



The human future: What's on the horizon?

An OECD Global Forum on Technology event

19-20 September 2024 | OECD Conference Centre | CC12

Emerging technologies are ushering in rapid social, economic and cultural shifts. A new wave of change is upon us. The emergence of mass-market AI tools is a significant impetus. The urgent need for solutions to global challenges has also focused and aligned many interests. Technology convergence and advancements in immersive technologies, new generation networks, biotechnology, neurotechnology and quantum technologies are expected to drive transitions in the energy sector, enhance food security, create new pathways for learning, bring about medical breakthroughs and extend reach of public services.

Despite the opportunities and promises, these technological and societal developments will bring about inevitable disruptions that require thoughtful analysis and a breadth of perspective to identify trends and inform policy. Wisdom can be found in hindsight analysis and lessons learned, factoring geopolitics and other sources of strain on social cohesion. Just as importantly, looking ahead can help us foresee change and inform anticipatory governance that steers technology to better outcomes.

This Global Forum on Technology (GFTech) event will convene policymakers, technologists and stakeholders to explore visions of the human future that guide responsible and rights-oriented technology development and deployment – a future where emerging technologies foster resilient societies, better address climate change, and cooperation leads to policies that help bridge digital and technological divides.

The event will explore new developments that appear poised to move humans into even more digitally and technologically-enabled experiences, including IoT-enabled environments, virtual worlds, and digital twins, as well as human enhancement through biological, neuro or other technological applications on the horizon.

With a mix of feature presentations on technologies, panels and roundtables, discussion will focus on three high-impact areas: health and well-being, learning and cognition and sustainable immersive spaces. Speakers will discuss emerging use cases, consider technology convergence and explore the specific human implications, opportunities, challenges and policy considerations. A closing plenary session will draw insights from the event to feed into future activities for the GFTech community.

DRAFT AGENDA

- Please note that all session times are in Central European Summer Time (CEST).
- This event is in person, and participation is by invitation only.
- Please contact gfttech@oecd.org for any questions.
- More information about the event is available on the [event webpage](#).

Day 1 – Thursday 19 September

Registration and coffee (09:00-09:30)

OECD welcome & scene setting panel: Technology developments and a shared human future

09:30-10:30

OECD Deputy Director Science, Technology and Innovation Jens Lundsgaard will welcome participants and open the event.

The first plenary panel session will offer a diverse set of perspectives on how future technologies can be expected to shape human experiences. This session will consider different technological futures, their diverse impacts across different communities, and why desired futures may be less viable without addressing barriers to finance and international cooperation, among others. The session will lay the foundation for discussing values-based technological futures that achieve common goals and mitigate divides.

Moderator: Elizabeth Thomas-Raynaud, Head of Emerging Digital Technology unit, OECD

Speakers:

- Bitange Ndemo, Kenya's Ambassador to Belgium & EU
- Diya Nair, Lead for Marketing, Girls in Quantum
- Mikko Dufva, Leading Foresight Specialist, Sitra
- Sibashisa Dash, Scientist D, Ministry of Science & Technology, India

Megatrends: The forces driving emerging technologies

10:35-11:40

In a world where technology landscapes are rapidly evolving, understanding the key drivers behind such changes is crucial for both technologists and policymakers. This session will examine the profound and observable long-term trends that are shaping the human future. These include climate change, ageing populations, and the rise of

geopolitical tensions. Understanding these and other megatrends is essential for navigating the complexities and uncertainties that lie ahead.

Megatrends are not mere predictions; they offer critical perspectives on how past data can inform our assumptions about what the foreseeable future might hold. They create common ground for understanding among individuals with diverse perspectives, fostering a collective vision for the human future.

Moderator: Rafał Kierzenkowski, Head of the Strategic Foresight Unit, OECD

Speakers:

- Emily Connolly, Deputy Director, Technology Insights, Futures and Foresight team, UK Government Office for Science
- Mikko Dufva, Leading Foresight Specialist, Sitra
- Riel Miller, Senior Fellow, École des Ponts Business School

Coffee break (11:40-12:00)

High impact area 1: Health and the human body

12:00-13:00

The last decade has witnessed remarkable development of health-relevant technologies in an array of areas, including the manipulation of biological processes (e.g. gene editing), personalised medicine and drug discovery, crisis and pandemic response, the rise of self-monitoring (wearables), and new hybrids of bodies and machines (machine-computer interfaces or 3D-printed tissue). This session will explore how this diverse suite of technologies for health and human bodies will usher in new understandings of ourselves, new avenues for health care, and new paradigms of global health.

Moderator: Francesca Colombo, Head of the Health Division, OECD

Speakers:

- Karine Rossignol, CEO and Co-Founder, Smart Immune
- Naveed Aziz, Vice President, Research & Innovation, Genome Canada
- Sarah de Lagarde, Janus Henderson, Head of Corporate Affairs

Lunch (13:00-14:15)

Tech Talk (14:15-14:30)

Olivier Ouiller, Co-founder and Chief Executive Officer, Inclusive Brains

High impact area 2: Learning and cognition

14:35-15:40

Transformative impacts of advances in nano-, bio-, digital, and material technologies on human health and well-being are shaping neurotechnologies and enhancing learning and cognitive functioning. Brain-computer interfaces offer potential therapies for individuals with disabilities and mental illnesses, as well as enhancement of sensory and cognitive experiences. Start-ups around memory and learning are quickly entering the market, raising ethical, legal, and social considerations. This panel will explore some of the technologies that will usher in the future of the brain, examining their economic, ethical and social implications.

Moderator: Olivier Ouiller, Co-founder and Chief Executive Officer, Inclusive Brains

Speakers:

- Hervé Chneiweiss, Chairman of Ethics Committee, INSERM
- María Lopez Valdés, Co-founder and Chief Executive Officer, Bitbrain
- Nataliya Kosmyna, Research Scientist, Massachusetts Institute of Technology

Coffee break (15:40-16:00)

Tech Talk (16:00-16:15)

Jeremy Hadall, Robotics & Automation Development Lead, Satellite Catapult

Looking back to look forward

16:20-17:10

Policymakers grapple with the difficult task of fostering innovation enabled by new technologies while safeguarding against their risks. The session will delve into case studies of past technology developments—such as the advent of the Internet, biotechnology, and mobile communications—to extract valuable lessons and consider these in view of technologies on the horizon. Leveraging the GFTech's diverse and insightful community of governments, business, academia and civil society perspectives, the discussion will draw on experiences from different continents and sectors to identify applicable wisdom from the past to:

- Leverage international cooperation so ethics and human rights guide developments through norms, standards, and best practices at the right time;
- Identify strategies for striking the right equilibrium, including managing the role of public and private sector in empowering competitive markets with sustainable investments that scale in line with societal interests;
- Consider the role of citizen engagement in shaping policies that facilitate digital and technological literacy required to foster inclusiveness; and,
- Anticipate priority policy areas with higher risk and ensure these are not given equal or lesser attention by default.

Moderator: Ben Brake, Director General "Digital- and Data-Policy", Federal Ministry for Digital and Transport, Germany

Speakers:

- Ahmed N. Tantawy, Senior advisor, Ministry of Communications and Information Technology, Egypt
- Christy Hoffman, General Secretary, UNI Global Union
- Wendell Wallach, Co-Director, AI and Equality Initiative, Carnegie Council for Ethics in International Affairs

Shaping technology development through anticipation and governance

17:15-18:00

Emerging technologies, their convergence and potential dual use, carry uncertainties about and risks to privacy, security, equity and human rights. The emergence of generative AI and its sweeping functionality took many by surprise, underscoring the challenges of governing powerful new technology and highlighting the need for anticipation. This double-edged nature of emerging technology requires policies and tools to better anticipate disruptions and enable technology development for economic prosperity, resilience, security and address societal challenges.

This session will explore the challenge of how to enhance societal capacities to govern emerging technology well and set up appropriate guardrails to align technological developments with human values. The session will draw on the [OECD Framework for the Anticipatory Governance of Emerging Technologies](#) welcomed by ministers at the OECD in April 2024, a resource meant to facilitate deliberation with diverse stakeholders and build deeper capacities to anticipate and shape technological development.

Moderator: David Winickoff, Head of the Responsible Innovation Unit, OECD

Speakers:

- Brice Laurent, Senior Researcher, Centre de Sociologie et de l'Innovation
- Justine Lacey, Director, Responsible Innovation Future Science Platform, CSIRO
- Shobita Parthasarathy, Professor and Director, University of Michigan

Cocktail reception at L'Expresso, OECD Conference Centre (18:00-19:30)

Day 2 – Friday 20 September

Networking coffee (09:00-09:15)

Tech Talk (9:15-9:35)

Joseph Mikael, Head of Quantum Computation & Quantum Information project, EDF

High impact area 3: Sustainable digitally-augmented spaces

09:35-10:30

Large shares of the population already spend more waking time in digital environments than not. Previously offline activities are evolving with digital dimensions, from mobile payments, tickets and identification verification, to congregating for cultural events, meetings and entertainment in virtual spaces. Surgeons are already achieving complex procedures enabled by AI-assisted telemedicine and augmented reality. Developments in connectivity and technology convergence will propagate digitally-augmented environments and the ensuing economic and social impacts.

This session will bring together technologists and policymakers to scope how emerging technologies (AI, IoT, 6G, digital twins, autonomous vehicles and smart, data-enabled environments) can be expected to converge and change the spaces people will occupy in the future. It will explore governments' priority considerations to orient these technologies to develop sustainably in line with shared goals. Technologies will be considered in terms of their anticipated impact on human spaces, while raising issues around scalability and associated costs. In addition to resource management, interdependencies and technological architectures and enablers that must be trusted to be adopted by users will also be factored.

Moderator: Clara Neppel, Senior Director, IEEE European Business Operations

Speakers:

- George Kamiya, Senior Manager, GSMA
- José Juan Haro, Chief Wholesale and Public Affairs Officer, Telefónica Hispam
- Rudy van Belkom, Executive Director, The Netherlands Study Centre for Technology Trends
- Takayo Takamuro, European Bloc Chief, KDDI Europe

Tech Talk (10:30-10:50)

Liina Munari, Destination Earth, European Commission

Coffee break (10:50-11:10)

Roundtable discussion

11:10-12:20

This facilitated exchange will glean from participants what was learned during the event and identify key takeaways, including what questions or gaps warrant discussion. It will also surface participants' views on priorities and provide an opportunity to collect wisdom and perspectives directly from the group to inform future deliberations and activities for the OECD and GFTech.

Co-chairs:

- Yongsuk Jang, Senior Research, Science and Technology Policy Institute
- Ben Brake, Director General "Digital- and Data-Policy", Federal Ministry for Digital and Transport, Germany

Rapporteurs:

- Souichirou Kozuka, Professor, Tokyo Gakushuin University
- David Hutchinson, Professor, University of Otago
- Nina Youssoufou, Health Industry Redactor at Export Sector Unit, Ministère de l'Europe et des Affaires étrangères, France

Closing session (12:20-12:30)

OECD Director Science, Technology and Innovation Jerry Sheehan will provide some closing remarks on the path forward and conclude the event.