

## **IGF 2017 Reporting Template**

- **Session Title:** AI: Intelligent Machines, Smart Policies

<http://sched.co/CTrq>

- **Date:** 20 December 2017

- **Time:** 16:40-18:10

- **Session Organizer:** OECD and Japanese Ministry of Internal affairs and Communications (MIC).  
Karine Perset and Nobuhisa Nishigata

- **Chair/Moderator:** Wonki Min

- Rapporteur/Notetaker:

- **List of Speakers and their institutional affiliations:**

- Wonki Min, Chair of the OECD's Committee on Digital Economy Policy (CDEP)
- Masahiko Tominaga, Vice Minister for Policy Coordination at the Japanese Ministry of Internal Affairs and Communications (MIC)
- Karine Perset, Economist/Policy Analyst, Digital Economy Policy Division at the OECD
- Joanna Bryson, reader at the University of Bath in the UK and Affiliate at the Center for Information Technology Policy at Princeton University
- Carolyn Nguyen, Director of Technology Policy at Microsoft
- Karen McCabe, Senior Director of Technology Policy and International Affairs at the IEEE Standards Association
- Jean-Marc Rickli, Global Risk and Resilience Cluster Leader, Geneva Center for Security Policy (GCSP)

- **Key Issues raised (1 sentence per issue):**

### **DISCUSSION**

- **key themes that emerged from the presentations:**

- AI is a dual-use technology that holds considerable promise but that raises new economic, social, ethical and governance challenges.
- AI is created by people who must take responsibility for shaping AI's development and for deciding on AI's place in society.
- A partnership between technologists and policy makers is needed: technological choices increasingly carry policy implications.
- There is a need for international best practice analysis and benchmarking of social and ethical implications of AI technologies.
- A multi-stakeholder approach to policymaking for AI is essential to ensure a human-centric, positive, effective and inclusive digital future.

- If there were presentations during the session, please provide a 1-paragraph summary for each presentation:

Each speaker gave a short presentation.

**Wonki Min, Chair of the OECD's Committee on Digital Economy Policy (CDEP)**, introduced the issues and speakers and moderated the discussion. The workshop was co-organised by the OECD and Japan's Ministry of Internal Affairs and Communications (MIC) and focused on identifying priorities for public policy in relation to artificial intelligence and discussing the role of different stakeholders.

**Mr Tominaga, Vice Minister for Policy Coordination at the Japanese Ministry of Internal Affairs and Communications (MIC)** presented the work conducted by MIC's "Conference toward AI Network Society", which was established to investigate social, economic, ethical and legal issues of AI that require international attention. The study assessed the impact and risks of AI networked systems, such as malfunction, leakage of sensitive data or bias in AI decision-making. It also formulated "AI R&D Guidelines" with five core values; human-centered, non-binding, balancing benefits & risks, technologically neutral and constantly reviewed and revised as necessary. It provided nine principles that AI researchers and developers should pay attention to: 1) collaboration; 2) transparency, 3) controllability, 4) safety, 5) security, 6) privacy, 7) ethics, 8) user assistance and 9) accountability.

**Karine Perset, Economist/Policy Analyst, Digital Economy Policy Division at the OECD**, introduced the OECD's work on AI. The OECD Committee on Digital Economy – or CDEP – is beginning its analytical work on AI, taking stock of opportunities and challenges raised by AI and of national and international AI initiatives by governments and by stakeholder groups. The OECD also plans to look at ways to measure some of the impacts of AI and to consider high-level principles for AI to help guide the development of AI. She gave an overview of main findings of a recent OECD event that is informing the work going forward (<http://oe.cd/ai>) that involves the parts of the OECD that handle employment policy, education policy, consumer policy, privacy policy as well as science and technology policy and space policy, because AI impacts so many different economic and social areas.

**Joanna Bryson, reader at the University of Bath in the UK and Affiliate at the Center for Information Technology Policy at Princeton University** provided a high-level overview of the ethical dimensions of AI. Defining intelligence as doing the right thing at the right time in a dynamic environment, she said that intelligence requires: i) a set of contexts that can be perceived; ii) a set of actions that can be performed; and iii) associations between the detected contexts and the actions. She argued that Artificial General Intelligence is a myth, because AI, like natural intelligence, is constrained by what computer scientists term *combinatorics* (the inconceivably vast number of things an intelligent system might think or do) and because AI systems are constructed using architectures that limit AI to the knowledge and potential actions that make sense for a given application. She stressed that both humans and machine intelligence exploit existing knowledge and search that is shared via language. She added that both machines and reality tends to replicate biases. Defining ethics as the way a society defines and governs itself to ensure group-level stability, she said that AI and ethics are both authored by people who are responsible for deciding AI's place. Unlike people, AI cannot be a moral subject or be liable as it cannot suffer / be punished.

**Carolyn Nguyen, Director of Technology Policy at Microsoft** recalled the economic promise of AI that could double economic growth by 2035, boost labor productivity and accelerate attainment of the UN Sustainable Development Goals. She said that AI works by searching for patterns in large data sets and then by using these patterns to make predictions or recommendations. AI can help enable new leapfrogging when used by subject matter experts e.g. in healthcare. She highlighted that the OECD's October 2017 conference ([oe.cd/ai](http://oe.cd/ai)) had agreed on the need for: a human-centered AI that amplifies human ingenuity and earns the trust of all the stakeholders involved. She emphasised the importance of multi-stakeholder dialogue in order to shape the development of AI and introduced the 'Partnership on Artificial Intelligence to Benefit People and Society,' a major initiative formed in September 2016 originally by the private sector that now has over 50 partner organisations.

**Ms. Karen McCabe, Senior Director of Technology Policy and International Affairs at the IEEE Standards Association** presented the IEEE's "Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems". She explained that the IEEE had started discussing ethical design in

2015 and now had close to 300 experts worldwide engaged in this initiative which was composed of 13 working groups. She encouraged participants to have a look at the recently launched ethically aligned design principles version 2 that contains a set of recommendations, primarily for technologists and developers. She said that the IEEE standardization ecosystem is evolving to account for social issues such as transparency of autonomous system, data privacy process and well-being metrics and that IEEE is working on standards to integrate ethics, trust and privacy *by design* into technical standards.

**Dr. Mark Rickli, Global Risk and Resilience Cluster Leader, Geneva Center for Security Policy (GCSP)** presented a global civic debate initiative on AI entitled the “AI Initiative for Society” that was established by the Future Society of Harvard University’s Kennedy School of Government. This initiative has created an online platform that lets individuals contribute their thoughts on issues related to AI and extracts issues for further discussion online. The Initiative has identified six major issues of AI: i) reinventing the man/machine relationship; ii) security and safety; iii) governance of AI, iv) adapting the workforce for the age of AI; v) driving AI for public good; vi) imageries of AI. He explained that the Initiative would hold discussions of increasing depth, the result of which would be distilled into policy recommendations.

**- Please describe the Discussions that took place during the workshop session (3 paragraphs):**

There was an active discussion among the participants, including on the following topics:

**AI as a computational intelligence tool that leverages past learnings:** Workshop participants explained that AI works by searching for patterns in large data sets and then by using these patterns to make predictions or recommendations; i.e. that it is a computational intelligence tool to make predictions or provide insights based on past learnings. They said that AI was akin to machines that could ‘do the right thing at the right time in a dynamic environment’ but that AI systems are constructed using architectures that limit AI to the knowledge and potential actions that make sense for a given application.

**Income inequality and work:** Participants discussed AI’s potential impact on inequality and on the future of work. They said that AI is poised to change the future of work, in terms of both the nature of work and the required skills. Some participants felt that, without policy action, AI is likely to worsen inequality of income and wealth distribution, which they said may call for strengthening and broadening social protection nets and perhaps considering policy options such as basic income. Another priority highlighted in the workshop was to help people develop AI skills, including digital skills and lifelong skills, and to ensure broad access to AI technology.

**The man/machine relationship and human self-determination:** Workshop participants discussed the importance of AI supporting humans and of people maintaining self-determination and making their own free choices in an AI-driven world. They recalled the OECD’s October 2017 conference “AI: Intelligent Machines, Smart Policies” where a strong theme was the need for a human-centered AI that works to amplify human ingenuity and earns the trust of all the stakeholders involved.

**- Please describe any Participant suggestions regarding the way forward/ potential next steps /key takeaways (3 paragraphs):**

**People must shape human-centered and rights-based AI:** Participants emphasised the fact that AI is created by people who must take responsibility for shaping AI’s development and for deciding on AI’s place in society. They agreed on the need for AI to be human-centered and to embody a rights-based approach.

**The need for a multi-stakeholder approach to govern AI-related matters:** Participants emphasised the need for a multi-stakeholder approach to both AI policy and to AI development, in order to shape the beneficial development of AI. They underlined the balancing role and legitimacy of governments in AI policy, informed by -- and in partnership with -- technologists; companies; and the public. Governments have a

critical responsibility to protect the public and to protect human rights, notably rights to safety, privacy, intellectual protection, but also to prepare societies and adapt social protection. They also noted that AI technologists and developers make decisions with substantial socio-economic, political and ethical ramifications that must be informed by all stakeholders. For example, ethics should become a core competency of R&D leaders who, in effect, 'regulate' AI and intelligent systems. In addition, the public must be informed and involved in these discussions.

**Policy principles for AI:** Looking ahead, participants agreed on the need for AI principles supported by governments, civil society, the private sector and researchers. They agreed on the need for a human-centered AI that embodies a rights-based approach. They stressed the importance of safety, fairness, privacy and security, but also inclusiveness; all of which are underpinned by transparency and accountability. Participants also highlighted that AI policy principles should have practical application, that skills training and research funding are needed and that data availability need to be addressed.

### **Gender Reporting**

**- Estimate the overall number of the participants present at the session:**

120

**- Estimate the overall number of women present at the session:**

50. 4 of the 6 session panellists were women.

**- To what extent did the session discuss gender equality and/or women's empowerment?**

n/a

**- If the session addressed issues related to gender equality and/or women's empowerment, please provide a brief summary of the discussion:**

n/a