Technology, Digitalization, Artificial Intelligence – Curse or Blessing for Sustainable Development?

22 MARCH 2019, 10:00-11:25
Plenary Room, International Conference Centre Geneva (CICG)

OBJECTIVES

The way we will live, work, socialize, will undergo drastic transformations under the impact of emerging technologies, which will open new possibilities but also raise challenges for sustainable development.

This Focus Event, as part of the 2019 Regional Forum on Sustainable Development for the UNECE Region, will seek a broad dialogue among multiple stakeholders on:

- How can we harness the potential of technology, digitalization and artificial intelligence to accelerate the transformation towards sustainable development? What are the critical policy issues?

- What are the main challenges we face? How existing pitfalls and negative aspects can be avoided or mitigated?

- What is the role of cooperation and dialogue – both within and across countries – in ensuring that the right policy choices are made so the potential benefits of technological development are widely shared? How can we facilitate this cooperation and what should be its primary focus?

BACKGROUND

ICT-led technological change holds great promise

Information and communication technologies (ICTs) form the backbone of today's digital economy and have enormous potential to *fast forward* progress on the SDGs and improve people's lives in fundamental ways. Emerging technologies like Internet of Things, Artificial Intelligence, together with high speed broadband connectivity, create new avenues for addressing global challenges in the fields of education, employment, inequalities, climate change andgovernance.

New types of learning are made possible

ICTs are powering a revolution in digital learning, which has become one of the world's fastest-growing industries. Mobile devices now allow students to access learning assets anytime, anywhere. Teachers are now using mobile devices for everything from literacy and numerical training to interactive tutoring. Indeed, mobile learning has the ability to help break down economic barriers, divides between rural and urban, as well as the gender divide.

The future of work is being transformed

ICT skills have already become a prerequisite for almost all forms of employment, and ICT capacity-building must therefore be prioritized in national youth employment and entrepreneurship strategies in all countries. It is not simply that most jobs and businesses now require ICT skills, but also that ICTs themselves are transforming the way business is being done everywhere and creating new employment opportunities. For instance *Digital Skills for Jobs Campaign* of the Global Initiative on Decent Jobs for Youth, encourage countries to invest in youth by developing their digital skills as a win-win strategy, i.e. addressing the skills gap by increasing young people's employability, creating quality jobs, and sparking innovation across all sectors in the digital economy.

ICTs can help to address some sources of inequality

ICTs have the potential to help reduce inequality both within and between countries by enabling access to information and knowledge to disadvantaged segments of society – including those living with disabilities, as well as women and girls. However, by the end of 2018, almost half of the world's population were not yet using the Internet and access was uneven between genders and geographically. Reducing inequalities cannot be achieved without addressing these underlying issues. So the challenge is not only about improving access to the internet, but also looking into how can countries be supported to leapfrog and reap the benefits of the fourth industrial revolution, while reducing socio-economic inequalities between countries.

Technological change and ICTs can provide effective solutions to tackle climate change

ICTs, including satellite monitoring, play a crucial role in earth monitoring, sharing climate and weather information, forecasting, and early warning systems. ICTs therefore enable both the global monitoring of climate change as well as strengthen resilience by helping mitigate the effects of climate change through forecasting and early warning systems.

When natural or man-made disasters occur, ICTs are crucial in obtaining, communicating and transmitting accurate and timely crisis information, allowing appropriate responses to be made. In the future, big data analysis and data mining should allow better use of the vast amount of data that is already openly accessible online.

The deployment of ICTs can lead to increase efficiency in the management of transport and energy systems while increasing the quality of life and promoting economic development in "smart cities", as advocated by the UN initiative on "United for Smart Sustainable Cities" (U4SSC). For instance, environmental footprint of buildings, which contributes about a third to greenhouse gas emissions, can be significantly reduced by integrating smart systems and deployment of mandatory standards.

ICTs can be used to facilitate public participation

ICTs can play an important role in crisis management, humanitarian aid and peacebuilding, and have proved to be a powerful aid in areas such as electoral monitoring. The growing use of open data by governments increases transparency, empowers citizens, and helps driving economic growth. ICTs are also essential in terms of record-keeping and tracking government

data and local demographics. Big data analysis can be also used as strategic guidance for policy makers.

But technological developments also create challenges and raise risks

Even though the spread of new ICTs is seen as the source of positive impact on sustainable development, they may also be a source of risks that require policy responses. Technological change, including the impact of Artificial Intelligence, may exacerbate inequality trends and create new divisions. Data protection, privacy, online protection, especially of vulnerable groups (e.g. children, persons with disabilities), ethics in AI, power of algorithms, negative social habits, including internet/screen addiction, among others are also of great concern. Therefore elaboration and timely implementation of right enabling environments (i.e. policies, strategies, regulatory frameworks,) are key to ensuring that the contribution of ICTs to the sustainable development is positive and leaves no one behind.

ORGANIZERS

This focus event is organized by the International Telecommunication Union (ITU), in cooperation with the Food and Agriculture Organization (FAO), the United Nations Development Programme (UNDP), World Health Organization (WHO) and the United Nations Economic Commission for Europe (UNECE).

PANEL

Setting the Context and Moderation

- **Ms Doreen Bogdan**, Director of Telecommunication Development Bureau, ITU

Special Remarks

- **H.E. Ambassador Janis Karklins,** Permanent Representative of Latvia to the United Nations in Geneva and Chairperson of the Economic Commission for Europe

Panellists

- **Mr Derek O'Halloran,** Head, Digital Economy & Society, Member of the Executive Committee, World Economic Forum
- **Mr Reinald Kruger**, Vodafone Group Public Policy Development Director, Vodafone
- **Ms Amela Odobašić**, Head of Public Affairs, Communications Regulatory Agency of Bosnia and Herzegovina
- **Dr Francois Grey,** Director of the Geneva Tsinghua Initiative, a Comprehensive Education Programme for the UN Sustainable Development Goals, and Director of Digital Strategy for the University of Geneva

Meet Speakers

Mrs Doreen Bogdan-Martin, Director, Telecommunication Development Bureau, International Telecommunication Union (ITU)

Doreen Bogdan-Martin was elected Director of the ITU Telecommunication Development Bureau on the 1st of November 2018. She took office on the 1st of January 2019. She is a strategic leader with 30 years of high-level experience in international and inter-governmental relations. She has a long history of success in policy and strategy development, analysis and execution. From 2008-2018, Ms Bogdan-Martin led the Strategic Planning & Membership Department of ITU. Ms Bogdan-Martin was responsible for the organization's strategic planning processes, while also overseeing the organization's Membership, Corporate Communications and External Affairs teams, the work of the United Nations Broadband Commission for Sustainable Development. She also served as Coordinator of United Nations affairs for the organization, putting ITU at the center of digital aspects of sustainable development. Ms Bogdan-Martin has advised governments from around the world on policy and regulatory reform measures. She has organized impact-driven global conferences with thousands of participants from 150+ countries, brokered international consensus on many critical issues, and is a regular presenter at high-level international forums and summits. As part of this important work, she was one of the principal architects of the annual Global Symposium for Regulators, directed ITU's first global youth summit #BYND2015, and is currently driving ITU latest high-profile initiative – EQUALS, the Global Partnership for Gender Equality in the Digital Age. Ms Bogdan-Martin previously headed the Regulatory and Market Environment Division of the Telecommunication Development Bureau and was responsible for the programmes on Regulatory Reform and Economics and Finance. Prior to joining ITU, she was a Telecommunications Policy Specialist in the National Telecommunication and Information Administration (NTIA), US Department of Commerce. With a Master's degree in International Communications Policy from the American University in Washington, DC, Ms Bogdan-Martin completed post-graduate certification in Strategies for Leadership at the Institute for Management Development in Lausanne, Switzerland. She is also certified in Accountability and Ethics by the United Nations Leaders Programme. Additionally, Ms Bogdan-Martin is an affiliate of the Harvard University Berkman-Klein Center for Internet and Society, currently serves as the Co-Chair of the United Nations Strategic Planning Group, Chair of the Academic Council for the Swiss Network for International Studies, and is a member of the Board of Governors of the UN Staff College. She is also an amateur radio operator. Ms Bogdan-Martin is married with four children.

Ambassador Janis Karklins, **Permanent Representative of Latvia to the United Nations in Geneva and Chairpersion of the Economic Commission for Europe**

Ambassador Janis Karklins currently is the Permanent Representative of Latvia to the United Nations in Geneva. He also has served as the Latvian Ambassador to France, Andorra, Monaco and UNESCO, the Director of the NATO Center of Excellence for Strategic Communications, as well as the Assistant Director General of Communication and Information of UNESCO. During his first stay in Geneva he presided over the Preparatory Committee of the Tunis Phase of the World Summit on the Information Society. Currently he chairs the WIPO General Assembly. Ambassador Karklins chaired the Governmental Advisory Committee of ICANN from 2007 until June 2010, at the same time being the GAC liaison to the ICANN Board of Directors. In 2014 the UN Secretary General appointed Ambassador Karklins to be the Chair of the Multi-stakeholder Advisory Group of the Internet Governance Forum for two year term. Ambassador Karklins holds an engineering degree from the Riga Technical University and attended an Executive Education Program for Eastern European diplomats at the Hoover Institute at Stanford University.

Derek O'Halloran, Head, Digital Economy & Society, Member of the Executive Committee, World Economic Forum

Derek is a member of the Executive Committee and leads the Digital Economy and Society programme at the World Economic Forum. This provides a platform for multistakeholder collaboration to accelerate progress towards an inclusive, trustworthy and sustainable digital world. He is also responsible for the digital technology industries. Derek previously worked in the technology and services industries across the Asia, the United States and

Europe, serving both private and public-sector clients. Derek holds an MPA in International Finance and Economic Policy from the School of International and Public Affairs at Columbia University and an MA Hons in Philosophy from the University of Edinburgh and is a graduate of the Global Leadership Fellows Programme at the Forum. He is co-author of "Beyond Cybersecurity: Protecting Your Digital Enterprise" (Wiley, 2015).

Mr Reinald Kruger, Vodafone Group Public Policy Development Director, Vodafone

Reinald Krüger is the Vodafone Group Public Policy Development Director, based in London, UK. Prior to joining Vodafone Group in 2018, he held different management positions with the European Commission, in the Directorate-Generals for Industry, for Competition and for Communications Networks, Content and Technology. Until 1995, Reinald was Head of the Research Group "Industrial Economics and Competition Policy" at the HWWA-Institute in Hamburg. He was also a Consultant with the US Federal Trade Commission (FTC) in Washington, D.C. (1989) and a Competition Expert to the World Bank (1990). Reinald is an economist by training and author of more than 30 publications in the areas of industrial economics, competition policy and transition economics.

Ms Amela Odobašić, Head of Public Affairs, Communications Regulatory Agency of Bosnia and Herzegovina

Ms. Amela Odobašić heads the Public Affairs Division of Communications Regulatory Agency of Bosnia and Herzegovina since 2001. She also works as communications and regulations specialist nationally and internationally. Some of the countries she worked in, beside Bosnia and Herzegovina, included Iraq, Afghanistan, Somalia, Kenya, as well as those of the Western Balkans. On behalf of Bosnia and Herzegovina, Amela acts as Designated Focal Point for relations with the International Telecommunications Union. In 2014, she was appointed Co-rapporteur for the Study Group 1 Question 7 "Access to telecommunications/ICT Services by persons with disabilities and other persons with specific needs," and in 2018, its Rapporteur. Besides, Amela is a Vice-Chair to ITU Study Group 1 for the mandate 2018-2021. Nationally and internationally she devises and implements advocacy campaigns and delivers training courses on ICT accessibility on behalf of ITU. She believes that by joining forces in creating the accessible ICT ecosystem, the stakeholders can ensure digital and social inclusion not only for persons with disabilities but for all citizens.

Prof.Dr. Francois Grey, Director of the Geneva Tsinghua Initiative, a comprehensive education programme for the UN Sustainable Development Goals, and Director of Digital Strategy for the University of Geneva

Mr Grey is am a physicist with a background in nanotechnology, and a passion for citizen science. He also has broad experience in science management, teaching and communication, in the United States, China, Japan, Germany, Denmark and Switzerland. During the past decade, he has managed the development of a series of online citizen science projects in a wide range of research fields, starting with the launch of LHC@home in 2004 while he was a manager at CERN. In 2009, he established a partnership for citizen science between CERN, the UN Institute for Training and Research (UNITAR) and the University of Geneva, now called Citizen Cyberlab. As an invited professor at the Centre Universitaire d'Informatique (CUI) of the University of Geneva since 2014, he coordinates Citizen Cyberlab, managing the development of technologies for crowdsourced research, exploring the broader impact of citizen science for society, and promoting public participation in science through hands-on events. He also teaches courses on Open Science and Citizen Science at the bachelor and master level. Since 2016 he is Director of the Geneva Tsinghua Initiative, a comprehensive education programme for the UN Sustainable Development Goals, and Director of Digital Strategy for the University of Geneva.