

FAPM

The 11th Funding Agency Presidents' Meeting

14th September 2021 • Online

SUMMARY REPORT



Japan Science and
Technology Agency



Deutsche
Forschungsgemeinschaft
German Research Foundation

Overview

The Funding Agency Presidents' Meeting (FAPM), organized in connection to the Annual Meeting of the Science and Technology in Society forum (*STS forum*), brings together representatives of funding agencies from around the world to informally discuss common interests and concerns, thereby facilitating and enhancing networking, cooperation and beyond. The 11th FAPM, held online due to the COVID-19 pandemic, was attended by 49 representatives from 33 countries and regions. Together we discussed two main topics: "Preparing for the next emergency" and "Enabling society to embrace emerging technologies". The meeting was opened by Prof. Hiroshi Komiyama (Chairman, *STS forum*). Next, Dr. Hamaguchi (President, JST) stressed that knowledge acquired from our responses to the coronavirus is key to making our societies more resilient.

The first topic, "Preparing for the next emergency", was introduced by Prof. Dr. Katja Becker (President, DFG) and Dr. Marc Schiltz (Secretary General, National Research Fund of Luxembourg (FNR); President, Science Europe). Prof. Dr. Becker stressed the need for interdisciplinary research and to identify fundamental research questions. She also advocated for large knowledge repositories in all disciplines that can help us in a future crisis. Dr. Schiltz added that there has never been so much cooperation between scientists as in the COVID-19 pandemic. However, there could have been more permanent cooperation mechanisms for scientists. He pointed out that one of the lessons learned from the pandemic is that a constructive dialogue needs to be established between scientists and political decision makers to make clear what their respective roles are.

The second topic, "Enabling society to embrace emerging technologies", was introduced by Dr. Sethuraman Panchanathan (Director, National Science Foundation (NSF, USA)). He explained how new and evolving technologies like robotics and AI are transforming the way we manufacture goods and materials, provide services, collaborate, as well as learn, and the time is now for all disciplines to work together and find meaningful and innovative solutions to our grand challenges. The future of all work will be defined by increasingly symbiotic relationships between humans, technology, and cyberspace, and we must therefore equip the workforce at all educational and career stages with the skills they need to adapt now and into the future. He further elaborated that funding agencies play a crucial role in empowering future generations and ensuring that anyone with drive and talent can participate in STEM, no matter their background.

Discussion Summaries

Topics were discussed in tables of 5-8 participants and their conclusions were presented by table chairs at the end of the meeting. See Annex II for a more detailed breakdown of these conclusions.

Topic 1: Preparing for the next emergency

Flexible budget for projects with built-in agility

It is difficult to change funding mechanisms quickly, so FAs need strategies to make us more flexible. A portion of our budgets could be set aside to be used flexibly, and at the same time allow more flexibility for the researchers. We need to build agility into strategic calls and be able to issue rapid response calls, all the while maintaining a balance between basic and targeted research. To remain vigilant, we could use deployment trials or deploy ourselves to smaller-scale crises to ensure action readiness.

Foresight, data collection and knowledge repositories

We need to do more work to identify various kinds of emergencies, pandemics, or other threats. Basic research gives us a broad understanding to address future emergencies. We must also collect high-quality, real-time data and share within and between countries, ensuring data and knowledge is equally shared across the world. We need a new system, perhaps a multi-disciplinary knowledge repository, that is easily accessible when another emergency occurs.

International and interdisciplinary cooperation

International cooperation among FAs is crucial to achieve a critical mass in R&D, and should play a key role in emergency response. We need to leverage existing structures and networks, and be able to work across disciplines and barriers naturally and effortlessly.

Science advice to policymakers

How to provide sound advice in the absence of knowledge and certainty has been a major challenge during the COVID-19 pandemic. We need an infrastructure connecting science and policymaking (so called 'science advice'), backed by mutual trust, and with clearly defined roles and responsibilities.

Topic 2: Enabling society to embrace emerging technologies

Co-creation with citizens

To build trust towards new technologies, citizens need to be involved in their development. Co-creation also has the benefit of promoting a feeling of ownership.

Interdisciplinary research, especially with social sciences and humanities

All science disciplines must act to move technologies forward. Social sciences and humanities need to be more involved to study the social impacts of technological change.

Science communication

FAs should support good scientific communication and give their scientists opportunities to talk with their communities. Social media is a key tool for disseminating factual information.

Focus on early age groups and lifelong learning

Early-stage education must be reviewed to equip younger people for a future that does not exist yet. FAs can offer funding for scientists to get in contact with schools. We should engage with the teachers as well as the students, to make sure the benefit is more wide-ranging. This links to the necessity for lifelong learning, for example through offering short online courses at universities.

Equal access to IT infrastructure

Digital education should be accessible for all, especially children. Lack of IT infrastructure is one reason why the digital divide has widened during the pandemic both within and between countries.

Annex I: Meeting Details

Date & Time Tuesday 14 September 2021, 19:30-21:30 (UTC+9)
Venue Online (Remo)
Co-Chairs Dr. Michinari Hamaguchi President, Japan Science and Technology Agency
 Prof. Dr. Katja Becker President, German Research Foundation

Participants 49: from 49 organizations; 33 countries/regions (see Annex III for full list)

Time (UTC+9)	Item	Speaker
19:30-19:35	Welcome	Prof. Hiroshi Komiyama Chairman, STS <i>forum</i>
	Opening Remarks	Dr. Michinari Hamaguchi President, Japan Science and Technology Agency (JST)
	Introduction to Remo	FAPM Secretariat
19:35-19:50	Tone Setting Presentation Topic 1	Prof. Dr. Katja Becker President, German Research Foundation (DFG)
		Dr. Marc Schiltz, Secretary General, National Research Fund of Luxembourg (FNR), and President, Science Europe
19:50-20:20	Group Discussion Topic 1	
20:20-20:25	Break	
20:25-20:35	Tone Setting Presentation Topic 2	Dr. Sethuraman Panchanathan, Director, National Science Foundation (NSF), USA
20:35-21:05	Group Discussion Topic 2	
21:05-21:25	Table Reports	Table Chairs
21:25-21:30	Concluding Remarks	Prof. Dr. Katja Becker Dr. Michinari Hamaguchi

Questions for Topic 1: Preparing for the next emergency

1. How can research funders prepare for the next global emergency?
2. How can research funders join forces to transfer knowledge into immediate emergency response?

Questions for Topic 2: Enabling society to embrace emerging technologies

1. How should we prepare society, in particular the workforce, to deal with emerging technologies?
Please specify priority areas for action.
2. How do we ensure the most vulnerable members of society are not disproportionately disadvantaged by the transition?



Using virtual event platform 'Remo', participants could move freely around the virtual space and engage in private table discussions.

Topic 1: Preparing for the next emergency

Table A

- It is difficult to change our funding mechanisms quickly, so we need strategies to make ourselves more flexible and agile.
- One idea is to allocate a part of our budget, perhaps 5%, that can be used flexibly.
- Researchers themselves can act more independently if they have flexibility in their funding.
- To promote a feeling of freedom among researchers we need a good balance between bottom up/ mission-oriented approach.

Table B

- Science and society need to learn lessons from past events and foster global, national and regional connections.
- Established scientific solutions should remain accessible during an emergency. (genetic sequencing etc.); pandemic preparedness partnership on European and global level is necessary.
- Policy choices rely on scientific advice; close connection between science and other policy areas (health, industrial actors, etc.)
- Epidemiological management: different models of dealing with infection numbers between countries.
- role of social sciences is important to gain a multidisciplinary view on epidemic situation.
- need to prepare for other emergencies than pandemics such as climate change (weather catastrophes etc.), social emergencies (conflicts, mass migrations,...), economic emergencies.
- funding agencies need strategies to prepare:
 - a) infrastructure: hold available laboratories, manpower,....
 - b) priority funding (biodiversity, ...)
 - c) flexibility (quick responses to emergencies)
 - d) communication with other funding agencies
- long standing collaborations and networks with partners will enable rapid reaction to crisis.
- 3 observations
 - a) funding research ecosystem - bottom up; be careful with priority funding
 - b) keep a broad approach in funding: not only sciences, but also humanities have a lot to offer (examples in Corona crisis: communication strategies, dealing with vaccination sceptics etc.)
 - c) inter-/ transdisciplinarity is important
- International cooperation enables a balance between funding on a regional scale and international connections; should be based on multilateral (e.g. GRC) and bilateral communication between funders.

Table C

- Strategic research calls, build in agility, mission-oriented research.
- Multi-disciplinary research, co-operative amongst countries.
- Create a balance between self-sufficiency and openness.
- How to provide sound advice in the absence of knowledge and certainty.
- Build trust between science expert advice / tables and government.
- Understand the long gestation period of science, over 50 years can be normal.
- Identify the various kinds of emergency, pandemic, cyber, natural, or threats.
- How to remain vigilant in the absence of an emergency, governments attention may wane.
- How to ensure preparations can translate into action; use deployment trials or deploy against smaller crisis to ensure action readiness.
- Connect industry with science research.

Table D

- Participants reported their experiences and lessons from the COVID-19 pandemic and their thoughts about the relevance of those lessons for future emergencies, whether pandemic or otherwise.
- Several participants highlighted the critical importance of the collection of high-quality, real-time data and sharing within and between countries, both in ordinary times and during emergencies and major disasters.
- Data availability was uneven across the world and there are many barriers to data sharing, even within countries (for example, between different parts of government and between provinces/states in federated countries).
- International cooperation is very important, especially for smaller countries, to achieve a critical mass in R&D. Sharing results of research projects is also important, e.g. through World Report and GloPID-R.
- It is important to share capabilities and information about issues as they emerge, such as the spread and effects of the virus early in the pandemic and, now that we have vaccines, suspicions about them.
- It is important to maintain a balance between basic/blue sky and targeted research.
- Researchers were very responsive to special calls for proposals and the opportunity to contribute advice to government.
- Other observations concerned challenges to the resilience of society (such as interruptions to food supply) and changes in how we manage work.

Table E

- There is a need to create global strategies (beyond the borders of each country), that will allow sharing of development knowledge and expertise. This is crucial to finding relevant, effective and efficient solutions to respond to emergencies of the future.
- Collaboration among funders will increasingly play a key role in the facilitation of effective planning to emergency response. In this regard, we need to pivot on the existing structures and networks.
- We need a system to coordinate the interventions. In this regard, collaborations and partnerships must be anchored on a common understanding, mutual trust, and transparency in order to effectively deliver on the outcomes. Part of the coordination should influence how and what we prioritise;
 - Examples of robust networks include: SDG Global Forum of Funders, the Global Research Council, the Science Granting Councils Initiative, the International Science Council and other expanding and innovative networks.
 - Examples of current action: Covid-19 Africa Rapid Grant Fund, the SDG Funding Pilot (led by the NRF and 19 funders), AJ-Core (the NRF, JST and SGCI countries co-funding SDG4 research)
- We need to be able to “naturally and effortlessly” work across disciplines and barriers. For example, Global North and Global South, developed world and the developing world, etc. and we should be inclusive meaningfully, to allow co-creation, flexibility and agility;
- Mission oriented research seems to be the way to go. The Group discussed the 5 European Commission missions, as a good example.

Table F

- Basic research should be undertaken for broader understanding to address future emergencies.
- Cross-disciplinary research, enabled by funding agencies are needed to achieve SDGs and these can only be achieved with international cooperation
- Information Technology (IT) should be completely ready.
- We cannot plan for emergencies; thus it is important for organizations to be able to switch to emergency mode, quickly respond, and decide what to fund; we should be able to facilitate research work even during emergencies, including the administration of R&D.
- Funding agencies should be able to issue rapid response call for proposals that capture lessons learned from epidemics and pandemics, and should include post-pandemic proposals.
- Research outcomes should be made available.

- Aside from health issues, R&D should cover food safety, animal diseases, recovery from natural disasters.
- We should be ready to re-purpose R&D outputs for the emergency at hand
- The STS Forum can play a role in open discussion to find expertise for future emergencies.

Table G

- Strengthen foresight activities.
- Stimulate and fund inter- and multidisciplinary programmes.
- Have a better knowledge about who and what we are funding – repositories of knowledge.
- Be better prepared for emergencies including have a greater flexibility.
- Have an established infrastructure for science to policy – science advice – but be clear about roles and responsibilities.
- Strengthen collaboration also internationally.
- The participants witnessed about how scientific panels or scientific boards were set up in their countries. They functioned in general well in the beginning but the situation became more complex when the scientific discussions took place within these panels and boards making the policy- makers very confused who to trust.
- To avoid this an infrastructure for science advice has to be set up in advance where it is important to build trust between policymakers and scientist. Different disciplines have to be present to help policymakers with difficult considerations – for example to lockdown a society is not only a medical question but it also affects among other things employment, education and growth as well as it hits different parts of the society differently. The scientists being part of the infrastructure need to be trained in science communication and the scientific discussion should not take place here.

Topic 2: Enabling society to embrace emerging technologies

Table A

- Science is not always seen as progress, so we must help the take-up of technology. It needs to be developed WITH citizens, not just explaining it to them.
- Giving citizens choices gives them a feeling of ownership.
- Results of science should be made aware of in education, and we should engage with the teachers as well as the students.
- Social sciences and humanities need to be more involved.
- Funders should help to inform the media and stop the spread of fake news.
- Researchers need to be aware of how the outcomes of research can actually be picked up by the end users in society.

Table B

- Consent that funders should work on and invest in the future workforce. However, the discussion quickly concentrated on the future academic workforce rather than skilled workers who have to bring new knowledge and skills into the “production lines” of our societies.
- This might be typical for the challenges/dilemma – research-funding agencies are dedicated to bringing talents into the scientific area and the work force is less within their focus.
- In Germany, skilled workers are educated in an occupational training system, combining shop floor- and school-modules according to well-defined and regularly updated occupations.
- Japan with its aging society and therefore aging workforce (30% in Japan over 60) put special efforts into continuous occupational training of the latter.
- All discussants emphasized the importance of adequate training for young academics with special emphasis on gender issues, inclusion and diversity in order to explore all potentials of society.
- NSFC (China) offers special support for young people from rural areas who are underrepresented within the scientific workforce.

Table C

- Leverage action in all science disciplines to move technologies forward, include social science.
- Integrate all science disciplines to solve problems.
- Ensure lifelong learning so as jobs evolve or are replaced people have a future job.
- Understand the impact of machine learning to change fundamental science research.
- Additional efforts to involve and include poor and underrepresented groups.
- Social science research – study impact on society of technological change.
- Leverage robotics to support ageing societies and people to improve their quality of life.
- Given huge data sets are being collected and analyzed via AI – feed back to people, access to results needs to be ubiquitous to balance society impact.
- Review early-stage education to prepare younger people to prepare for a future that does not exist as yet, create the training to undertake continuous learning.
- Provide basic technological connectivity, e.g. internet speed.
- Develop strategies to combat fake news, engage with citizen groups to ensure they have an opportunity to buy into the new research.

Table D

- Participants identified several approaches to bring society along with scientific advances.
- Co-creation is important to ensure science addresses the problems of society; this requires mechanisms to bring scientists together with other sectors, such as citizens and not-for-profit organizations.
- New technologies should be developed iteratively to allow the community to keep up.
- Communication is important. Training can help but it should be directed to those who are interested to engage. Funders should support good scientific communication and give their scientists opportunities to talk with the community.
- Engagement with early age groups (primary and high school students), e.g. through forums and schoolteachers, is important for preparing the future research workforce.
- Some emerging technologies present new ethical issues for society. Fields such as artificial intelligence and genome editing need research on the legal, ethical and social consequences of their use. We should not expect everyone to agree, however, as there are many earlier technologies and practices that society uses but where differences of opinion have not been resolved.
- Climate change is an example where there will need to be societal transformation to reach net zero. Although some of the issues are political, our response must be informed by research, including research on power, conflicts of interest and human behaviour in addition to technology.

Table E

- The COVID-19 pandemic has reminded the world that challenges that the modern world face cut across borders and require effective collaboration in response. Therefore, timely support for knowledge and innovation development is key when responding to global emergencies.
- It is critical to have flexible funding programmes, including simplified application process, swift decision-making and disbursement of funds. The un-predictive nature of the future requires research funders to constantly monitor and learn from the broader society.
- A well-established active network that drives education of society and ensuring that there is STEM orientation from primary school. The key message here is that this intervention must be done much earlier than what is normal.
- There is evidence of the critical need to set up permanent multilateral collaboration structures that include civil society organizations, and society.
- The world needs to embrace opportunities presented by the digital revolution which is rapidly shaping the research enterprise and society. Aspects such as foresight, and co-creation were raised and being an absolute necessity.
- Awareness of “The future of work” is also necessary. An example of Singapore producing 30% of its food was cited as an example of how “work” is changing. This calls for one to look at how work will look like in the future, and prepare society for that. This further calls for:
 - Friendlier technologies
 - The need to reduce anxiety in society (fear of the unknown)
- Embracing Open Science/Open Innovation.

- Communication beyond the science environment.

Table F

- The pandemic showed us that even educated people do not trust science.
- We should be able to counter skepticism and achieve high trust in science and ensure that new technologies are under democratic control.
- There should be an international knowledge repository – countries can be incentivized to contribute to the repository.
- To build trust and adopt new technologies, we need to “bring the public with us” through co-creation or participation in the scientific process.
- Put more emphasis on communicating results of R&D – “vaccinate” people against false information.
- Different government agencies should have open discussions with the public to build trust
- Figure out how society could better influence, for social media to be more correct; information should be curated.
- We need to embrace the techniques of social media, and ask major influencers who are non-scientists to advocate for science and technology.
- There is disparity in access to IT across countries – a system for children to gain access to IT must be established; nobody should be excluded from digital education.
- Financial support for S&T professionals should be given, but also for policy studies, social science studies and inter-disciplinary studies.
- Universities in the future should be open also for life-long learning through short online courses.

Table G

- Most of the participants in the group funded only research which made the comments quite general. There were however a couple who also were responsible for educational programmes.
- Declining interest for STEM which has to be met in early ages with specific programmes continuing all the way the future oriented research programmes.
- Identify talent in High Schools and invest in those young people.
- Learn from literature – there are research done on barriers to adapt new technologies.
- More research has to be done on how new technologies affects us as human beings and societies. There is already research indicating that the use of mobile phones has changed how our brain is functioning. Important that this kind of research gets funding.
- The participants thought that the digital divide had widening during the pandemic both within and between countries due to among other things, lack of infrastructure.
- Investing in young people can also be of help for older generations.
- Research funding organization could be a part of closing the gap between countries. Belmont Forum is for example concentrating on the ecological sustainability but could also include social sustainability taking the Sustainable Development Goal (SDGs) as a starting point.

Annex III: Participant List

	Name	Title	Organization	Country/Region
1	Abdul Sattar Al-Taie	Executive Director	Qatar National Research Fund (QNRF)	Qatar
2	Alejandro Adem	President	Natural Sciences and Engineering Research Council of Canada (NSERC)	Canada
3	André Kudelski	President	Innosuisse - Swiss Innovation Agency	Switzerland
4	Andrea Hoeglinger	Head of Department European and International Programmes	Austrian Research Promotion Agency (FFG)	Austria
5	Andreas Göthenberg	Executive Director	The Swedish Foundation for International Cooperation in Research and Higher Education (STINT)	Sweden
6	Angelika Kalt	Director	Swiss National Science Foundation (SNSF)	Switzerland
7	Anne Kelso	Chief Executive Officer	National Health and Medical Research Council (NHMRC)	Australia
8	Antoine Petit	Chairman and CEO	National Center for Scientific Research (CNRS)	France
9	Arne Flåøyen	Director	NordForsk	Nordic countries
10	Christof Gattringer	President	Austrian Science Fund (FWF)	Austria
11	Chuan Poh Lim	Chairman of the board	Singapore Food Agency (SFA)	Singapore
12	David Cleave	Executive Director	International Science and Technology Center (ISTC)	Global
13	Eduardo Ortega-Barria	National Secretary	The National Secretariat of Science, Technology and Innovation of the Republic of Panama	Panama
14	Evaldo Vilela	President	National Council for Scientific and Technological Development (CNPq)	Brazil
15	Faten Al Jabsheh	Division Director	Kuwait Institute for Scientific Research (KISR)	Kuwait
16	Fulufhelo Nelwamondo	Chief Executive Officer	National Research Foundation (NRF)	South Africa

17	Futoshi Hoshina	Director-General	Bio-oriented Technology Research Advancement Institution, NARO	Japan
18	Hasan Mandal	President	The Scientific and Technological Research Council of Turkey (TÜBİTAK)	Turkey
19	Hideyuki Tokuda	President	National Institute of Information and Communications Technology (NICT)	Japan
20	Hiroaki Ishizuka	Chairman	New Energy and Industrial Technology Development Organization (NEDO)	Japan
21	Ingrid Petersson	Director General	The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas)	Sweden
22	István Szabó	Vice-President	National Research, Development and Innovation Office of Hungary (NKFIH)	Hungary
23	Jacek Kuźnicki	President of the Council	National Science Centre (NCN)	Poland
24	James Foden	Senior Director	The Malta Council for Science & Technology (MCST)	Malta
25	Jane Ohlmeyer	Chair	Irish Research Council	Ireland
26	Jean-Eric Paquet	Director General (DG RTD)	European Commission	EU
27	Katja Becker	President	German Research Foundation (DFG)	Germany
28	Laksana Tri Handoko	Head	National Research and Innovation Agency (BRIN)	Indonesia
29	Liyao Zou	Director of Bureau of International Cooperation	National Natural Science Foundation of China (NSFC)	China
30	Marc Schiltz	CEO	Luxembourg National Research Fund (FNR)	Luxembourg
31	Marco Antonio Zago	President	State of São Paulo Research Foundation (FAPESP)	Brazil
32	Mari Sundli Tveit	Chief Executive	Research Council of Norway (RCN)	Norway
33	Maria Leptin	Director	European Molecular Biology Organization	Europe
34	Mark W.J. Ferguson	Director General SFI and Chief Scientific Adviser to the Government of Ireland	Science Foundation Ireland	Ireland
35	Michinari Hamaguchi	President	Japan Science and Technology Agency (JST)	Japan

36	Mitch Davies	President	National Research Council Canada (NRC)	Canada
37	Nina Kopola	Director General	Business Finland	Finland
38	Pavel Kabat	Secretary-General	International Human Frontier Science Program Organization (HFSPO)	Global
39	Peter Križan	President (Scientific Council)	Slovenian Research Agency (ARRS)	Slovenia
40	Peter Samuely	Vice President SAS for Science, Research and Innovation	Slovak Academy of Sciences	Slovakia
41	Prasit Palittapongarnpim	Executive Vice President	National Science and Technology Development Agency (NSTDA)	Thailand
42	Rowena Cristina L. Guevara	Undersecretary for Research and Development	Department of Science and Technology (DOST)	Philippines
43	Sethuraman Panchanathan	Director	National Science Foundation (NSF)	United States
44	Stefaan Sonck Thiebaut	Director General	Innoviris	Belgium
45	Susumu Satomi	President	Japan Society for the Promotion of Science (JSPS)	Japan
46	Teck Seng Low	Chief Executive Officer	National Research Foundation (NRF)	Singapore
47	Thierry Damerval	President	French National Research Agency (ANR)	France
48	Wiparat De-ong	Executive Director	National Research Council of Thailand (NRCT)	Thailand
49	Yoshinao Mishima	President	Japan Agency for Medical Research and Development (AMED)	Japan

Annex IV: Table Composition

*Table chairs are highlighted in yellow

Topic 1: Preparing for the next emergency

Table	Name	Title	Organization	Country/Region
A	Michinari Hamaguchi	President	Japan Science and Technology Agency (JST)	Japan
	Sethuraman Panchanathan	Director	National Science Foundation (NSF)	US
	Mari Sundli Tveit	Chief Executive	Research Council of Norway (RCN)	Norway
	Liyao Zou	Director of Bureau of International Cooperation	National Natural Science Foundation of China (NSFC)	China
	Nina Kopola	Director General	Business Finland	Finland
	Jacek Kuźnicki	President of the Council	National Science Centre (NCN)	Poland
	Eduardo Ortega-Barria	National Secretary	The National Secretariat of Science, Technology and Innovation of the Republic of Panama	Panama
	Maria Leptin	Director	European Molecular Biology Organization	Europe
B	Katja Becker	President	German Research Foundation (DFG)	Germany
	Stefaan Sonck Thiebaut	Director General	Innoviris	Belgium
	Marco Antonio Zago	President	State of São Paulo Research Foundation (FAPESP)	Brazil
	Jean-Eric Paquet	Director General (DG RTD)	European Commission	EU
	Prasit Palittapongarnpim	Executive Vice President	National Science and Technology Development Agency (NSTDA)	Thailand
	Hiroaki Ishizuka	Chairman	New Energy and Industrial Technology Development Organization (NEDO)	Japan
	Jane Ohlmeyer	Chair	Irish Research Council	Ireland

C	Mitch Davies	President	National Research Council Canada (NRC)	Canada
	Marc Schiltz	CEO	Luxembourg National Research Fund (FNR)	Luxembourg
	Antoine Petit	Chairman and CEO	National Center for Scientific Research (CNRS)	France
	Susumu Satomi	President	Japan Society for the Promotion of Science (JSPS)	Japan
	David Cleave	Executive Director	International Science and Technology Center (ISTC)	Global
	Wiparat De-ong	Executive Director	National Research Council of Thailand (NRCT)	Thailand
D	Anne Kelso	Chief Executive Officer	National Health and Medical Research Council (NHMRC)	Australia
	Alejandro Adem	President	Natural Sciences and Engineering Research Council of Canada (NSERC)	Canada
	Faten Al Jabsheh	Division Director	Kuwait Institute for Scientific Research (KISR)	Kuwait
	István Szabó	Vice-President	National Research, Development and Innovation Office of Hungary (NKFIH)	Hungary
	Yoshinao Mishima	President	Japan Agency for Medical Research and Development (AMED)	Japan
	Teck Seng Low	Chief Executive Officer	National Research Foundation (NRF)	Singapore
	Peter Križan	President of the Scientific Council	Slovenian Research Agency (ARRS)	Slovenia
E	Fulufhelo Nelwamondo	Chief Executive Officer	National Research Foundation (NRF)	South Africa
	Mark W.J. Ferguson	Director General SFI and Chief Scientific Adviser to the Government of Ireland	Science Foundation Ireland	Ireland
	Laksana Tri Handoko	Head	National Research and Innovation Agency (BRIN)	Indonesia
	Pavel Kabat	Secretary-General	International Human Frontier Science Program Organization (HFSP)	Global
	Arne Flåøyen	Director	NordForsk	Nordic Countries
	Andrea Hoeglinger	Head of Department European and International Programmes of FFG	Austrian Research Promotion Agency (FFG)	Austria
	Hasan Mandal	President	The Scientific and Technological Research Council of Turkey (TÜBİTAK)	Turkey

F	Rowena Cristina L. Guevara	Undersecretary for Research and Development	Department of Science and Technology(DOST)	Philippines
	Futoshi Hoshina	Director-General	Bio-oriented Technology Research Advancement Institution, NARO	Japan
	André Kudelski	President	Innosuisse - Swiss Innovation Agency	Switzerland
	Christof Gattringer	President	Austrian Science Fund (FWF)	Austria
	Abdul Sattar Al-Taie	Executive Director	Qatar National Research Fund (QNRF)	Qatar
	Peter Samuely	Vice President SAS for Science, Research and Innovation	Slovak Academy of Sciences	Slovakia
	Andreas Göthenberg	Executive Director	The Swedish Foundation for International Cooperation in Research and Higher Education (STINT)	Sweden
G	Ingrid Petersson	Director General	The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas)	Sweden
	James Foden	Senior Director	The Malta Council for Science & Technology (MCST)	Malta
	Angelika Kalt	Director	Swiss National Science Foundation (SNSF)	Switzerland
	Thierry Damerval	President and CEO	French National Research Agency (ANR)	France
	Hideyuki Tokuda	President	National Institute of Information and Communications Technology (NICT)	Japan
	Chuan Poh Lim	Chairman of the board	Singapore Food Agency (SFA)	Singapore
	Evaldo Vilela	President	National Council for Scientific and Technological Development (CNPq)	Brazil

Topic 2: Enabling society to embrace emerging technologies

Table	Name	Title	Organization	Country/area
A	Michinari Hamaguchi	President	Japan Science and Technology Agency (JST)	Japan
	Jean-Eric Paquet	Director General (DG RTD)	European Commission	EU
	Wiparat De-ong	Executive Director	National Research Council of Thailand(NRCT)	Thailand
	Alejandro Adem	President	Natural Sciences and Engineering Research Council of Canada (NSERC)	Canada
	Angelika Kalt	Director	Swiss National Science Foundation (SNSF)	Switzerland
	Marc Schiltz	CEO	Luxembourg National Research Fund (FNR)	Luxembourg
B	Katja Becker	President	German Research Foundation (DFG)	Germany
	Sethuraman Panchanathan	Director	National Science Foundation (NSF)	US
	Laksana Tri Handoko	Head	National Research and Innovation Agency (BRIN)	Indonesia
	Antoine Petit	Chairman and CEO	National Center for Scientific Research (CNRS)	France
	Hideyuki Tokuda	President	National Institute of Information and Communications Technology (NICT)	Japan
	Liyao Zou	Director of Bureau of International Cooperation	National Natural Science Foundation of China (NSFC)	China
C	Mitch Davies	President	National Research Council Canada (NRC)	Canada
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