Science and Technology in Society *forum* (STS *forum*)
14th Annual Meeting
Kyoto, Japan, October 3, 2017
STATEMENT

1. The 14th Annual Meeting of the Science and Technology in Society *forum* took place from October 1 to 3, with the participation of nearly 1,400 global leaders in science and technology, policy-making, business, and media from nearly 80 countries, regions, and international organizations.

2. In 2017, the STS *forum* launched a new initiative to increase the participation of business leaders and we included a special CEO (Chief Executive Officers) lunch meeting in our Annual Meeting program. Nineteen CEOs from prominent global companies attended. We also had a CTO (Chief Technology Officer) Meeting, which gathered close to 40 CTOs and heads of research, as well as a special lunch for heads of Foundations.

3. The Future Leaders Program, introduced in 2015, has further expanded, with close to 140 young leaders under age 40 from business and academic institutions, who had a special dialogue with most of the 15 Nobel Laureates present at the Annual Meeting. This occasion was particularly well received by both the future leaders and the Nobel Laureates.

4. The STS *forum* also held workshops in Delhi, Brussels, and Bali, Indonesia. We will continue to build on and expand the network we have established to further address the opportunities and challenges facing humanity from the long-term viewpoint.

5. During the STS 14th Annual Meeting, the following points were highlighted.

Energy, Resources and Environment
6. Achieving a sustainable low-carbon society was recognized to be an objective not just in the developed world but also worldwide, particularly in the fast-developing economies. Science and technology is key to attaining this goal but social and economic solutions are also needed. Climate change mitigation is essential for sustainable development in harmony with nature. The interconnected issues of food, water, and energy must be solved through science and technology, but energy policy must also be a component which can contribute to addressing this agenda. In this context, renewable energy plays a more important role in the best mix of energy, although nuclear energy as a low-carbon energy source should also remain an important option under strict conditions of safety, security, and non-proliferation.

7. Beyond mitigation, there must be adaptation and increased resilience in societies that will suffer from the impact of climate change and extreme events. We need to enhance the collection, storage, analysis, and deployment of scientific knowledge on space, earth, oceans, and water in order to devise appropriate policies and programs, nationally and locally. Knowledge from the humanities and social sciences combined with the natural sciences and making the best use of ICT should be deployed to make human society more resilient to the damage brought by disasters and extreme environmental changes.

8. While the world's population is expected to increase before peaking at a high level, this globe's resources are finite. World leaders, whether in government or industry, should consider changes in population and its regional distribution to deploy energy and food reflecting this appropriately. Food production under difficult conditions will require the application of the best of science– including GMOs–to produce more food more efficiently. With urbanization accelerating, smart cities and sustainable human settlements with smaller environmental impact and better quality of life for citizens are needed. These environments can be created by carefully designing systems,

deploying new materials and new technologies, and making better use of innovations in mobility and energy systems.

Life Sciences and Health Care
9. Progress in genome engineering and advanced medicine has the potential to improve human health. The accomplishments of R&D in the life sciences should be available for the benefit of all of humanity, subject to certain ethical guidelines. Environmental factors such as Climate Change and air pollution as well as unhealthy diets, habits and lifestyles negatively impact health, and should be confronted by sustained public education. At the same time, the fight against infectious disease is a global mission. We must build an international system to deliver health care to all parts of the world with the cooperation of WHO and other organizations.

10. Healthy aging is becoming a key issue for our societies. In addition to the use of personalized and preemptive medicine, creating more comfortable surroundings for the aged can contribute to healthy aging.

Digitized Society
11. The Internet of Things, Big Data, and AI, combined with robotics and autonomous systems, will not only radically transform our lives but also change the production process and the nature of economic activity. The impact of this on employment must be taken into account. The benefits of progress in these ICT-related fields should enable people in developing countries to start new businesses with minimal resources. But the deployment of these new technologies challenges many aspects of privacy and security. New approaches are needed to alleviate the new and emerging risks of ICT.

Research and Innovation
12. STEM education in schools, as well as for the public at large, is essential for nurturing innovation and promoting sustainable development. Special efforts must be deployed to nurture the next generation of scientists. Policy-making and business decisions based on a sound knowledge of science and technology are of more significance than ever. High-quality science programs are needed to interest and inform the public about the current status and the emerging issues of science and technology.

13. University-based research, both curiosity-driven and applied, and education, with government support and the involvement of private businesses, should play an important role in developing nodes for promoting innovation in society. Government, academia, and business must work together for growth and sustainable development in the global economy as well as at the national level.

Cooperation in Science and Technology
14. Enhancing open innovation requires collaboration between academia, business, and government. In that context, mobility of researchers and engineers between conventional sectors (academia, industry, and government) as well as across countries is essential.

15. There are many aspects to international cooperation in science and technology. Cooperation between different scientific communities in various countries, or in some areas, can allow large-scale research, and cooperation between developed and developing countries is essential for development. Science diplomacy should include the active participation of not only diplomats but also researchers, engineers, and business leaders, to produce beneficial cross-border solutions.

16. We look forward to meeting here again next year. We agreed to hold the 15th Annual Meeting of the STS *forum* in Kyoto from Sunday, October 7 to Tuesday, October 9, 2018.