



United Nations Educational,
Scientific and Cultural
Organization

Information Meeting on UNESCO's role in Artificial Intelligence

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UNESCO & AI

- UNESCO's field of competence is human-centered
- AI has enormous potential for:
 - Addressing humanity's most critical issues including education, sciences, culture, media, access to information, gender equality and poverty alleviation
 - Promoting the achievement of Sustainable Development Goals
 - Fostering new development opportunities while respecting universal human values and ethical principles



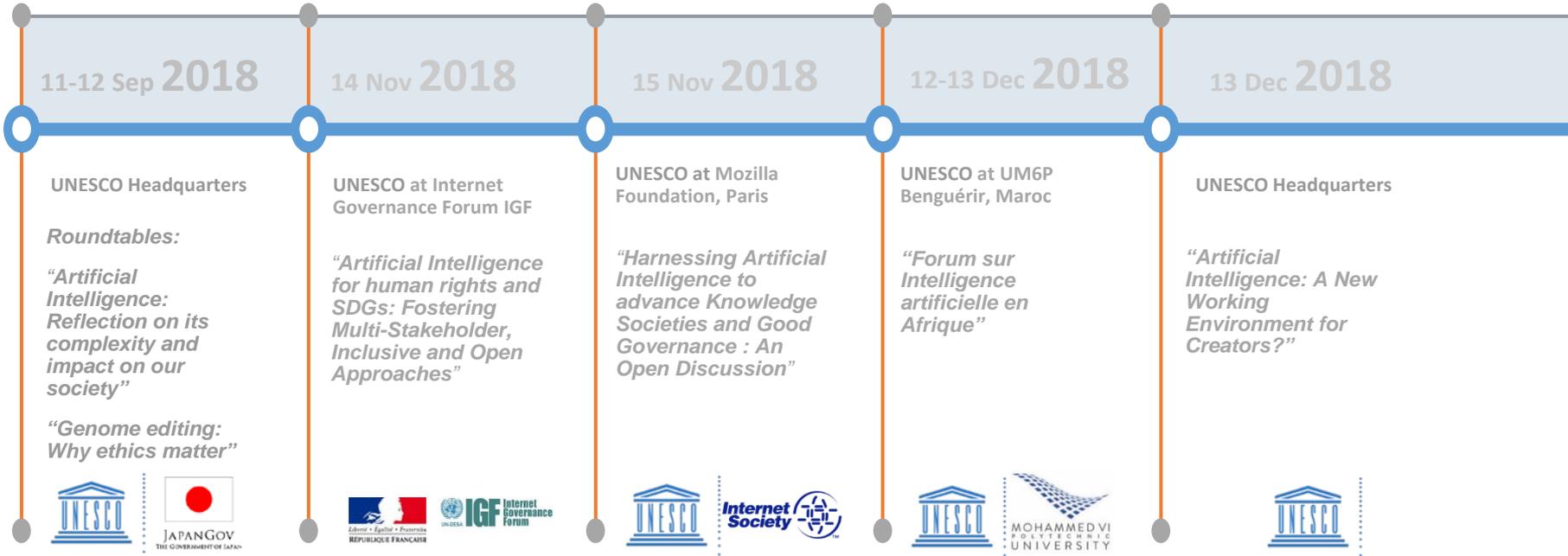
UNESCO work on AI

- AI has an impact on all UNESCO activities — all sectors and units responsible for the Gender and Priority Africa Strategies are involved and engaged
- Inter-sectorial coordination : AI Task Team created in 2018 with Communication & Information sector as secretariat
- Launch of a study by a multidisciplinary working group of experts to harness the importance of global ethical standards on AI
- Advocacy and Public Information includes UNESCO Courier special edition on AI (July '18) and AI intersectoral website en.unesco.org/artificial-intelligence
- Organization of events on AI in order to raise awareness of all Member States and highlight the importance of the work to be performed by UNESCO in collaboration with other stakeholders including international organizations



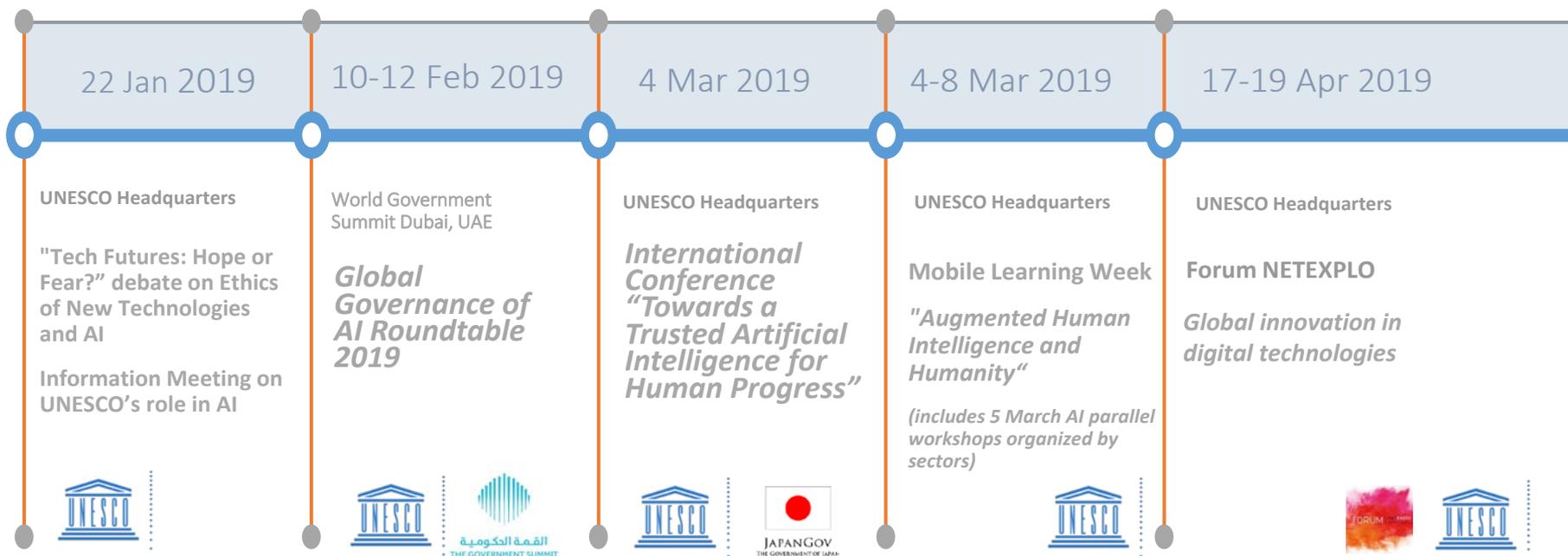
AI events

2018





upcoming UNESCO AI events





International Cooperation

Several initiatives already launched & cooperation is needed:

- UN strategy on frontier technologies for sustainable development including ITU's AI4Good global summit in Geneva
- OECD, "Better policies for better life" — Expert Working Group AIGO
- EC, "Towards AI ethics guidelines" — High-Level Expert Group on AI
- CoE, "Towards an ethical & responsible AI for human rights, rule of law and democracy"
- IEEE, "Global initiative on ethics of autonomous and intelligent systems"



Ethics of science and technology

-More than 20 years of work in bioethics and ethics of science and technology

-Two independent advisory bodies:

1. COMEST, the World Commission on the Ethics of Scientific Knowledge and Technology
2. IBC, the International Bioethics Committee. The IGBC, Intergovernmental Bioethics Committee (36 Member States), examines the work of the IBC

-Facilitator for WSIS Action Line C10 “Ethics of the Information Society”

-Convening power for all Member States to debate an international normative framework on the ethics of AI

-A global, pluralistic, multi-disciplinary and multi-stakeholder ethos



Internet Universality and Governance

- Multi-stakeholder approach to norms & rules of governance: civil society and academia, public and private sector
- Digital divide & lack of open data policies = scarcity of data to fuel potential AI-driven benefits
- Addressing internet universality via the R.O.A.M. principles: Human Rights-based — **O**penness — **A**ccessible — **M**ultistakeholder
- Measuring the Internet Universality Indicators (IUI) to harness the readiness of Member States and encourage policy makers in LDCs to adopt adequate policies with regards to AI development & use



Education & capacity building

- Ensuring inclusive and equitable use of AI in education for vulnerable groups, while promoting gender equality in AI;
- Leveraging AI to enhance education and learning including promoting human-machine collective intelligence, harnessing intelligent learning system for learning and assessment, and empowering teachers to use AI effectively;
- Promoting AI skills development for jobs and life with a focus on nurturing youth's innovations in developing AI applications for SDGs;
- Transparent and auditable use of education data through multi-stakeholder partnership, safeguarding confidentiality and privacy of learners' personal data
- Publishing reports on (ethics of robotics, big data and health) that support policy makers and different stakeholders by providing guidance on ethical issues



Science, technology, innovation

- Policy, capacity, application
- Addressing the scientific divide by promoting open science and open innovation (open data, open scientific resources such as cloud computing, etc.) and universal access to scientific knowledge
- Monitoring policy trends related to AI, such as national AI strategies, as part of global monitoring function for SDG 9.5, focus on inclusiveness and diversity
- Training and research in AI in developing countries must advance in parallel to technological progress
- AI to support Member States in their response to water management, disaster risk reduction, climate change, biodiversity monitoring, etc



Cultural Heritage & Creativity

- Promoting the diversity of cultural expressions in an AI environment;
- Fostering digital creativity by using AI technologies;
- Contributing to cultural heritage preservation and addressing threats through digitization & use of AI systems;
- Addressing the illicit trafficking of cultural objects and the destruction of cultural property.



Media & Access to information

- Independent and pluralistic media in order to disseminate the right information and raise citizens's awareness about AI issues
- Media & Information Literacy (MIL) to build inclusive knowledge societies and address threats to democratic processes and peaceful development (Hate speech, Disinformation, Discrimination, etc.)
- Promoting access to public information (Open public data, OER)
- Protection of fundamental rights: Freedom of expression, privacy, access to information, et cetera



Gender equality and artificial intelligence

- Women's Forum 'Daring Circle' on artificial intelligence and gender (14 November 2018)
- Paper on the implications of digital assistants for gender equality (to be released on 8 March 2019)
- Policy brief on promoting digital skills for girls and women (to be released on 8 March 2019)



Priority Africa and AI

Main Outcomes of the Forum on Artificial Intelligence in Africa, (Benguérir, Morocco, Dec. 2018):

- need to promote a human-centered AI, based on human rights and ethical values, and calls for collaboration between UNESCO the African Union and Regional Economic Communities to:
- Support establishment of African forum of associations and institutions on AI, bringing together the main public and private AI actors ;
- Organize AI sub-regional forums to deepen understanding and support policy development at national level;
- Develop a continental strategy for AI, underpinned by Agenda 2063.



Examples of programmatic initiatives

- UNESCO initiative with Microsoft and other partners is developing an “AI in Education Readiness Index” and training policy makers on AI in education
- Initiative with Ericsson and other partners in developing a repository of AI skills training programmes and supporting TVET institutions to develop or reform training programmes on AI
- Version 1 of “AI in Education Policy Guidelines” will launch it during the 2019 Mobile Learning Week.
- From 18 to 22 February 2019, the new Centre for Quantum Technologies at ICTP is hosting its first Advanced School on Ubiquitous Quantum Physics: the New Quantum Revolution, for scientists from developing countries.
- UNESCO’s Man and the Biosphere programme and Kyoto University are helping Mont Nimba Biosphere Reserve in Guinea (also a World Heritage site) to improve the conservation of chimpanzees by using drones to combat poachers.



Programmatic initiatives (continued)

- UNESCO's International Hydrological Programme and University of California have developed the G-WADI Geoserver application (in 2005) to estimate real-time precipitation worldwide using artificial neural networks. It is used globally for emergency planning and management, such as to track storms and prepare daily bulletins with up-to-date information on flood and drought conditions for local communities.
- AI for Knowledge Societies from a R.O.A.M perspective. Translate R.O.A.M. principles into AI norms and policies, primer research: "Towards Internet Universality and Knowledge Societies in the Digital Age: Opportunities and Challenges of Artificial Intelligence". The research will be presented in the March conference of AI.



Programmatic initiatives (continued)

- A joint project with «Sciences Po» Paris is developing a methodology to map AI Commitment, Capacity and Creation. The project has initiated data gathering process for Africa.
- A joint capacity building workshop on the technical issues, the myths around AI and the impact of AI on SDGs will be organized by CI Sector and HRM. The workshop will be part of the Mobile Learning Week and will be conducted by UNESCO Chair in AI and UNESCO Chair in Analytics and Big Data.
- The feasibility for a Category 2 Centre under the auspices of UNESCO at Josef Stefan Institute, Slovenia has been established to support UNESCO objectives and use AI for SDGs.
- Working with UNESCO Chair in AI and Knowledge4All foundation has prepared an ecosystem map for AI development. The findings were presented at IGF and the AI conference in Morocco.



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Thank you for your attention

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