D) infrastructure and commercial incentives for scaling. R&D collaboration among universities, research institutions and laboratories are crucial to unlock the potential of innovative 4IR technologies and up-scale them for commercialization and adoption across the region.

The role of governments is vital in providing the enabling environment through policy frameworks, institutional support and investment mechanisms for the development of innovative 4IR technologies. This includes support for breakthrough innovations and commercialization through interventions such as targeted R&D funding, tax incentives and technical advisory support.

Facilitating regional R&D cooperation and strengthening of collaborative networks can support faster innovation and diffusion of 4IR technologies. Sharing of experiences of national strategies and good practices for collaborative R&D, innovation, cross-border technology transfer and diffusion can be vital in promoting the 4IR technologies. It is important to identify policy strategies to facilitate regional cooperation for developing 4IR technology-based solutions to address sustainable development challenges.

This international conference will provide a platform to deliberate on the challenges, strategies and good practices for collaborative innovation of 4IR technologies. It will also facilitate discussion on fostering regional cooperation and role of collaborative networks from the Asia Pacific region for diffusion of these technologies.

## **OBJECTIVES**

- Explore innovative strategies for cross-border R&D collaboration among universities and research institutions & laboratories to promote innovative applications of 4IR technologies in the Asia-Pacific Region.
- Enhance awareness on the good practices and measures on innovation, technology transfer and application of emerging 4IR technologies.
- Provide policy recommendations to facilitate regional cooperation for developing innovative 4IR technologies to address sustainable development challenges

## **PARTICIPANTS**

The participants at this virtual conference will include representatives from the universities, national laboratories and industrial and research organizations engaged in 4IR technology innovations as well as policymakers from the Asia-Pacific region.

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<sup>1</sup>[http://www3.weforum.org/docs/Unlocking\\_Technology\\_for\\_the\\_Global\\_Goals.pdf](http://www3.weforum.org/docs/Unlocking_Technology_for_the_Global_Goals.pdf)