

G20 Ministerial Statement on Trade and Digital Economy
(Digital Economy Part)

1. Overview: Human-centered Future Society

- 1) We, G20 Ministers for the Digital Economy discussed how we can design and implement our digital policies to maximize benefits and minimize the challenges from the development of the digital economy, and to overcome challenges with special attention to developing countries and underrepresented populations.

- 2) The G20 started the policy discussion on the digital economy under the Chinese Presidency in the Hangzhou Summit process in 2016, in which G20 members engaged in comprehensive discussion on digital economy, innovation and new industrial revolution. Germany established the first G20 Digital Economy Ministerial Meeting and created an overall perspective on digital policy with the G20 Roadmap on Digital Economy and the Ministerial Declaration. In 2018, Argentina focused on digital government, the digital gender divide, infrastructure deployment and the measurement of the digital economy, in addition to creating the G20 Repository of Digital Policies. The Digital Economy Ministers issued a declaration, which noted that it is essential to continue the work on further understanding of the market impact of emerging technologies and new business models, like online platforms and the need to advance a fair, predictable, transparent, competitive and non-discriminatory business environment.

- 3) Recalling these discussions, we exchanged views on how to achieve an inclusive, sustainable, safe, trustworthy and innovative society through digitalization. We share the notion of a human-centered future society which is being promoted as Society 5.0 in Japan. Society 5.0 is a vision of human-centered future society promoted by the Japanese government to achieve an advanced society, which realizes economic growth and solves social challenges, by advancing towards Sustainable Development Goals (SDGs) through the increasing convergence of the physical world and the virtual world.

- 4) Digitalization is expected to continue creating benefits for our economies and societies as a whole. The benefits brought by increased productivity through the use of emerging technologies such as artificial intelligence (AI), fifth-generation mobile telecommunication technologies (5G), the Internet of Things (IoT), Distributed Ledger Technologies (e.g. block chain) will empower all individuals and

firms by creating new opportunities, and generate new services and employment, all of which can lead to greater well-being and further inclusiveness for individuals and firms.

- 5) While digitalization has tremendous potential to deliver benefits to society, it also raises certain concerns. Digital divide should be addressed with a commitment to evidence-based policy approaches together with the efforts to improve the measurement of the digital economy that enable the widest possible adoption and use of innovative technology. We should come together to promote trust in the digital economy to harness the benefits brought by digitalization as well as to mitigate the associated challenges.
- 6) The G20 also reaffirms its commitment to fighting exploitation of the Internet for violent extremist and terrorist purposes, as well as promoting a free, open and secure internet, and encourages the digital industry to continue to work together with all stakeholders in fighting use of the Internet and social media for violent extremist and terrorist purposes, and addressing content that incites terrorist acts.
- 7) We share the view that the digital society must be built on trust among all stakeholders including governments, civil society, international organizations, academics and businesses through sharing common values and principles including equality, justice, transparency and accountability taking into account the global economy and interoperability. We note the views given at the G20 Digital Economy Multi-stakeholder Conference, and look forward to the multi-stakeholders discussion at the 14th United Nation's Internet Governance Forum at the end of November 2019 in Berlin and the WSIS Forum at the end of March 2020 in Geneva.
- 8) Building upon the commitments and achievements of previous years, we, as G20 Ministers, commit to sharing and promoting national experiences and international policies to maximize and share the benefits from digitalization of our economies and societies through the following efforts.

2. Data Free Flow with Trust

- 9) Reaffirming the commitments made in Hangzhou, Dusseldorf, and Salta, we share the understanding that digitalization gives us the opportunity to promote inclusive and sustainable economic growth. Digitalization also promotes social and cultural progress and development, fosters innovation, and empowers individuals

and businesses, including micro, small, and medium-sized enterprises (MSMEs) to benefit from emerging technologies and data.

10) Cross-border flow of data, information, ideas and knowledge generates higher productivity, greater innovation, and improved sustainable development. At the same time, we recognize that the free flow of data raises certain challenges. By continuing to address challenges related to privacy, data protection, intellectual property rights, and security, we can further facilitate data free flow and strengthen consumer and business trust. In order to build trust and facilitate the free flow of data, it is necessary that legal frameworks both domestic and international should be respected. Such data free flow with trust will harness the opportunities of the digital economy. We will cooperate to encourage the interoperability of different frameworks, and we affirm the role of data for development.

3. Human-centered Artificial Intelligence (AI)

11) Recognizing the efforts undertaken so far by all stakeholders in their respective roles including governments, international organizations, academia, civil society and the private sector, and mindful of how technology impacts society, the G20 endeavors to provide an enabling environment for human-centered AI that promotes innovation and investment, with a particular focus on digital entrepreneurship, research and development, scaling up of startups in this area, and adoption of AI by MSMEs which face disproportionately higher costs to adopt AI.

12) We recognize that AI technologies can help promote inclusive economic growth, bring great benefits to society, and empower individuals. The responsible development and use of AI can be a driving force to help advance the SDGs and to realize a sustainable and inclusive society, mitigating risks to wider societal values. The benefits brought by the responsible use of AI can improve the work environment and quality of life, and create potential for realizing a human-centered future society with opportunities for everyone, including women and girls as well as vulnerable groups.

13) At the same time, we also recognize that AI, like other emerging technologies, may present societal challenges, including the transitions in the labor market, privacy, security, ethical issues, new digital divides and the need for AI capacity building. To foster public trust and confidence in AI technologies and fully realize their potential, we are committed to a human-centered approach to AI, guided by the G20 AI Principles drawn from the OECD Recommendation on AI, which are

attached in Annex and are non-binding. This Annex includes the following principles of “inclusive growth, sustainable development and well-being”, “human-centered values and fairness”, “transparency and explainability”, “robustness, security and safety” and “accountability”. The Annex also offers guidance for consideration by policy makers with the purpose of maximizing and sharing the benefits from AI, while minimizing the risks and concerns, with special attention to international cooperation and inclusion of developing countries and underrepresented populations.

- 14) In pursuing human-centered AI, G20 members recognize the need to continue to promote the protection of privacy and personal data consistent with applicable frameworks. The G20 also recognizes the need to promote AI capacity building and skills development. We will each continue to strive for international cooperation and endeavor to work together with appropriate fora in areas such as research and development, policy development and information sharing through the G20 Repository of Digital Policies and other open and collaborative efforts.

4. Governance Innovation - Agile and Flexible Policy Approaches in the Digital Economy -

- 15) We recognize that harnessing the full potential of emerging technologies would benefit from more innovation enabling approaches to policy making than in the past. We will strive for innovation-friendly policies to capitalize the potential of digital technologies and look to remove barriers to innovation accordingly.
- 16) We recognize that various countries have already taken steps with the intention of making policy approaches more flexible, holistic, and agile, for example through the use of regulatory sandboxes. Policies, regulations, or the removal of regulatory barriers can contribute to and accelerate economic growth, and inclusive development by developing countries as well as MSMEs.
- 17) We recognize that governance in the digital era needs to be not only innovation-friendly but also innovative itself, while not losing legal certainty. Interoperable standards, frameworks and regulatory cooperation can help in this regard. International as well as national policy formulation with the involvement of all relevant stakeholders in their respective roles is instrumental to address a wide range of societal challenges and facilitate discussion on how technology can be better incorporated into policy tools.

18) To adapt better policy approaches and guide technical innovation, we support the sharing of good practices between G20 countries, including by utilizing the G20 Repository of Digital Policies established under Argentina's presidency. We note the work of relevant international organizations.

5. Security in the Digital Economy

19) Security in the digital economy is essential for strengthening our public's confidence in digital technologies and the entire digital economy. We recognize the importance for governments and other stakeholders within their respective roles to address security gaps and vulnerabilities. These have a negative impact on digital innovations, and trust by consumers and businesses, and thus hinder us from taking full advantage of the benefits of digitalization. Security in the digital economy is also important for governments in providing their services.

20) Along with the rapid expansion of emerging technologies, including IoT, the value of an ongoing discussion on security in the digital economy is growing. We, as G20 members, affirm the need to further work on these urgent challenges.

We recognize the global aspect of security in the digital economy together with the need to develop localized and customized frameworks and methodologies.

Industry-led and market-led global technical standards, developed based upon principles of openness, transparency, and consensus help deliver interoperability.

These promote trust, which is essential for enabling the benefits of the global digital economy.

21) We recognize the need to raise awareness on the importance of actions to enhance security in the digital economy. We also recognize the role played by stakeholders such as private sector, the technical community and civil society, and relevant international organizations to further discuss those issues. We note relevant international organizations working on security in the digital economy within their existing mandates and efforts in security in the digital economy.

6. SDGs and Inclusion

[Tackling the Digital Divide and Promoting Digitalization]

22) Digital Infrastructure

We recognize that improved connectivity and broadband access is a necessary condition for the development of the digital economy, as well as a powerful enabler of inclusive growth and sustainable development. Therefore we support initiatives aimed at the promotion of investment in domestic and international digital

connectivity infrastructure, including fiber optic cables, 5G and other ultra-high-speed connectivity technologies, scaling-up the fiber optics infrastructure to avail fiber connectivity to a greater number of individuals and connectivity redundancy. We acknowledge the relevance of appropriate policy approaches that, while recognizing national circumstances, promote a pro-investment, fair, competitive, and non-discriminatory marketplace enhance the accessibility, affordability, quality and security of connectivity and digital services, and increase access to digital economic growth. We encourage the G20 common goal of promoting universal and affordable access to the Internet by all people by 2025. G20 members also encourage promoting connectivity in rural areas for rural prosperity with a particular focus on poverty eradication and distance learning.

23) Digital Literacy

The digital divide recently is no longer just about access to technology, it is also about having the right skills and knowledge to use it. Possessing the right skills and knowledge as well as creating consumer oriented digital environment has a direct impact on the ability of people to reap the benefits of digitalization for their personal and professional life. We encourage G20 countries to promote digital literacy strategies with a special focus on vulnerable groups and for labor market transformation.

24) Bridging the Digital Gender Divide

We reconfirm the importance of bridging the digital divide in ways such as development of skills for digital literacy, enhancing digital access and adopting digital technologies with special attention to the digital gender divide, while working towards the 25 by 25 goal that G20 members committed to in Brisbane, and to people who are living in remote areas as discussed in earlier DETFs under the German and Argentinian presidencies. With our continuous support of EQUALS and G20 #eSkills4girls initiative, we reaffirm that the participation of women and girls in the digital economy supports stronger economic growth, innovation, and inclusiveness and enhances societal well-being. We further encourage G20 countries to take actions to bridge the digital gender divide, including through the development of frameworks to measure and track sex-disaggregated data, and to make efforts to increase women's access to digital networks while addressing abuse and violent online behavior toward women, enhance women and girls' participation in STEM (Science, Technology, Engineering and Mathematics), support women's entrepreneurship in digital business and work within existing partnerships and frameworks. Technology should be accessible for all. The G20 could explore using

the existing G20 Toolkit for Measuring Digital Economy to add indicators on women in digital.

25) Inclusion of MSMEs and Entrepreneurs

MSMEs and entrepreneurs are important drivers of innovation and the digital economy. Facilitative environment in which MSMEs can actively take part in the digital economy, including by using leapfrog technologies, are helpful to create an inclusive and sustainable society. The G20 will seek to exchange and share practices on the promotion and scale up of digital entrepreneurship.

26) Inclusive Design for people at all ages /Persons with disabilities

In addition to an approach where people develop additional skills to use digital technology, we acknowledge that digital technology, should be user-friendly and human-centered, and should be designed for use by a diverse group of persons, including persons with disabilities, older persons, or those with lower digital skills. For example, the use of new digital interfaces such as sensors and VUI (Voice User Interface) could support inclusion of persons with disabilities and older persons.

27) Digital transformation of industries

Digitalization can contribute to economic growth and social development in a variety of sectors. Manufacturing, which is one of the most crucial industries in the global economy, is becoming more digitalized, networked and intelligent. The G20 will share good practices and experiences regarding digital industrial policy with a view to promoting high quality inclusive development of all sectors including manufacturing sector, and take actions to create a favorable environment globally.

28) Smart Cities

To contribute to sustainable and inclusive growth in urban areas where most of the world's population and energy consumption are concentrated, the G20 encourages networking and experience-sharing among cities for the development of smart cities, recommended by the Business 20 and the Urban 20. Implementations of smart cities should take into account transparency, resiliency, privacy, security, efficiency, and interoperability. Cities and networks of cities that express an interest may join a Global Smart City Coalition, which has been proposed to be established in October. The G20 notes the upcoming "Super City/Smart City Forum" planned to be held on 29th of June in Osaka.

[Plan for action towards SDGs through digitalization]

29) In order to share the benefits of digitalization globally to contribute to the implementation of the G20 action plan on the 2030 agenda on sustainable development and leave no one behind, we will endeavor to share good practices and lessons learnt from their experiences in solving social problems by using the G20 Repository of Digital Policies.

30) We encourage all stakeholders in their respective roles to work together in facilitating digitalization in developing countries and regions, as well as globally, by making use of good practices and knowledge-sharing. For this objective, all G20 members and other interested countries are invited to discuss how to make use of good practices and knowledge and to set actions into motion to collaborate, cooperate and support the efforts for digitalization, including advance progress towards SDGs in developing countries and regions. We consider that digital governance is an essential leverage of prosperity, social inclusion and environmental sustainability with measurable results. We note the work of the Development Working Group for the Guiding Principles for the Development of Science, Technology, and Innovation for SDGs Roadmaps. We are committed to capacity-building around the world as a vehicle for implementing SDGs.

31) The knowledge sharing activity will be supported by the World Bank and other relevant international organizations, within their existing mandates and core competencies and managed by interested G20 members and other interested countries.

7 Way Forward

32) We will continue to work toward a human-centric future society, and emphasize the importance of working with all interested parties and stakeholders in sharing good practices and experiences, including inclusive digital economy business models, in digitalization to advance globally inclusive development of digital society.

33) We recognize the role and contributions of the G20 engagement groups and other civil society groups in the G20 process. We thank International Organizations, including the APT, ERIA, IMF, ITU, OECD, UNCTAD, WB, and WTO for contributing their expertise to the work of the G20 DETF and welcome their efforts to maximize the positive impact of the digital economy.

ANNEX

G20 AI Principles ¹

The G20 supports the Principles for responsible stewardship of Trustworthy AI in Section 1 and takes note of the Recommendations in Section 2.

Section 1: Principles for responsible stewardship of trustworthy AI

1.1. Inclusive growth, sustainable development and well-being

Stakeholders should proactively engage in responsible stewardship of trustworthy AI in pursuit of beneficial outcomes for people and the planet, such as augmenting human capabilities and enhancing creativity, advancing inclusion of underrepresented populations, reducing economic, social, gender and other inequalities, and protecting natural environments, thus invigorating inclusive growth, sustainable development and well-being.

1.2. Human-centered values and fairness

- a) AI actors should respect the rule of law, human rights and democratic values, throughout the AI system lifecycle. These include freedom, dignity and autonomy, privacy and data protection, non-discrimination and equality, diversity, fairness, social justice, and internationally recognized labor rights.
- b) To this end, AI actors should implement mechanisms and safeguards, such as capacity for human determination, that are appropriate to the context and consistent with the state of art.

1.3. Transparency and explainability

AI Actors should commit to transparency and responsible disclosure regarding AI systems. To this end, they should provide meaningful information, appropriate to the context, and consistent with the state of art:

- i. to foster a general understanding of AI systems;
- ii. to make stakeholders aware of their interactions with AI systems, including in the workplace;
- iii. to enable those affected by an AI system to understand the outcome; and,
- iv. to enable those adversely affected by an AI system to challenge its outcome based on plain and easy-to-understand information on the factors, and the logic

¹ This Annex draws from the OECD principles and recommendations.

that served as the basis for the prediction, recommendation or decision.

1.4. Robustness, security and safety

- a) AI systems should be robust, secure and safe throughout their entire lifecycle so that, in conditions of normal use, foreseeable use or misuse, or other adverse conditions, they function appropriately and do not pose unreasonable safety risk.
- b) To this end, AI actors should ensure traceability, including in relation to datasets, processes and decisions made during the AI system lifecycle, to enable analysis of the AI system's outcomes and responses to inquiry, appropriate to the context and consistent with the state of art.
- c) AI actors should, based on their roles, the context, and their ability to act, apply a systematic risk management approach to each phase of the AI system lifecycle on a continuous basis to address risks related to AI systems, including privacy, digital security, safety and bias.

1.5. Accountability

AI actors should be accountable for the proper functioning of AI systems and for the respect of the above principles, based on their roles, the context, and consistent with the state of art.

Section 2: National policies and international co-operation for trustworthy AI

2.1. Investing in AI research and development

- a) Governments should consider long-term public investment, and encourage private investment, in research and development, including inter-disciplinary efforts, to spur innovation in trustworthy AI that focus on challenging technical issues and on AI-related social, legal and ethical implications and policy issues.
- b) Governments should also consider public investment and encourage private investment in open datasets that are representative and respect privacy and data protection to support an environment for AI research and development that is free of inappropriate bias and to improve interoperability and use of standards.

2.2. Fostering a digital ecosystem for AI

Governments should foster the development of, and access to, a digital ecosystem for trustworthy AI. Such an ecosystem includes in particular digital technologies and infrastructure, and mechanisms for sharing AI knowledge, as appropriate. In this regard, governments should consider promoting mechanisms, such as data trusts, to support the safe, fair, legal and ethical sharing of data.

2.3 Shaping an enabling policy environment for AI

- a) Governments should promote a policy environment that supports an agile transition from the research and development stage to the deployment and operation stage for trustworthy AI systems. To this effect, they should consider using experimentation to provide a controlled environment in which AI systems can be tested, and scaled-up, as appropriate.
- b) Governments should review and adapt, as appropriate, their policy and regulatory frameworks and assessment mechanisms as they apply to AI systems to encourage innovation and competition for trustworthy AI.

2.4. Building human capacity and preparing for labor market transformation

- a) Governments should work closely with stakeholders to prepare for the transformation of the world of work and of society. They should empower people to effectively use and interact with AI systems across the breadth of applications, including by equipping them with the necessary skills.
- b) Governments should take steps, including through social dialogue, to ensure a fair transition for workers as AI is deployed, such as through training programs

along the working life, support for those affected by displacement, and access to new opportunities in the labor market.

- c) Governments should also work closely with stakeholders to promote the responsible use of AI at work, to enhance the safety of workers and the quality of jobs, to foster entrepreneurship and productivity, and aim to ensure that the benefits from AI are broadly and fairly shared.

2.5. International co-operation for trustworthy AI

- a) Governments, including developing countries and with stakeholders, should actively cooperate to advance these principles and to progress on responsible stewardship of trustworthy AI.
- b) Governments should work together in the OECD and other global and regional fora to foster the sharing of AI knowledge, as appropriate. They should encourage international, cross-sectoral and open multi-stakeholder initiatives to garner long-term expertise on AI.
- c) Governments should promote the development of multi-stakeholder, consensus-driven global technical standards for interoperable and trustworthy AI.
- d) Governments should also encourage the development, and their own use, of internationally comparable metrics to measure AI research, development and deployment, and gather the evidence base to assess progress in the implementation of these principles.