



COMMITTEE ON
TRADE, INVESTMENT,
ENTERPRISE & BUSINESS
INNOVATION



Agenda item 6

Promoting regional cooperation in new and emerging technologies to achieve sustainable development

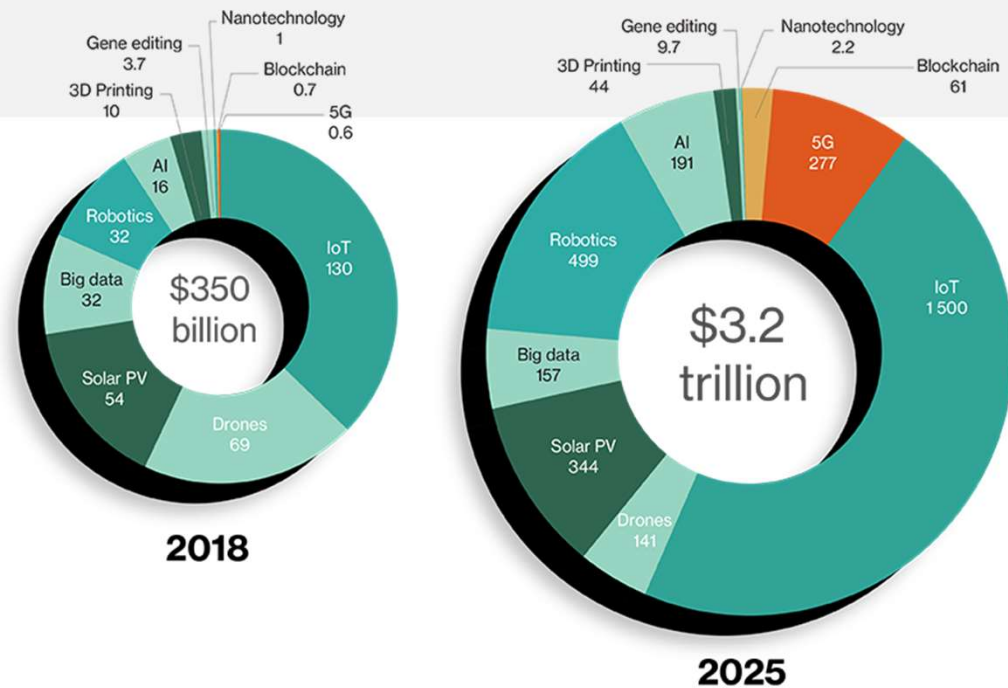
**Asian and Pacific Centre for Transfer of Technology
of the Economic and Social Commission for Asia and the Pacific**

Introduction

New and emerging technologies, incl. 4IR technologies, are important for progress towards SDGs

Rapid growth in development & utilization of technologies, with increase in market size

Asia-Pacific – comprises innovative countries; showed dynamic innovation performances & advances in innovation indicators (Global Innovation Index 2022)



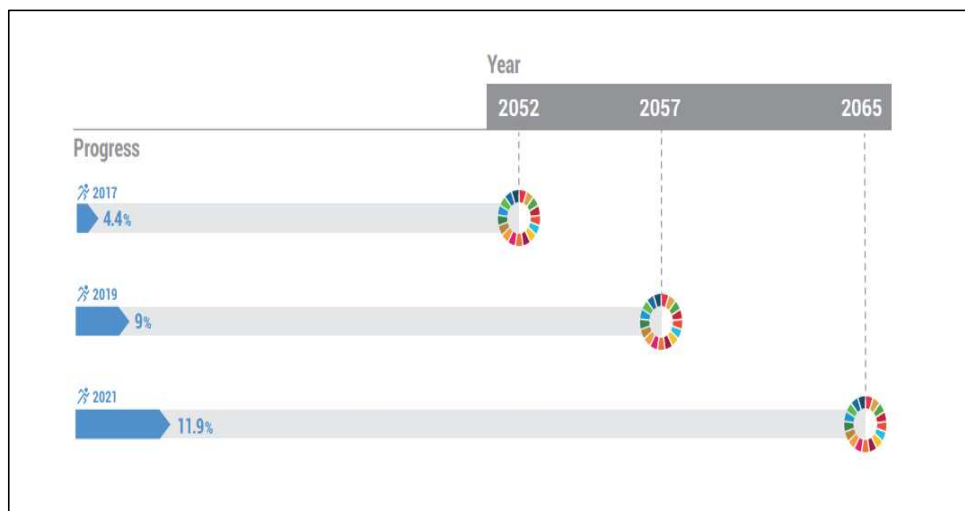
11 technologies represent \$350-billion market (by 2025 could be > \$3.2 trillion)

AI, IoT, Big data, Blockchain, 3D printing, Robotics, Drones, Gene editing, 5G, Nanotechnology, Solar PV

(Source: *Technology and Innovation Report 2021, UNCTAD*)

Technologies and SDGs

At the current pace, the region will not achieve the SDGs until **2065**.



(Source: Asia and the Pacific SDG Progress Report, 2022. ESCAP)

- Development, diffusion, transfer of new and emerging technologies can be harnessed for environmental, social, economic benefits
- **70% of the 169 targets** underpinning the SDGs could be enabled by 4IR technologies. (Source: Unlocking Technology for the Global Goals 2020, WEF)
- For example:
 - AI enabled smart solar energy systems, intelligent motors, 5G wireless systems networks, cloud-based control centres
 - Machine learning techniques for accurate rainfall and climatic predictions, Drone-based solutions for sustainable agriculture

Technology innovation, development and absorption

Capacity-related constraints

- Shortage of skilled technical personnel in new and emerging technology areas
- Infrastructure constraints

Structural constraints

- Low resource base of MSMEs to adopt new and emerging technologies
- Technical, organizational, economic & system barriers to technology transfer and adoption
- Inadequate policy and legal frameworks, especially for intellectual property
- Weak government and private programme delivery mechanisms for technology promotion

Institutional constraints

- Weak interlinkages within NIS for synergistic development & scaling up of technologies
- Inadequate institutional support mechanisms for scaling up of technologies

Role of regional cooperation

Action needed

- Planning well-formulated strategy for increased usage of new and emerging technologies
- Strengthening institutional and digital infrastructure
- Strengthening R&D, innovation and demonstration
- Augmenting financing for the scaling up of innovations and commercialization
- Addressing issues of safety and data set related protocols
- Supporting workforce through capacity-building, training, exchange programmes
- Establishing multi-stakeholder partnerships and collaborations

Work of the secretariat on promoting new and emerging technologies to meet SDGs (2021-2022)

□ Regional technology cooperation strengthened

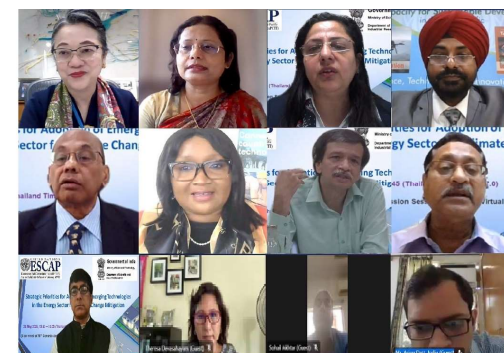
- ✓ 5 consultative meetings
- ✓ **Focus** - Health-care biotechnology & biomedical technologies; Techno address the COVID-19; Emerging energy technologies for climate change mitigation; industry-academia-government collaboration

□ Innovation and technology transfer capacity enhanced

- ✓ 13 demand-driven capacity-building activities
- ✓ **Focus** – 4IR technologies; Decentralized power plants & smart grids; technologies to address climate change and COVID-19; Air pollution control technologies, IP management, renewable energy and circular economy

□ Technology intelligence enhanced

- ✓ **Focus** – analytical work & knowledge products
 - Asia-Pacific Tech Monitor
 - Guidebook on Intellectual Property Management; Theme papers on 4IR technologies for SDGs



Strategic Priorities for Adoption of Emerging Technologies in the Energy Sector for Climate Change Mitigation (side event at the seventy-eighth session of the Commission), 24 May 2022, Bangkok and online

Work of the Secretariat – Capacity building on new & emerging technologies

Series of international conferences and capacity building events

- Workshop on Emerging technologies to respond to climate change, 2021, China
- Conference on 4IR Technologies for Sustainable Development, 2021, India
- Expert group meeting on Strengthening regional cooperation in health care biotechnology and biomedical sector, 2022, online
- Side event on Strategic Priorities for Adoption of Emerging Technologies in the Energy Sector for Climate Change Mitigation, 2022, 78th Commission session, online
- Conference on Innovation, Transfer and Diffusion of 4IR Technologies, 2022, China
- Industry-academic-government consultative meeting to address challenges of the energy sector, 2022, Delhi and online

Recommendations

- Strengthening stakeholders' capacities to develop & effectively utilize new and emerging technologies
- Redesign educational curriculum , reskilling and upskilling of workforce
- Promoting innovation through incubators, collaborative platforms
- Knowledge sharing & partnerships for regional cooperation

APCTT's Strategic Plan (2023-27): Enhanced cooperation for adoption, diffusion & transfer of innovative and emerging technologies in the Asia Pacific region for addressing climate change and achieving SDGs

Issues for consideration by the Committee

- Identify the types of support that may be needed to advance the promotion of new and emerging technologies for sustainable development in the region
- Make recommendations to advance the promotion of these technologies for sustainable development in the region
- Identify new and priority policy issues related to new and emerging technologies and support member States in the promotion of such policies for the rapid absorption of the same

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