INTERSESSIONAL PANEL OF THE UNITED NATIONS COMMISSION ON SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (CSTD)

Geneva, Switzerland
17-19 November 2021

Contribution by United Kingdom

to the CSTD 2021-2022 priority theme on "Industry 4.0 for inclusive development"

PRIORITY THEME 1: Industry 4.0 for inclusive development

United Nations Commission on Science and Technology for Development (CSTD)

Dear CSTD member,

As you are aware, the CSTD 24th annual session selected "Industry 4.0 for inclusive development" as one of the priority themes for its 25th session (2021-22 period).

This priority theme is directly relevant to SDG 9 on industry, innovation and infrastructure. As highlighted by the Technology and Innovation Report 2021, we live at the beginning of a new technological revolution around Industry 4.0 technologies such as AI, robotics, Internet of Things, and blockchain. The way to be prepared to benefit from Industry 4.0 is by promoting the use, adoption, adaptation, and development of technologies associated with this new technological wave. This priority theme will focus on the challenges and prospects for developing countries to pursuit an industrialization path considering the emergence of Industry 4.0. This may include the possibility of bypassing intermediate stages of technology that other countries have historically passed in their development process, often referred to as "leapfrogging". The priority theme will cover the impact of this new technological revolution on the traditional channels for technological learning, and innovation in developing countries, including FDI and participation in Global Value Chains. It will examine the opportunities for "leapfrogging". It will also consider the role of public policies in enabling vulnerable groups and communities to benefit from Industry 4.0, including through better and more equitably accessible jobs.

Questions to be addressed include: How can developing countries take advantage of the window of opportunity presented by the Industry 4.0 technologies for technological upgrading and catch up? What can countries do to ensure that Industry 4.0 does not increase inequality? What is the role of international cooperation in facilitating this process?

The CSTD secretariat is in the process of drafting an issues paper on the theme to be presented at the CSTD inter-sessional panel meeting on 17-19 November 2021. In this context, we would like to solicit inputs from the CSTD members on this theme. We would be grateful if you could kindly answer the following questions based on your experience from your country or region.

1. What are the national strategies, policies, laws, programmes and initiatives concerning Industry 4.0 in your country?

   The UK Department for Digital, Culture, Media and Sport (DCMS) is assessing the UK cyber security regulatory framework that applies to the buyers (local and regional authorities, and / or other public sector organisations procuring connected places technology and using the resulting data to deliver local services), suppliers (private organisations that are operators and / or manufacturers of technology and services), and specific technologies and services (for example, CCTV surveillance) operating in UK connected places.

   There are existing regulations in the critical infrastructure space (network and information systems (NIS) as an example) and the consumer protection space.

2. What are the key industries that are pioneer Industry 4.0 innovation in the country? List the key actors in the national ecosystem of innovation related to Industry 4.0 in your country (firms, universities, financial institutions, regulators)? What are the key networks of the ecosystem in your country (including online networks, innovation hubs, forums, etc.)?

   Academia, industry groups such as TechUK and others, government departments such as DCMS and BEIS, Catapult Centres (that promote research and development through business-led collaboration between scientists and engineers to exploit market opportunities), and industry and regulators (Ofcom, Ofgem etc)

Innovation hubs (districts, corridors and quarters – further information found here: https://cp.catapult.org.uk/news/hubs-of-innovation-report/)

3. What are the challenges that your government have faced or may face for promoting Industry 4.0 in your country to contribute to national development priorities and accelerate the progress towards the SDGs?

   Difficulties in proving business cases and return of investment , and that the new emerging applications of these technologies perform according to expectation. Many areas are not yet regulated so there is some cautiousness from those seeking use of such services.

4. What should governments, the private sector, labour unions and other stakeholders do so that developing countries can benefit from these technologies?

5. What actions can the international community, including the CSTD, take to help your country take advantage of Industry 4.0 for inclusive and sustainable development?

   Share more robust business cases as examples of success

6. Could you suggest some contact persons of the nodal agency responsible for projects/policies and international collaboration in this context as well as any experts (from academia, private sector, civil society or government) dealing with projects in this area? We might contact them directly for further inputs or invite some of them as speakers for the CSTD inter-sessional panel and annual session.

   Matt Hewitt (matthew.hewitt@dcms.gov.uk) in the Secure Connected Places team works with international collaboration

   The Digital Catapult and Connected Places Catapult

7. Do you have any documentation, references, technological assessments, future studies or reports on the priority theme in your country or region?

   Future of technological innovations and the role of regulation - August 2021

   This paper captures opinions on the future socio-economic context within which technological innovations will be delivered from 2021 to 2030 including:

   - how innovations might shape that content
   - what could be done to bring about a preferred future
   - how regulation can act as an enabler

   Read the paper on the future of technological innovations and the role of regulation.

   https://dcms.shorthandstories.com/Our-Ten-Tech-Priorities/index.html

   https://www.weforum.org/centre-for-the-fourth-industrial-revolution

Please send your responses and any further inputs on the theme to the CSTD secretariat (stdev@unctad.org) by 6 September 2021. We look forward to receiving your valuable inputs.

Sincere regards,

CSTD secretariat