

Beat: News

## FRONTIER TECHNOLOGIES CAN BOOST PROGRESS IN TACKLING GLOBAL CHALLENGES

### freedom of expression and information

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**USPA NEWS** - Technologies on the frontier of what is possible can boost the ambitious agenda of the Sustainable Development Goals and help find global solutions to 21st century economic, social and environmental challenges, says the UNCTAD Technology and Innovation Report 2018: Harnessing Frontier Technologies for Sustainable Development, launched today.

“Frontier technologies hold the promise of reviving productivity and making plentiful resources to end poverty for good, enable more sustainable patterns of growth and mitigate or even reverse decades of environmental degradation,” UNCTAD Secretary-General Mukhisa Kituyi said. “However, technological change and innovation need to be directed towards inclusive and sustainable outcomes through a purposeful effort by governments in collaboration with civil society, business and academia.”

According to the report, frontier technologies are converging through the increasing use of digital platforms to produce new combinatory technologies, accelerating the pace of change across multiple sectors.

The report calls for a concerted international effort to build technological capabilities and to support all forms of innovation in developing countries. Least developed countries in particular should receive international support to build their domestic capabilities and create an enabling environment necessary for frontier technologies to deliver.

But the report also notes that the spread of new technologies threatens to outpace the ability of societies “ and policymakers “ to adapt to the sweeping changes that they generate. Frontier technologies can also exacerbate existing economic, social and technological divides, and widen inequality.

The report calls for an international dialogue to develop policy responses to the serious ethical, environmental, economic and social questions raised by frontier technologies, and proposes the UN Commission on Science and Technology for Development, the annual meeting of which this year takes place “from 14““18 May“– in Geneva, Switzerland, as one forum in which this could take place.

“By recognizing the immense benefits of new and emerging technologies, and identifying and addressing the risks sensibly, we can overcome the fears and anxieties raised by accelerated technological, economic and social change.” Shamika N. Sirimanne, director of UNCTAD’s Division on Technology and Logistics, said.

“It is in this constructive spirit, that we must continue to make a solid case for the benefits of multilateral collaboration, openness, and the transformative potential of technology.”

The report presents examples of how frontier technologies can improve lives in developing countries:

“ Big data analysis is helping to respond to outbreaks of deadly diseases: during a typhoid outbreak in Uganda, for example, the Ministry of Health used data-mapping applications to facilitate decision-making on the allocation of medicine and mobilization of health teams; and develop insurance products for small-scale African farmers.

“ 3D printers are being used in developing countries to produce prosthetic limbs that are custom-built and cheaper.

“ Artificial intelligence is reading digital scans more accurately than doctors, freeing them for care in which the human touch is important.

“ Internet-of-things (IoT) devices are allowing farmers to monitor soil conditions to decide when is the best time to plant.

Issues that the rapid technological change illustrated by such examples raises and discusses how they might be appropriately managed are considered by the report.

For instance, digital technologies have implications for citizens’ rights and the ownership of data. Big data analytics and IoT devices rely on personal data, which is increasingly becoming accessible to commercial and government entities, raising important issues of

privacy and security, and reinforcing the need for regulation of data sharing and use.

Artificial intelligence systems are being used by financial institutions to make decisions on credit applications, by internet companies to decide which advertisements to show users, by retailers to decide which discounts or deals to show potential and repeat customers, and by employers to select candidates in recruitment process.

Such algorithms are not infallible, and errors can arise from communications or sensor failures, unforeseen data volumes, incorrect computer code, or computer or data-storage failures. They also need to be better understood, to identify and mitigate potential discriminatory biases and ensure transparency on their use.

The report says that “consideration is therefore needed for appropriate regulatory frameworks for data collection, usage and access, to safeguard privacy and security, while balancing individual and collective rights (including freedom of expression and information) and allowing private sector innovation”<sup>[7]</sup>.

**Article online:**

<https://www.uspa24.com/bericht-13386/frontier-technologies-can-boost-progress-in-tackling-global-challenges.html>

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