



DECLARATION OF G20 DIGITAL MINISTERS

Leveraging Digitalisation for a Resilient, Strong, Sustainable and Inclusive Recovery

We, the G20 Digital Ministers, met on the 5th of August 2021 in Trieste, Italy, both physically and virtually, to further our dialogue and cooperation on digitalisation as a key enabler for achieving the UN Sustainable Development Goals (SDGs) in its three economic, social and environmental dimensions, in line with the G20 priorities for 2021 of People, Planet and Prosperity.

Building on the achievements and commitments of past Presidencies and acknowledging the impact of the COVID-19 crisis on the economy, employment, and the wellbeing of our societies, we discussed how to embrace opportunities and address challenges and risks to further leverage the potential of digitalisation for a resilient, strong, sustainable and inclusive recovery, while tackling inequalities. Governments should keep pace with the profound transformation that digitalisation has generated in the economy and society. We addressed our priorities under the umbrella of Digital Economy, with a particular focus on Digital Government.

Given the increasing impact of digitalisation on our economy and society, the DETF work was enriched by a multistakeholder approach through the organisation of engagement groups' consultations and multistakeholder fora. Indeed, this has been an opportunity to go more in depth into the specific priorities, to exchange views, knowledge and practices and to add further value to the vision of our future.

DIGITAL ECONOMY

The pandemic has highlighted the benefits of digitalisation for the economy and the society: to support employment, health and education (People), to contribute to sustainability (Planet) and to enable the economic resilience of businesses (Prosperity).

At the same time, the rapid increase in the use of digital technologies and in their diffusion across industries and sectors raises challenges, such as the need of businesses and workers to adapt, the need to bridge the digital divide in order to avoid social exclusion, and the need to strengthen our response to the increased digital security challenges for business and citizens in the digital environment. In particular, developing countries face challenges linked to the deployment of digital infrastructures.

Now it appears urgent to accelerate the digital transformation and reflect on how to reap the benefits of the advancements, while addressing the challenges ahead, taking into account different development levels of countries.

We recognise the importance of policies to create an enabling, inclusive, open, fair and non-discriminatory digital economy that fosters the application of new technologies and allows businesses and entrepreneurs to thrive.



i. Digital Transformation in Production for Sustainable Growth

Since the 2016 G20 New Industrial Revolution Action Plan, which was adopted at the Hangzhou Summit, G20 Leaders recognised that digitalisation of production presents opportunities for industry, transforming production processes and business models, and enhances economic growth.

The pandemic has amplified the relevance of the digital transformation for business resilience and for the delivery of goods and services and it has also spurred the diffusion of most advanced digital technologies throughout the economy. Yet, the benefits of the digital transformation are spread unevenly across and within countries, industries, and firms. Micro, small, and medium-sized enterprises (MSMEs), and also larger companies in developing countries, are still lagging behind on digital adoption and international evidence indicates larger productivity gaps among firms, especially between MSMEs and large firms.

We recognise that companies have to be prepared for the “new normal” and for further technological shifts, in order to cope with future challenges towards a sustainable, open, shared and more innovative economy. We acknowledge, as well, that there is a necessity to support MSMEs’ inclusiveness in the digital economy and that there is a need to increase our efforts on developing human-centred approach to digital economy development that accounts for the needs and perspective of traditionally vulnerable groups.

Policies can support the development, deployment, and diffusion of technologies across the economy and promote further investments for digitalisation in hardware, software, complementary intangible, know-how and R&D. Investments in human capital, capacity building, digital literacy and skills are needed to enable workers, managers and entrepreneurs to adapt to digitalisation and to new forms of employment. New business models represent both an opportunity and a challenge, particularly for incumbent MSMEs that are not born digital. To facilitate the change, policy actions can promote innovation ecosystems, stability of industrial supply chains, innovative start-ups, and collaboration between private and public actors for effective identification and sharing of information on technologies, while promoting a responsible and human-centred use of new technologies, to foster new business models.

We recognise the importance of data-driven innovation and the growing demand of data across society. Coherent and responsible data governance frameworks that guide the reuse and sharing of data should ensure confidence and security, privacy, personal data protection and the protection and enforcement of intellectual property rights, taking into account differences in national legal systems. This could be accompanied by policies that foster investments in data infrastructure and architecture that have positive spillovers across industries and society. Increased, open and accessible government data could help encourage innovation, in particular among MSMEs.

Digital technologies can contribute to the transition to sustainable development and play a key role in helping industries to protect the environment, improve processes, improve energy-efficiency, and manage and reduce the use of materials. At the same time, some digital technologies consume a significant amount of energy and resources and can have negative impacts on the environment, which need to be tackled.



Security in the digital economy is a key enabling factor. Companies should strengthen the security of their infrastructure, digital processes, products, and services throughout their supply chain. Security threats can jeopardize the innovation process and slow the adoption of new technologies, particularly by MSMEs. Data breaches can undermine public trust in organisations and technology. Policy action should create a culture of security in the digital economy and encourage companies to ensure duty of care, inter alia by including security risks associated with the digital economy in their risk management strategy, and by implementing security by design and lifecycle management of products and services, as promoted within relevant international institutions. Policies should avoid choices that may negatively impact an organisation's ability to protect data and personal information.

Actions such as the use of consensus-based standards and their application strengthening the ICT security industry, risk-based ICT security certification schemes, training of workers, raising security awareness of managers and strengthening industry-research centre collaborations, contribute to a secure digital environment for both large firms and MSMEs. It is also important to raise awareness in the public about security risks associated with digital transformation and digital economy transition, thus building confidence and security in the use of ICTs and digital technologies.

Looking ahead and building on our policies, we, the G20 Digital Ministers, commit to reinforce our actions and policies for the digitalisation of production and to strengthen international cooperation, in order to promote and accelerate a strong, resilient, sustainable and inclusive recovery, in a way that benefits all.

We welcome the *Multi-stakeholder Forum on Digital transformation in production for sustainable growth*, held in June 2021, which contributed to further the dialogue and delivered *Key messages for digital transformation in production for sustainable growth*, providing guidance on how to accelerate the digitalisation and favour MSMEs' inclusiveness.

ii. Leveraging Trustworthy Artificial Intelligence for MSMEs' Inclusiveness and Start-ups' Promotion

We reaffirm our willingness to implement trustworthy Artificial Intelligence (AI) and to commit to a human-centred approach, as decided in 2019 under the Japanese G20 Presidency, guided by the G20 AI Principles, drawn from the OECD Recommendations on AI. We will build on the Examples of National Policies to advance the G20 AI principles, launched under the Saudi G20 Presidency in 2020.

The uptake of AI by firms, in general, is still low and significant gaps remain between large firms and MSMEs in the development and use of AI technologies, in particular in developing countries. The presence of AI start-ups across G20 countries and between the gender representation of entrepreneurs also differs considerably. Innovative start-ups have the potential to develop AI applications, to generate new ideas and to exploit opportunities to scale up. MSMEs can benefit in many different ways from the opportunities offered by AI, e.g. by enabling innovation and strengthening productivity or by changing their business models and internal practices, as well as improving the efficiency of existing models.

In the design of our policies, we consider the specific needs of MSMEs and start-ups, for the implementation of trustworthy AI that is human-centred, fair, transparent, robust, accountable, responsible, safe and secure and protects privacy, so as to encourage competition, innovation, diversity and inclusion.



We acknowledge the need to bolster MSMEs' capabilities for AI, including their capability to use data, access to finance, sharing opportunities as well as by building a talented and skilled workforce. Policies could favour access to AI technology and networks and collaboration between large firms and MSMEs, as well as start-ups' access to innovative public procurement.

An enabling business environment for AI can be fostered through MSME-friendly AI policies, guidelines, standards and regulations and by relying on agile regulatory approaches related to AI, including the use of regulatory sandboxes that can favour experimentations and responsible AI, combining security, social sustainability and strengthened intellectual property protection for innovation.

In order to increase our knowledge on existing approaches and practices, we welcome the *G20 Policy Examples on How to Enhance the Adoption of AI by MSMEs and Start-ups* (Annex 1). We believe in the importance of international cooperation for promoting MSMEs' inclusiveness through knowledge sharing and mutual learning and we commit to further advancing the implementation of the G20 AI Principles in the future.

iii. Measurement, Practice and Impact of the Digital Economy

Recognising the work carried out under previous G20 Presidencies and following up on the G20 Roadmap toward a Common Framework for Measuring the Digital Economy, developed under the Saudi Presidency, we encourage improved measurement of the digital economy and ongoing discussions on the dynamic aspects of this topic to support evidence-based policy development.

We support an inclusive and multi-stakeholder dialogue on measurement and recognise the contributions made during the February 2021 *G20 Expert Workshop on Measurement of the Digital Economy*. Enhanced statistical cooperation and experience sharing among the National Statistical Offices (NSOs) of G20 countries, as well as with IOs and other stakeholders, is essential to delineate and improve the measurement of the digital economy, including in priority areas such as the integration of the digital economy in macro-economic statistics, analysis of value of data, artificial intelligence and the digital divides, especially gender divide and its underlying causes.

We believe that measurement of AI, notably its diffusion and impact across the economy and the international comparability of indicators on AI, needs to be improved. As AI remains a rapidly evolving set of technologies, requiring some flexibility in approaches, we encourage further sharing of experiences across countries and IOs to make progress.

We note the lack of comparative data and studies on the digital gender divide, and the need for a more comprehensive picture of related policy challenges, including intersectional considerations. Improving measurement can help shape and underpin the policy discussion on the role of women in the digital economy. We call for close coordination to promote statistical guidance and move from outcome measures of the digital gender divide to the analysis of enabling and disabling factors.

To this end, we acknowledge the importance of developing sound statistical infrastructures, including through dedicated statistical surveys, appropriate domestic, national and international legal and technical frameworks for data access and use, while protecting personal data and privacy, strengthening of NSOs' capabilities in



using linked data, increased availability of open data, and enhanced collaboration with the private sector and relevant stakeholders, including in exploring alternative sources of data and data collection practices.

We reaffirm that the 2020 Roadmap can help ensure that measurement of the digital economy remains a priority in G20 countries and in International Organisations and that adequate resources are devoted to its implementation. We value the contribution of sharing good practices, also in relation to monitoring digital economy developments beyond the G20 itself.

iv. Consumers' Awareness and Protection in the Global Digital Economy

Since 2017, G20 Ministers have paid attention to consumer protection in the digital economy and in 2018 in Argentina, the *Toolkit for Protecting Digital Consumers* was launched.

Enhanced and increased transparency in the digital markets should tackle not only asymmetries in individual transactions but also promote consumers' awareness and empowerment, in order to make consumers play an active role in shaping sustainable economic development.

Taking stock of previous G20 results and given the steep increase of online transactions and e-commerce during the pandemic, we commit to take action to raise awareness, educate and support consumers, including through digital literacy programs in the digital economy, with the aim of preventing the detriment of consumers and ensuring consumer's protection regarding products' quality and safety, privacy and personal data protection, and unfair commercial practices, with particular consideration for vulnerable consumers. We acknowledge the relevance of research and intervention in the field of consumer protection in the digital economy in order to prevent detrimental implications of technological development for citizens and to keep pace with technological evolution.

We promote stronger international cooperation among consumer protection authorities and multistakeholder engagement initiatives and coordination, and we see value in ongoing international efforts such as the OECD's *Global Recalls portal* and other existing tools and guidelines to protect consumers.

We welcome the *Multi-stakeholder Forum on consumers' awareness, protection, and blockchain for traceability in the digital economy*, held in May 2021, and the call to promote growing international cooperation and exchange of practices to advance consumer protection as a means to support digital economy growth. We hope that similar opportunities of wide and open consultation in this field will continue regularly in the next years.

The *Blockchain in Global Value Chains: G20 Collection of Practices and Examples*, developed by the Presidency as a follow up to the Forum, has indicated that the use of distributed ledger technologies (DLTs), such as blockchain, in global value chains, has the possibility to offer greater transparency and accountability for consumers, yet companies, especially MSMEs, face particular barriers in the up-take of DLT-based solutions. Current analysis has identified the opportunities offered, as well as existing challenges in the use of DLTs, in particular in developing countries, and can contribute to shedding light on experiences and practices among G20 countries, IOs, businesses and other stakeholders.



v. Children Protection and Empowerment in the Digital Environment

We are pleased to include the protection and empowerment of children in the digital environment for the first time among the priorities of the G20 Digital Economy.

We acknowledge that the digital environment offers multiple opportunities for children, including in supporting their education, enhancing their creativity, supporting their civil liberties, providing social and cultural opportunities, entertainment, and contributing to off-line experiences.

At the same time, the digital environment is complex, subject to rapid evolution and has the capacity to shape and reshape children's lives in a variety of ways, including into adulthood. The increased use of digital technologies, especially during the COVID-19 pandemic, exposes children to a spectrum of risks, to which children might be more vulnerable than adults, including harmful and illegal content, contact, and conduct risk, as well as risks related to children as consumers, product safety, human rights, security, and personal data protection and privacy.

Previously existing risks such as cyberbullying and cyber grooming have changed in nature and persist, and can have serious implications on children's mental and physical wellbeing. The abundance of personal information and data processed and shared in the use of internet, mobile devices and media devices, including through emerging digital technologies, such as AI and Internet of Things, exposes children to increased and complex privacy risks. The COVID-19 pandemic has exacerbated those risks.

We stress the shared responsibility of different stakeholders, especially the providers of digital services and products, including governments, companies, parents, guardians, civil society, educators, representative groups and children themselves, in creating a digital environment that both empowers and protects children.

We believe that companies providing platforms for content sharing, or providing services for children, or online spaces, including but not limited to online gaming, social media platforms and productivity tools and services that may be used by children, should prioritise the protection and privacy of children on their services and provide safety measures, including age-appropriate child safety and privacy by design, in the development of products and services to ensure children are protected from both illegal and harmful content and activity.

Through a proactive and multi-stakeholder approach, we will promote a safe, secure, inclusive, transparent and beneficial digital environment for children, age-appropriate and high-quality content online, and the awareness and empowerment of children and their parents, guardians, carers and educators.

Recalling the overarching importance of the United Nations *Convention on the Rights of the Child*, we recognise the important work being carried out in international governmental and non-governmental fora in this area, inter alia ITU 2020 *Guidelines on Child Online Protection*. We commit to children protection and empowerment in the digital environment, informed by the *G20 High Level Principles for Children Protection and Empowerment in the Digital Environment* (Annex 2), which are not binding and which are drawn from the *OECD Recommendation on Children in the Digital Environment*.



vi. Encourage Innovation for Smart Cities and Communities

In 2019 the *Global Smart Cities Alliance* initiative was launched by the Japanese G20 Presidency, which emphasized the role of interoperable, standards-based, open digital urban platforms. In 2020 the Saudi G20 Presidency welcomed the *G20 Smart Mobility Practices* and encouraged integration of other elements of smart cities and communities.

The public sector, as a major consumer of goods and services, has considerable power as a demand-side driver and is well suited to encourage innovation based on security, transparency, resilience, privacy, citizen participation, efficiency, technological neutrality and interoperability. Public procurement represents a prominent opportunity to foster the digital and sustainable transition of cities, enabling the modernization of public services with better value for money solutions, enhancing the quality of life of our citizens, and allowing MSMEs to participate in digital value chains.

Public procurement can help foster innovation for smart cities, enabling the modernization of public services and infrastructures. At the same time, smart cities have proven to be challenging to implement due to their large and versatile nature. Thus, we stress the importance of building proper capabilities in the government sectors to adequately procure and manage open standard-based digital solutions for smart cities. Improving the well-being in our cities is of crucial relevance and we reaffirm our engagement in international efforts and in sharing practices across G20 countries to further promote dialogue on smart cities, including practices on participatory methods, which allow for more inclusive and holistic approaches towards the development of smart cities.

Therefore, we welcome the Italian Presidency's Report of *G20 Practices of Innovative Public Procurement for Smart Cities and Communities*, as a tool to increase and share our knowledge.

vii. Connectivity and Social Inclusion

Building on G20 achievements over the years, we reaffirm our commitment to bridge connectivity gaps, and we encourage the goal of promoting universal and affordable access to connectivity for all by 2025.

Faced with an unprecedented digital acceleration and a future where digital technologies will be even more essential for jobs, education, health, government services, as well as social interactions, we believe that it is of utmost importance to ensure universal, secure, accessible and affordable connectivity for all.

The availability of high-quality digital services based on secure and resilient infrastructure, including high-performing digital connectivity, will be critical for the future: connectivity minimizes workforce disruptions, supports online learning and working, enables access to public services, smart health systems, strengthens territorial cohesion, and promotes job upskilling and reskilling programs for everyone and everywhere, to prepare the workforce for the future.

We recognise the importance to promote human-centred and inclusive deployment and application of digital technologies, increasing the digital access and promoting digital solutions for all, taking into account the



additional barriers faced by vulnerable and underrepresented groups, including, inter alia, people with disabilities and older people and having regard for poorly served areas, and including remote and rural areas.

We recognise the importance of increased digital skills and digital literacy, including in urban, remote and rural or displaced environments and the need for a diverse digital workforce. This will enable citizens to have equal access to more efficient services, consumers will enjoy more choices and business will explore more opportunities and markets. The usage of ICTs and digital technologies as well as digital skills are a key factor to offer multiple opportunities for gender equality and social inclusion.

We believe that enhanced collaboration and exchange of practices at the international level and interaction with stakeholders can contribute to our connectivity and social inclusion goals. In an open dialogue among G20 countries, IOs, and other stakeholders, on the occasion of the *Connectivity and Social Inclusion Forum*, held in April 2021, we addressed crucial topics such as: fostering innovation, growth and inclusion by connectivity; tackling global challenges through connectivity; sharing best practices on connectivity for all.

We believe that there is a need to stimulate financing and optimize the domestic environment to attract investments in digital infrastructure and we welcome the G20 Finance Ministers and Central Bank Governors efforts in this direction, in particular by focussing on this issue in the work of the G20 Infrastructure Working Group.

viii. Data Free Flow with Trust and Cross-border Data Flows

Digital Economy Ministers, in 2020, recognised the opportunities and challenges of data free flow with trust and cross-border data flows and the need to address these challenges such as those related to privacy, data protection, intellectual property rights and security, in accordance with the relevant applicable legal frameworks, including by identifying commonalities between existing approaches and instruments used to enable data to flow with trust across borders. Against this backdrop, building upon and recognising the work and achievements of the Japanese and Saudi Presidencies, we acknowledge the work of the OECD on *Mapping Commonalities in Regulatory Approaches to Cross-border Data Transfers* which identifies the “commonalities, complementarities and elements of convergence”¹ across different approaches. Such commonalities can foster future interoperability.

DIGITAL GOVERNMENT

As the digital transformation accelerates, governments, at all the levels of administration, should act not only as facilitators and regulators of this transition, but they should also transform the way in which they function, and serve the society as a whole. The ever-increasing citizens’ experience with digital services, especially during the COVID-19 crisis, raises expectations while challenging the public sector to achieve new levels of efficiency, human-centricity, convenience and inclusiveness to prove their responsiveness and accountability.

¹ Available at: <https://doi.org/10.1787/ca9f974e-en>



A fully ‘Digital Government’ is not only digitalised, but it should provide citizens and businesses with digital services that are proactive, human-centric and user-driven, safe and secure, easy-to-use, and accessible to all, including people with disabilities and older people, communities living in remote and rural areas as well as vulnerable groups.

In this sense, the digital transformation of governments should aim to improve services for all businesses and citizens and maintain access to traditional forms of public services.

The digital transformation of governments should, however, not lead to excluding businesses and citizens who do not wish or are not able to use digital public services, for whom traditional public services should remain available.

At the same time, the digital government should support protecting personal data and privacy of citizens and businesses, in order to foster confidence.

ix. Digital Tools for Public Services and Their Continuity

We recognise the importance of the 2018 G20 Digital Government Principles, developed under the Argentine Presidency, in improving the use of digital tools and data to better meet the needs of all citizens. The COVID-19 pandemic has highlighted the importance of digital government at all the levels of administration, and the need to enhance government’s capacities to deploy technologies, and handle data effectively while protecting personal data and privacy to ensure the continuity, safety, security and resilience of public services.

Moreover, rapid technological development in emerging technologies can offer the potential to transform the way in which G20 governments design and deliver public policies and services.

We reaffirm our commitment to foster the conditions and competencies necessary to unlock the potential of digital technologies and data in order to ensure the resilience, security, human centricity, and sustainability of our governments, while managing risks related to security, data protection, including personal data, and privacy, and bias in algorithms. Particular attention should be paid to bridging all kinds of digital divides.

We welcome the *G20 Compendium on the use of digital tools for public service continuity*, developed with the support of the OECD, which includes practices at the national and international level of how digital technologies and data have supported COVID-19 related public services to provide the basis for future recovery. We commit to continue our efforts, with the support of all the relevant international organisations, to ensure the quality of these services, their accessibility for all, in particular for people with disabilities and older people, and to develop the needed skills of our public servants. We will continue to work towards a collection of practical solutions to guide the implementation of integrated rights-based, human-centric, user-driven, transparent, safe and secure, resilient, proactive, ethical and inclusive public services at all levels of government. We reaffirm the importance of adopting a participatory and inclusive process with the engagement of civil society organisations, academia, and diverse stakeholders. Finally, we recognise the role of open-source in the public sector as one of the drivers of innovation, and a potential tool for furthering international cooperation.



x. Digital Identity

We acknowledge that easily usable, reliable, secure, trusted, and portable digital identity solutions that guarantee privacy and the protection of personal data, could enable G20 Member States to meet the needs and expectations of public and private sector users and, for example, they could improve accessibility to social benefits, however provided. We note that during the pandemic, the domestic adoption of digital identity to support access to both public and private sector services has accelerated. We support technical solutions that are based on the users' freely given, specific, and informed consent, and protect citizens' privacy and personal data, within the domestically applicable legal frameworks. We recognise that receiving government services by means of digital identity should not completely replace other means of accessing services, in order for citizens to meaningfully consent to the use of digital identity. While connectivity remains the main enabler, we recognise the potential contribution that digital identity solutions may have in supporting countries in the attainment of the United Nations Sustainable Development Goal Target 16.9: "to provide legal identity for all".

We welcome the opportunity to support international dialogue on digital identity by sharing practices, including through the *G20 Collection of Digital Identity practices*, developed in collaboration with the OECD, and gathering experiences of interoperable, portable and reusable digital identity as a tool that can transform the capacity of citizens to timely access the benefits and services they are entitled to.

We believe that such a learning exercise could provide useful insights to the development and improvement of national e-ID schemes, and contribute to future discussions to encourage harmonising digital identity standards and regulations as a key to achieve interoperability between different platforms and frameworks with appropriate data protection to prioritise users' privacy. We will pursue further work to find technology solutions that are suitable in internet-scarce settings including in humanitarian and emergency scenarios to provide a digital identity.

xi. Agile Regulation

Digitalisation and technological innovation are raising new governance and regulatory challenges for governments worldwide. We should keep pace with this new reality to support growth and innovation, while taking into account all stakeholders, preventing ethical risks, and protecting our citizens, our societal values and the planet. We should ensure that the innovation that will contribute to power economic growth and tackle the world's most pressing social and environmental challenges, is supported by governance frameworks and regulatory models fit for the digital age.

We note that various actions have already been taken by G20 members and guest countries, to make governance and regulatory approaches more agile, flexible and resilient through the development of experimental regulation such as regulatory sandboxes, anticipatory approaches (e.g. horizon scanning, scenario analysis and strategic foresight activities), multi-stakeholders use of guidelines and standards, and the promotion of international initiatives. We take note of the invitation from the Agile Nations intergovernmental network for G20 members to join. We note that agile regulations and solutions should not neglect the rights of any parties.



We recognise the contribution of the *Survey on agile regulation across G20 Members*, and the OECD's ongoing work to developing the *Principles and policy recommendations for agile regulatory governance to harness innovation*, supported and accompanied by the work of other international organisations, including UNIDO's global initiative on technology foresight and the ITU's 2020 Global ICT Regulatory Outlook.

We welcome the sharing of good practices and common approaches with a view to promoting more agile governance and regulatory models for innovation.

WAY FORWARD

We will continue to work towards digitalisation for resilient, strong, sustainable and inclusive recovery and we recognise the role and contribution of engagement groups, IOs and other stakeholders.

We welcome the proposal of Indonesia, the next Presidency of the G20, to continue the works and discussion, on the basis of this Declaration, on post-COVID-19 recovery measures, digital skills and literacy, as well as continuing the discussion on data free flow with trust and cross-border data flow.

We are grateful to those who contributed to the G20 Digital Economy Task Force (DETF) work in 2021, that brought together all G20 members, as well as the G20 2021 guest countries, namely Brunei Darussalam as Chair of Association of Southeast Asian Nations (ASEAN), Democratic Republic of the Congo as Chair of African Union (AU), Netherlands, Rwanda as Chair of New Partnership for Africa's Development (NEPAD), Singapore, and G20 permanent guest, Spain.

We would also like to thank UNIDO, UNCTAD, UNESCO and OECD as knowledge partners in 2021, as well as FAO, ITU, UNECE, UNHCR, UNSD, and WORLD BANK, the engagement groups B20, C20, L20, T20, W20, Y20, and other representatives of businesses and civil society who contributed to the dialogue.

Building on the discussion begun in 2020 under the Saudi Presidency and acknowledging the increasing and permanent role of the digital economy for our economy and society, we welcome the transformation of the Digital Economy Task Force to the Digital Economy Working Group (DEWG). The DEWG will work based on the *Terms of Reference of the G20 Digital Economy Working Group* (Annex 3), and meet at least twice a year, on the basis of an agenda decided by the Presidency.



ANNEX 1

G20 POLICY EXAMPLES ON HOW TO ENHANCE THE ADOPTION OF AI BY MSMEs AND START-UPS

Raising MSMEs' capabilities for AI

MSMEs need strategic resources and capabilities to develop and adopt innovation, including AI. Among others, skills, finance and intangible assets (e.g. data, technology and networks) are critical for AI, and often more difficult to access and leverage for smaller firms.

Raise awareness and improve access to talent and skills

The development and deployment of AI in businesses requires awareness about the possibilities and opportunities offered by AI, as well as the challenges it poses, in particular for developing countries. Entrepreneurs and managers should be made aware and have a good understanding of what AI systems can or cannot do, as well as of which type of function AI can be most beneficial to complement human capabilities, including the challenges it poses.

MSMEs should also be informed about the overall approach to AI that G20 members support, as referred to in the G20 AI Principles.

Workers will need to acquire the skills to work with AI and incentives to try new ways of working with the technology. Specialised AI skills are also required by MSMEs, to develop AI goods and services, and to support the development of a competitive AI-related knowledge market.

Indeed, the development and promotion of talent is fundamental for the success of MSMEs and innovative start-ups and for inclusive and sustainable growth, and requires a multidisciplinary high-quality education, including STEM, social and human sciences. This is central also to ensuring the development of human-centric and trustworthy AI and to addressing the lack of female-led start-ups in tech sectors and the overall gender gap in STEM fields, in addition to other underrepresented groups.

Examples of policies to address these challenges include:

- Raising awareness among MSMEs' entrepreneurs and managers, CEOs and workers about the benefits of AI and on data management in business practices, and disseminating the culture of responsible AI development and use, e.g. through new MSMEs-specific guidelines that consider MSMEs as producers, service providers and users of AI technologies.
- Fostering the endowment of the different sets of skills needed to develop, adopt and work with AI, by different types of entrepreneurs and workers, e.g. by supporting investment in education, skills and by encouraging the participation of MSMEs in training programmes better leveraging the pipeline of skills and talent between MSMEs and academic institutions.



Access to data

Access to data unleashes the potential of AI. MSMEs tend to have fewer resources to access data. They also often have less skills to find, analyse, exploit or valorise relevant data. Although they may produce and handle a great volume and variety of data, small businesses often lack the ability to structure, manage and protect them, and even when they do, these data may not be of adequate quality or quantity to perform pertinent analysis. In addition, having to deal with an increased volume and granularity of data can expose MSMEs to more data breaches, as well as lead, in case of misuse, to liability to MSMEs. Examples of policies to address these challenges include:

- Establishing public standards and infrastructure (e.g. data centres) for some categories of relevant data, e.g. health, research and AI training data, in order to increase data access, use and sharing for MSMEs.
- Defining mechanisms to encourage the use of data and cooperation between large enterprises and MSMEs and among MSMEs, e.g. through incentives and collaboration schemes that tackle data needs in specific industries and value chains.
- Fostering competition in data markets, including through competition policy, to provide a level playing field for AI-related MSMEs, notably as regards the cost and conditions of data access.

Access to finance

AI adoption and diffusion may be costly, especially for MSMEs in developing countries. In addition, AI uptake and transformation may not deliver immediate benefits, thus possibly delaying financial returns for MSMEs. High entry costs and uncertainty may further raise the cost for smaller businesses to finance AI innovation and adoption, as these barriers compound with MSMEs' limited cash reserves and borrowing capacity and known challenges in accessing appropriate forms of finance. Start-ups can be even more dependent on external funding, due to the need for significant up-front investments ahead of revenue growth. Examples of policies to address these challenges include:

- Improving MSMEs' financing for AI-related intangible assets (skills, data, software, process innovation, organisational changes), e.g. through sharing evidence on the cost-benefits of AI for different types of MSMEs, better collateralising intangible assets, and supporting access to alternative sources of finance, such as angel investors, venture capital, equity crowdfunding and private equity.
- Providing public schemes to encourage the participation of private investors in financing AI investments in MSMEs through public kick-start programs and risk-sharing and mitigating mechanisms with private partners.
- Strengthening public-private support for early stage and venture capital, and facilitating the use of intellectual property by start-ups, spin-offs and MSMEs as collateral. Equity investments in start-ups could be combined with R&D support schemes (e.g. grants, tax credits) within broader innovative acceleration schemes that strengthen the link between research and industry and encourage joint technology development between academia, industry and government



Access to AI technology and networks

MSMEs tend to be more dependent on external sources of knowledge than larger firms. Business linkages, e.g. buyer-supplier relationships, collaborative arrangements and platforms, or the integration into global value chains, can act as channels fostering data exchange and knowledge and, with it, technology diffusion. Yet, MSMEs are less integrated into innovation networks and may lack the absorptive capacity needed to benefit from AI-related spillovers. Examples of policies to address these challenges include:

- Establishing initiatives to increase AI uptake among MSMEs, e.g. through intermediaries, or through controlled environments for training, testing and experimentation of AI systems by MSMEs.
- Improving the supply and delivery of AI-related services and practices from technology diffusion institutions, including AI-related technology transfer from research and higher education institutions.
- Establishing collaborative infrastructures related to AI and open innovation initiatives aimed at increasing formal linkages between actors, including MSMEs, and at fostering an AI-prone ecosystem.
- Strengthening AI-related collaboration within business networks, including between large firms, multinationals and MSMEs and refining practices and policies. Favour AI-related relationships between large enterprises and MSMEs, e.g. related to data access or IP-related arrangements.
- Boosting access to specialised hardware for MSMEs AI developers, including in lagging sectors and regions.
- Fostering AI-related innovation by MSMEs, e.g. through competitions, prizes or challenges. At the same time, enhance public procurement related to AI, with integration of MSMEs in the procurement process, e.g. by reaching out to a variety of AI suppliers, adopting proportionality in requirements, and avoiding unnecessary administrative burdens.

An enabling business environment for AI

MSMEs are typically more dependent on their business ecosystem than larger firms and may have to often divert a relatively greater part of their internal resources to administrative functions than larger competitors. MSMEs, including start-ups, are therefore more vulnerable to deficient framework conditions, administrative and regulatory burdens, weak infrastructure, market failures and economic shocks. AI raises specific challenges for the business environment of MSMEs and start-ups, including those related to policies and practices that support trustworthy AI. Examples of policies to address these challenges include:

- Ensuring a conducive business environment for AI, in accordance with the G20 AI principles, including through the development of MSME-friendly AI guidelines, standards and regulations.
- Implementing agile regulatory approaches related to AI that consider the specificities of MSMEs in different markets and industries, e.g. through the use of regulatory sandboxes or other flexible and outcome-based regulations that can combine security, social sustainability and innovation.
- Levelling the playing field to foster the entry and growth of AI start-ups and to facilitate pro-competitive business dynamics in emerging AI markets.



Sharing practices for MSMEs and start-up policies related to AI

Supporting knowledge sharing and mutual learning, among G20 and in international platforms such as the OECD's AI Policy Observatory can contribute to improve evidence for MSME policies related to AI and nurture the understanding of the role played by different actors, including large firms, business associations, academia, national and local governments as well as international organisations.



ANNEX 2

G20 HIGH LEVEL PRINCIPLES FOR CHILDREN PROTECTION AND EMPOWERMENT IN THE DIGITAL ENVIRONMENT ²

Section 1. Principles for a Safe and Beneficial Digital Environment for Children

1.1 Fundamental Values

Actors³ in all activities concerning children's participation in, or engagement with, the digital environment, should:

- a) Uphold the child's best interests as a primary consideration; and
- b) Identify how the rights of children can be protected and respected in the digital environment and take appropriate measures to do so.

1.2 Empowerment and Resilience

Actors should take measures to support children in realising and enjoying the benefits of the digital environment by:

- a) Supporting parents, guardians and carers in their fundamental role of evaluating and minimising risks of harm and optimising the benefits to their children online as well as offline;
- b) Making sure children and their parents, guardians and carers are aware of their rights in the digital environment and putting in place accessible mechanisms for enforcing such rights, including complaints mechanisms or legal remedies;
- c) Supporting children and their parents, guardians and carers in understanding:
 - i. children's rights as data subjects; and
 - ii. the way in which children's personal data is collected, processed, shared, and used;
- d) Upholding and respecting children's right to freely express their views and their ability, as appropriate considering their age and maturity, to participate in matters that affect them in the digital environment;
- e) Making children, as well as their parents, guardians, and carers, aware of legal, psychosocial, or therapeutic services available to children requiring assistance as a result of activities or action in the digital environment, and providing access thereto; and
- f) Developing mechanisms to make children, parents, guardians, and carers aware of online commercial practices that may cause children harm.

² These Principles are not binding. This Annex draws from the principles and recommendations included in the OECD Recommendation on Children in the Digital Environment. In line with that Recommendation, 'Children' refers to every individual below the age of eighteen years recognising the different age thresholds may be appropriate in providing certain legal protections.

³ 'Actors' refers to all public and private organisations who play an active role in setting policies and practices or providing services for children in the digital environment.



1.3 Proportionality and Respect for Human Rights

Measures taken by Actors to protect children in the digital environment should:

- a) Be proportionate to the risks, evidence-based, effective, balanced, and formulated with a view of maximising the opportunities and benefits for children in the digital environment;
- b) Promote children's freedom of expression, and not undermine other human rights and fundamental freedoms;
- c) Not be unduly punitive; and
- d) Not unduly restrict digital service provision or limit innovation that can foster a safe and beneficial digital environment for children.

1.4 Appropriateness and Inclusion

In their activities in the digital environment, Actors should:

- a) Account for the different needs of different children, taking into consideration their age and maturity; and
- b) Seek to ensure that no child is more vulnerable to risk because of their particular social or economic circumstances and that no child is at risk of being excluded or discriminated against, or likely to suffer a future bias, because of:
 - i. a lack of digital access or digital literacy;
 - ii. inappropriate digital access or digital literacy; or
 - iii. the way in which services are designed.

1.5 Shared Responsibility, Co-operation, and Positive Engagement

Actors, in view of their shared responsibility to provide for a safe and beneficial digital environment for children, should:

- a) Engage in and promote multi-stakeholder dialogue including parents, guardians, carers, educators, and children themselves;
- b) Foster co-operation and positive engagement in policy making and the development of practices relating to children in the digital environment, including through multi-stakeholder bodies and by involving children;
- c) Encourage the positive engagement of business and Digital Service Providers⁴ in policy making;
- d) Support parents, guardians, carers, and teachers to identify opportunities and benefits and evaluate and mitigate the risks of the digital environment, recognising that the continually increasing complexities of digital technologies may increase the necessity for such support; and
- e) Support parents, guardians, carers, and teachers to fulfil their role in helping ensure children become responsible participants in the digital environment.

⁴ 'Digital Service Providers' refers to any natural or legal person that provides products and services, electronically and at a distance.



Section 2. Overarching Policy Framework for a safe and beneficial digital environment for children

2.1 Governments should demonstrate **leadership and commitment taking into account the best interests of the child in the digital environment, including by:**

- a) Adopting clear policy objectives at the highest level of government;
- b) Articulating a whole-of-government approach, through a national strategy where appropriate, that is flexible, technology neutral, and coherent with other strategies for fostering a sustainable and inclusive digital economy;
- c) Consider establishing or designating oversight bodies, with a view to:
 - i. Coordinating stakeholders' views, efforts, and activities in the development of policies;
 - ii. Meeting policy objectives;
 - iii. Reviewing the effectiveness of policy actions and measures implemented to account for the best interests of children in the digital environment;
 - iv. Coordinating, in accordance with their legal and institutional frameworks, the relevant actions of government bodies with responsibility for responding to the needs of children;
 - v. Ensuring that the actions of government bodies are cohesive and mutually reinforcing, rather than an accumulation of isolated or stand-alone, and potentially inconsistent, initiatives; and
 - vi. Promoting co-operation across borders.
- d) Dedicating adequate and appropriate financial and human resources to implement policy measures.

2.2 Governments should **review, develop, and amend as appropriate, laws that directly or indirectly affect children in the digital environment, such that:**

- a) Legal measures and frameworks are fit for purpose, enforceable, and do not limit children's enjoyment of their rights;
- b) Legal frameworks provide effective remedies for harms suffered by children via the digital environment, and new measures are introduced if existing legal frameworks fail to protect children or provide effective remedies;
- c) Legal measures are in place to promote responsible business conduct;
- d) Legal frameworks define conditions under which Digital Service Providers may be held liable for illegal activity by, or illegal information from, third parties using their digital products and services, which harm children; and
- e) Children are not unnecessarily criminalised. In this regard, other appropriate methods of dealing with harmful behaviour, such as educational or therapeutic methods, should be considered in the first instance.

2.3 Governments should promote **digital literacy as an essential tool for meeting the needs of children in the digital environment, in particular by:**

- a) Clarifying categories of digital risks according to age, maturity, and circumstances of children, together with harmonising the terminology used to inform the public;



- b) Supporting children in:
 - i. Understanding how their personal data is collected, disclosed, made available or otherwise used;
 - ii. Critically considering and appraising information to increase resilience in dealing with misinformation and disinformation; and
 - iii. Understanding terms of service, user redress and moderation processes and how these can be used to flag and report harmful content.
- c) Regularly measuring the evolution of children's digital literacy and skills.

2.4 Governments should adopt **evidence-based policies** to support children in the digital environment, in particular by:

- a) Conducting regular impact assessments of laws and policies to ensure they remain appropriate;
- b) Encouraging and supporting research into the use of, attitudes towards, benefits of, and risks associated with children and the digital environment;
- c) Coordinating with all stakeholders, including business, academia, and civil society, to share and develop evidence; and
- d) Seeking to ensure that research is responsibly undertaken in accordance with data protection principles which include protection of children's privacy, data minimisation, and purpose limitation.

2.5 Governments should promote the adoption of measures that provide for **age-appropriate child safety by design**, in particular by:

- a) Fostering the research, development, and adoption of privacy protective, interoperable and user-friendly technologies that can restrict contact and access to content that is inappropriate for children, taking into account their age, maturity, and circumstances; and
- b) Providing all stakeholders with clear information as to the trustworthiness, quality, user-friendliness, and privacy by design of such technologies.

Section 3. International Co-operation

3.1 Governments should **strengthen international networks of domestic organisations** dedicated to upholding the best interests of children in the digital environment, such as hotlines, helplines, and awareness centres and, where appropriate, facilitate an expansion of their role;

3.2 Governments should actively co-operate by sharing information about domestic policy approaches to children in the digital environment, and develop the empirical foundations for quantitative and qualitative international comparative policy analysis through:

- a) Developing proposals for shared statistical frameworks that enable internationally comparable indicators on children's engagement with the digital environment, risk prevalence, awareness by children, parents, carers, and guardians of these risks and how to respond to them, as well as policy impact and efficiency;



- b) Developing proposals for harmonised terms and statistical definition of risks and benefits, related policy responses, as well as children's age groups used for statistical purposes; and
- c) A shared commitment to regularly update official quantitative data within a timeframe that takes into account the dynamic development of the digital environment and of its uses by children.

3.3 Governments should support regional and international capacity-building efforts to improve policy and operational measures that take account of the best interests of children in the digital environment, including sharing of successful learning and awareness raising tools; and

3.4 Governments should actively co-operate to ensure the good co-ordination of work by the various international and regional organisations and bodies that play a role in supporting government efforts in this area.

Section 4. Digital Service Providers

4.1 Recognising the essential role of Digital Service Providers in providing a safe and beneficial digital environment for children, Governments, and other Actors, should make efforts to develop best practices and codes of conduct, such as the OECD Guidelines for Digital Service Providers, taking into account the domestic legal and regulatory context in which Digital Service Providers operate, as well as differences in their roles and the services and products they provide, in order to support Digital Service Providers in determining how best to protect and respect the rights, safety, and interests of children when they take actions that may directly or indirectly affect children in the digital environment.



ANNEX 3

TERMS OF REFERENCE OF THE G20 DIGITAL ECONOMY WORKING GROUP

Objective

Following the creation of the G20 Digital Economy Task Force (DETF) in 2017, under the German Presidency, which itself followed the Digital Economy Development and Cooperation Initiative held in 2016 under the Chinese Presidency, the G20 members have worked to share information and further a common understanding to harness the benefits, and address the challenges of the digital economy. Over the years, the G20 Digital economy Ministers and the G20 Leaders have recognised digitalisation as a key enabler for making progress towards the UN Sustainable Development Goals (SDGs) in its three economic, social and environmental dimensions, in line with the G20 priorities for 2021 of People, Planet and Prosperity.

The DETF work has been enriched through discussions and consultations with G20 engagement groups and relevant stakeholders. Indeed, this has been an opportunity to go more in depth into the specific priorities, to exchange views, and share knowledge and practices.

At this juncture, the transformation of the Digital Economy Task Force (DETF) into a Digital Economy Working Group (DEWG) reflects a reality whereby digital tools enable acceleration in inclusive socio-economic growth and the economy.

Scope

The mandate of the DEWG is to address how to leverage digital technologies, through the sharing of information and views, and seeking an understanding on policies, to enable the digital economy for resilient, sustainable and inclusive growth and development, with a safe, secure and connected digital environment, while mitigating the challenges and risks of digitalisation.

To this end, the DEWG should work on the following directions, including, but not limited to:

- Honouring commitments and mandates from previous Leaders' Summits, DETF and Ministerial Meetings, and Sherpa Meetings.
- Recognising the cross-cutting nature of digitalisation and acknowledging that other G20 bodies already discuss various aspects of digitalisation within their respective mandates, the DEWG will focus on digital economy topics, including the public sector.
- Cooperating and working with engagement groups, international organisations and other G20 work streams, while avoiding duplication of work in other G20 bodies, to advance the digital economy agenda considering the priorities of G20 Presidencies.



Agenda

The incumbent G20 Presidency, at its discretion, will develop each year's agenda in consultation with the Troika members, and with the consensus of DEWG members. International organisations and engagement groups may be consulted as well. The G20 Presidency may decide to focus on issues of specific importance, within the digital economy, including digital government, based on consensus reached within the DEWG members.

Membership

Membership in the DEWG is composed of delegates from G20 members and guest countries.

Governance and functioning

The DEWG will be chaired by the incumbent G20 Presidency, in close collaboration with the previous and following year's presidencies, which together will compose the Troika.

Reflecting the G20 as a member-driven organisation, discussions will take place among members by consensus and be consistent with other G20 working arrangements. Guest countries may be invited to provide inputs to the outcome documents of DEWG.

Representatives from G20 engagement groups, notably the B20 task force on digitalization, may be invited to express their views as well.

The DEWG work will be enriched by a multistakeholder approach, through discussions and consultations with G20 engagement groups and relevant stakeholders.

In consultation with the Troika, the DEWG will meet at least two times each year, at the discretion of the Presidency.

The DEWG will annually report its work to G20 Leaders, Ministers, and Sherpas, as appropriate.

These Terms of Reference, including modalities, may be reviewed and updated annually at the discretion of the Presidency and with the Membership's consensus.

Every three years, the Terms of Reference and the status⁵ of the DEWG will be reviewed, and revised as necessary.

⁵ Status refers to the state or condition of the DEWG in the context of wider discussions and current events in the global digital economy.