



G20

INDONESIA
2022



G20 DIGITAL ECONOMY MINISTERS' MEETING 2022



Jakarta, 21 September 2022

Reference No. : B-199/DEWG/KI.01.07/09/2022
Subject : Digital Economy Minister's Letter to the Chair's Summary
To : Digital Economy Ministers of G20 DEWG Countries and Invitees

Your Excellency,

On behalf of the Indonesian G20 Presidency, I wish to commend your support and contribution during the 2022 Digital Economy Ministers' Meeting (DEMM) in Bali. I am confident the DEMM has advanced our progress in the digital economy.

Having considered the situation where no consensus was reached for the DEMM to issue a Ministerial Declaration, I decided to issue the DEMM Chair's Summary, which was read at the closing of the DEMM. Bearing in mind the spirit of consensus of the G20 members, I invited views from all members on the Chair's Summary, as I reiterated during the DEMM.

Whereas, during the DEMM, I recognized that:

1. *"Several members have condemned Russia's war against Ukraine and its disruptive impacts towards global digital economic ecosystem. While some others have stated the discrepancy between the topic of geopolitical tension to the mandate of the DEWG."*
2. the Digital Economy Ministers have broadly reached a consensus on all the substantive issues tabled by DEWG.

The above points shall constitute as part of the Chair's Summary read in the DEMM, which is hereby attached. It shall be taken as an acknowledgment of the views shared by some of the G20 members and shall not be construed otherwise.

I thank you for your significant participation in the DEMM, and avail myself of this opportunity to renew to you the assurances of my highest consideration.

Best regards,



Johnny G. Plate
Chair



**G20 DIGITAL ECONOMY
MINISTERS' MEETING 2022
CHAIR'S SUMMARY**



G20 DIGITAL ECONOMY MINISTERS' MEETING 2022 CHAIR'S SUMMARY

The Bali Package

1. We, the G20 Digital Economy Ministers, met in Bali, Indonesia on 1 September 2022 to deepen our discussions on digital connectivity and post-COVID-19 recovery, digital skills and digital literacy, data free flow with trust and cross-border data flows, and other issues associated with digital transformation. These discussions are in line with the overarching theme of the Indonesian G20 Presidency, "Recover Together, Recover Stronger", and its priority issues on inclusive global health architecture, digital-based transformation, and sustainable energy transition.

PART I

2. Ministers have stated their continued support to the G20 DEWG 2022 and its following actions to the deliverables. While consensus has been reached in all substantive deliverables, varying views have been stated with regards to the geopolitical tensions, as follows:
3. Some members denounce any attempt to completely or partially disrupt digital connectivity infrastructure, and the digital ecosystem, as well as peaceful international trade and commerce. These include the war in Ukraine that undermines the integrity of the digital economy. Meanwhile, mindful of the DEWG Terms of Reference in 2021, some others underscored that the DEWG is not mandated to discuss geopolitical issues, and acknowledge that digital economy integrity is indispensable for promoting the socio-economic development of countries, in particular of countries in special need, which are those suffering from natural disasters and ongoing conflicts, including Ukraine. There was also a view denouncing any attempt to disrupt economic relations developed through the operation of connectivity infrastructure and the digital ecosystem. Many members call for all to refrain from employing any endeavor that interferes with our collective efforts to promote connectivity and bridge digital divides, increase digital skills, and enable data free flow with trust and cross-border data flows.

PART II

4. On all three priority issues of the DEWG, namely Connectivity and Post-COVID-19 Recovery, Digital Skills and Digital Literacy, and Data Free Flow with Trust and Cross-Border Data Flows, we, the Digital Economy Ministers, have reached an agreement in the following paragraphs:

Introduction

5. Continuing the productive work and elevation of the Digital Economy Task Force to the Digital Economy Working Group (DEWG) discussed in the Saudi G20 Presidency and adopted during the Italy G20 Presidency, we emphasize the need to foster international cooperation for a more inclusive, empowering, sustainable, resilient, and innovation-driven digital transformation which will help to achieve post-COVID-19 recovery and contribute to the achievement of the Sustainable Development Goals (SDGs).

6. We recognize and seek to build upon the achievements of the previous G20 presidencies and those in other multilateral fora relevant to the work of the DEWG and its priorities in the Indonesian G20 Presidency. We affirm that international cooperation and collaboration within and beyond the G20 DEWG will help to leverage the full benefits of the digital transformation currently underway and reap the benefit of data free flow with trust and cross-border data flows. Mindful that not all countries and people are equally equipped to maximize and harness the benefits of digital transformation, we recognize the need to enhance digital connectivity and access to digital literacy and skills. Such efforts are essential to ensure that digital transformation facilitates the promotion of inclusive economic growth and creates opportunities for people in vulnerable situations to meaningfully participate in the digital economy.
7. We acknowledge the cross-cutting nature of digital transformation, its impacts on different sectors, and the potential utilization of digital solutions for the G20 members. We welcome the discussion on the adoption of digital technologies in various sectors such as health, energy, agriculture, culture, education, employment, finance, industry, trade, tourism, and other associated priorities at the other Indonesian G20 Presidency Working Groups and Engagement Groups.
8. Building on the momentum from the Digital Economy Ministers' Meeting in Bali, the Bali Package serves as an essential milestone to pave the way toward global recovery through cooperation among the G20 members in Achieving a Resilient Recovery: Working Together for a More Inclusive, Empowering, and Sustainable Digital Transformation.

Realizing a Stronger Post-COVID-19 Recovery through Digital Connectivity

9. We acknowledge that the COVID-19 pandemic has accelerated the transformation of the digital ecosystem and digital economy. However, we recognize that continued challenges, especially on the issue of digital divides, inhibit all members of society from enjoying the benefits of the digital economy.
10. In line with the past G20 Digital Ministers' Declarations, we acknowledge the role of digital connectivity as an essential enabler of digital inclusion and digital transformation and recognize the need to protect digital infrastructure. We recognize the Indonesian G20 Presidency's efforts to frame the developing interplay of people-to-people and digital connectivity as 'people-centered digital connectivity'. The Presidency proposes it as an extension of human-centered digital connectivity concept, which highlights the role of digital connectivity in supporting people's resilience within the COVID-19 pandemic as presented in the Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity (Annex 1). The discussion highlights the importance of resilient high-quality connectivity based on access availability and affordability, infrastructure readiness, as well as responsible and meaningful use of digital technologies to support the provision of proactive, human-centric, inclusive, safe and secure, easy-to-use, and accessible digital public services for all. All of these are pertinent to enhancing access for all stakeholders, achieving meaningful connectivity, realizing the SDGs, and supporting post-COVID-19 recovery.
11. Despite the many benefits, increasing economic interdependence and integration also brings increased risks including regarding privacy and digital security. Such a situation requires the maintenance of well-functioning economies through in particular, safeguarding critical infrastructure, addressing the misuse of technology, and protecting 'users of digital services' from malicious activities. We recognize the importance of a safe and secure online environment to

enhance confidence and trust in the digital economy, including extending safety for all, especially for underrepresented groups and people in vulnerable situations. Cognizant of such background and building on the work done in the past G20 presidencies, the Indonesian G20 Presidency has compiled the Collection of Existing Practices on Digital Security as a Key Enabler to Support Business Continuity. We will also continue to advance our discussions on how to promote online safety, especially for Micro, Small, and Medium Enterprises (MSMEs).

12. Noting the challenges of the digital ecosystem, we are aware of the various innovations and solutions to enable an inclusive, empowering, and sustainable digital transformation. To increase the usability and optimize the implementation of digital innovation solutions, the Indonesian G20 Presidency recognizes the need to encourage cooperation between innovation players such as start-ups, venture capitals, corporations, and governments to support the development of innovation and improvement of processes in different phases of production chains as well as in various digital economy areas, especially in technology, healthcare, sustainable and renewable energy, education and digital literacy, financial inclusion, and supply chain. The Indonesian G20 Presidency is organizing the G20 Digital Innovation Network to facilitate such efforts.
13. We reaffirm the importance of governments providing digital services that are proactive, human-centric, inclusive, user-driven, safe and secure, easy-to-use, and accessible to all. Furthermore, we share the need to foster collaboration, promote the exchange of views, and share use cases to advance the digital transformation and innovation for public services to facilitate growth and recovery. Cognizant of such views, we appreciate the organization of the Digital Transformation Expo, an initiative of the Indonesian G20 Presidency to showcase and share the G20's digital transformation achievements.
14. With innovation being a driving force to global digital economy development, it is of the shared benefit for the international community to jointly promote research, development, innovation, and application of digital technologies, deliver inclusive and concrete outcomes, and create an enabling ecosystem with extensive and multistakeholder participation in particular for developing countries and MSMEs. Recognizing contributions from G20 members, international organizations, and other stakeholders in delivering actionable outcomes, we encourage discussions on how to promote further innovation in the digital economy.
15. To extend the benefit of the discussion on the digital connectivity and post-COVID-19 recovery within the DEWG and beyond the economies of G20, we welcome the Smart Village and Smart Island Initiative administered by the ITU as an initiative that may foster the advancement of an inclusive, empowering, and sustainable digital economy in various countries, such as middle-income countries, least developed countries, landlocked developing countries, and small islands developing states. We support the effort to digitally transform populations in rural and remote communities, particularly the most vulnerable.

Nurturing an Inclusive Digital Transformation through Digital Skills and Digital Literacy

16. We note that digital skills and digital literacy are essential to foster an inclusive digital transformation. We firmly believe that international collaboration to further develop digital skills and digital literacy should be encouraged to ensure and harness the positive impacts of digital transformation on sustainable, human-centered, and inclusive development.

17. We reiterate the need to empower people in vulnerable situations by strengthening cooperation in bridging digital divides and digital inclusion as well as improving digital skills and digital literacy, through enhancing digital accessibility for people in vulnerable situations and underrepresented groups, which are essential to ensuring that no one is left behind, especially those in developing countries. We welcome the Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situation in the Digital Economy (Annex 2), showcasing experiences and practical information from different G20 members aiming to inspire and guide strategies and public policies toward a more inclusive and empowering digital economy for people in vulnerable situations and underrepresented groups, among others.
18. We welcome G20 members efforts to advance the meaningful participation of MSMEs in the digital economy including those in rural and remote areas. We recognize past G20 efforts to enhance MSMEs' meaningful participation in the digital economy at the sub-national, national, and international levels.
19. We acknowledge the role of the existing initiatives to measure digital skills and digital literacy. Nonetheless, with the rapid pace of digital transformation, efforts to improve digital literacy and digital skills remain in need, especially for people in developing countries and regions. Therefore, we welcome the introduction made by the Indonesian G20 Presidency of the G20 Toolkit for Measuring Digital Skills and Digital Literacy (Toolkit). The Toolkit was discussed in the Workshop for G20 Toolkit for Measuring Digital Skills and Digital Literacy, where we highlighted the importance of making use of the Toolkit as an adaptable instrument to different country's contexts as well as a complement to existing initiatives, especially with respect to measuring and benchmarking skills gaps to inform policy responses, for the purpose of enhancing digital skills and literacy.
20. Furthermore, we note the increasing demands of global markets, especially emerging markets, for a workforce adept at utilizing emerging technologies, such as artificial intelligence, big data analytics, distributed ledger technologies, cloud computing, internet of things, and quantum computing among others. Such demands can be addressed with valuable programs, policies, and initiatives to improve digital skills and digital literacy, including at the national level, supported by the governments, industry, and other stakeholders. Such efforts should also be supported by robust, accessible, and secure digital infrastructures to facilitate the development of digital skills and digital literacy. The effort to emphasize the importance of promoting digital literacy and skills was also exemplified in the past G20 presidencies, such as in the G20 Digital Economy Development and Cooperation Initiative during the China G20 Presidency in 2016, the #eSkills4Girls initiative started under the Germany G20 Presidency 2017 with the aim to tackle gender digital divide in particular in low income and developing countries, and the G20 Rome Leaders' Declaration during the Italy G20 Presidency in 2021. Reflecting on such achievements, we are also mindful of the need for training, reskilling, and upskilling to grow the talent pool in meeting the current and future demands.
21. As such, to achieve such goals, we welcome the Compendium of Practices and Policies on Advanced Digital Skills and Digital Literacy, which outlines, in particular, initiatives and lessons learned from G20 members in harnessing the use of emerging technologies to advance digital skills and digital literacy.

Facilitating Discussion to Foster Data Free Flow with Trust and Cross-Border Data Flows in Advancing Digital Transformation

22. Recognizing the work carried out under the previous G20 presidencies, we affirm the importance of enabling data free flow with trust and cross-border data flows to advance a more inclusive, empowering, and sustainable digital transformation. We recognize the role of data and data flows as a key driver for economic growth and development, particularly for developing countries. We reaffirm the previous G20 discussions that highlighted the importance of trust for cross-border data flows, including consumer, business, and government trust. We acknowledge the importance of addressing key issues, such as privacy protection, personal data protection, intellectual property protection, and security, in accordance with the relevant applicable international and domestic legal frameworks, and taking into account legitimate public policy objectives. It is essential to exchange insights and experiences to further common understanding and to work towards identifying commonalities, complementarities, and elements of convergence between existing regulatory approaches and instruments enabling data to flow with trust, in order to foster future interoperability.
23. Building on these prior discussions, we have exchanged information and improved our understanding on identifying commonalities, complementarities, and elements of convergence between existing regulatory and policy approaches and instruments, including the existing regional and multilateral arrangements that enable data free flow with trust and cross-border data flows. We have discussed the Stocktaking Existing Data Governance Approaches to Identify Common Values for Data Free Flow with Trust and Cross-Border Data Flows in the G20 and the Workshop of Multistakeholder Dialogue on Identifying Measures to Facilitate the Different Levels of Understanding of Data Governance. Both activities also highlighted regulatory approaches and instruments such as model contractual clauses as well as multi-stakeholder discussions to further enable data free flow with trust and promote cross-border data flows.
24. We note the discussion initiated by the Indonesian G20 Presidency on lawfulness, fairness, and transparency in the context of its proposed 'principles' for data free flow with trust and cross-border data flows, as well as discussions on existing principles related to data flows established by regional and multilateral institutions, and the practical approach to operationalize data free flow with trust and promote cross-border data flows. We seek to intensify our discussion on the practical aspect of data free flow with trust and cross-border data flows through deepening our understanding of the commonalities in different regulatory approaches and instruments used to enable data to flow with trust, as described in the previous paragraph.
25. We recognize the importance of continuing the discussion on the use and development of interoperable digital identity frameworks in alignment with the human-centric approach in facilitating digital identity solutions that respect human rights, including the right to be free from arbitrary or unlawful interference with privacy. We seek to foster the discussion of digital identity. We note the Report on Identifying Key Enablers on Digital Identity (Annex 3) as a reference for enabling digital identity systems to harness the benefits of the digital economy. Digital identity solutions may also help support progress towards the achievement of digital inclusion and the SDGs.

Way Forward

26. We express our commitment to enabling an inclusive, empowering, and sustainable digital transformation to achieve a resilient recovery and prosperous digital economy. We take note of the need to discuss policies to create an enabling, inclusive, open, and fair digital economy that fosters the application of new technologies and allows businesses and entrepreneurs to thrive.
27. We are grateful to those who contributed to the G20 Digital Economy Minister's Meeting in 2022, which brought together all G20 members, G20 2022 guest countries, namely Cambodia, Fiji, Rwanda, Senegal, Singapore, Suriname, the Netherlands, and United Arab Emirates, and G20 permanent guest, Spain.
28. We would also like to thank ITU, OECD, UNCTAD, and UNESCAP as global knowledge partners in G20 DEWG 2022, as well as representatives of businesses and civil society organizations who contributed to the discussion.
29. The Indonesian G20 Presidency appreciates the effort put forward by all G20 members and other stakeholders, in particular Australia for its proposal on online safety and China for its proposals on digital innovation and cooperation, and on digital literacy and digital skills.
30. We welcome the India's G20 Presidency in 2023 for the G20 to continue the progress achieved at the present G20 Digital Economy Ministers' Meeting.
31. As the next Presidency, and acknowledging the fact that Digital Economy has now become a key enabler for socio-economic growth post COVID-19, India looks forward to continue the achievements of previous presidencies and current Indonesian G20 Presidency on various key issues of Digital Economy. India considers Digital Inclusion as the way forward for such progress, for which it will try to evolve consensus-based frameworks on some of important issues impacting Digital Economy. The key focus areas identified for Digital Inclusion by India include Cyber Security in Digital Economy, Digital Skilling, and Public Digital Platforms to achieve Sustainable Development Goals.



ANNEX 1

Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity

INTRODUCTION¹

In our contemporary world, digital connectivity constitutes a foundational infrastructure that has created value for individuals and organizations. Policies have prioritised digital connectivity as a key driver for economic and social advancement in support of the current global agenda for growth and development as articulated in the Sustainable Development Goals (SDGs). Great progress has been made to increase the number of connected people around the world including in low and middle-income countries (LMICs). Yet in 2021, the International Telecommunications Union (ITU) estimated that only 63% of the world population or 4.9 billion people were online. Many hundreds of millions more, particularly those who live in low population density or belong to vulnerable groups, have struggled with access that is too slow, too costly, and too unreliable to make a difference to their lives. The COVID-19 pandemic has resulted in a further sharp contraction of economic activity all over the world. While advanced economies have seen a gradual economic recovery, albeit below pre-crisis levels, the aftershocks of the pandemic continue to weigh on growth in most G20 emerging economies and threaten to adversely affect attainment towards inclusive growth and development (IMF, 2020).

The pandemic has dramatically and irrevocably reinforced the vital importance of digital connectivity across the world. The aim of this stocktake is to demonstrate the complex interplay between digital connectivity and the social context within which the technology is embedded for expanding connectivity, recovering from the COVID-19 pandemic, and working toward the 2030 Sustainable Development Agenda is developed.

EXISTING APPROACHES FOR EXTENDING DIGITAL CONNECTIVITY IMPLEMENTATION

The enhancement and improvement of digital infrastructure through better mobile and broadband connectivity has been a priority of many nations in achieving significant economic and social benefits. Therefore, this report was formulated with the aim to compile and analyse existing policies, institutional arrangements, and implementation arrangements to understand how the development and expansion of digital networks and infrastructure could boost the economic recovery as well as drive the achievement of SDGs. Its key take aways includes:

PROVISION OF SOUND POLICY AND REGULATORY FRAMEWORKS TO SUPPORT HIGH QUALITY CONNECTIVITY

An examination of digital connectivity policies in the G20 should start from an assessment of digital divides in the G20 area as provided by OECD (2021a). While levels of broadband subscriptions are higher among G20 countries than in the rest of the world, substantial differences exist both among countries and within them. Within countries, systemic access gaps between urban and rural areas, affecting especially the latter, call for broadband access policies to explicitly address such differences.

¹ This annex of the Bali Package is part of ITU's deliverable "Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity" under Priority Issue 1: Connectivity and Post-COVID-19 Recovery.

In light of extant digital divides, it is imperative to boost the deployment of high-quality and cost-efficient digital connectivity for economic recovery and development by implementing sound policy and regulatory framework considering country differences and priorities (OECD, 2021b). Data from the OECD Broadband Portal reveals that the pandemic has spurred the uptake of high-speed broadband subscriptions, with users upgrading their connections to improve upload and download speeds to work and study from home.

Against this context, G20 members have taken actions to build policies that address digital connectivity divides. While such policies translate differently across countries, regions, and rural/urban areas, extant reports reveal two main clusters of policy and regulation (OECD, 2021a): Overarching policies and regulatory measures to expand connectivity and tailored policies and regulations to close connectivity divides in rural and remote areas. In the majority of G20 countries, the private sector is the largest source of investment in telecommunication infrastructure, particularly in the advanced economies. However, in some cases, governments are investing alongside private actors through public-private partnerships to share the risks of creating, developing, and operating infrastructure in areas where there is no clear business case, such as in remote rural areas. The role of the public sector is also crucial in creating an enabling environment for private investment and innovation in digital connectivity while also encouraging alternative models to fill financing gaps through means such as community-led networks that can support local programmes for digital skills and training (OECD, 2021a).

PROVISION OF POLICY AND REGULATORY FRAMEWORKS ON DIGITAL CONNECTIVITY TO SUPPORT THE ACHIEVEMENT OF SDGS

Aside from its transmission value, digital connectivity needs to be matched with coordination among government, industry, and civil society organisations to work toward the Sustainable Development Goals (SDGs) as articulated in the 2030 Agenda for Sustainable Development (herein after referred as 2030 Agenda) (Shenglin et al., 2017). Overall, most countries around the world have demonstrated policy intent to achieve the SDGs although there are variations in the strategies employed.

In this section, we focus on the key policies and institutional mechanisms that have been enacted to translate SDGs policy intent into outcome (UNDESA 2020; 2021). Our comparative analysis across the five representative G20 countries provides insights into how policies aimed at SDGs attainment have been instrumentalised both in terms of online and offline good practices and challenges enacted prior to COVID-19 and during the pandemic.

The key areas of focus in our country-specific analysis are as follows:

- 1. High-level legal and regulatory frameworks for implementing the SDGs** involving the creation of a new structure or using existing mechanisms with the overall purpose of integrating the goals into policies and actions.
- 2. The role of sub-national and local governments in SDGs implementation**, including responding to the UN's localisation strategy for implementing the 2030 Agenda and bringing contextual knowledge, experience, data, and practices to strengthen SDGs coordination at the national level.
- 3. Development of SDGs monitoring, evaluation, and reporting mechanisms** that go beyond measuring targets and achievements to understand how policy intent and instrumentation link to the outcome. The Voluntary National Review (VNR) process introduced in 2016 has been designed to create a dialogue to identify good practices and challenges towards this end.

4. **Establishing mechanisms for the inclusion of a range of non-governmental stakeholders** in SDGs implementation, monitoring and evaluation through presentation of the VNR to the UN High Level Political Forum on Sustainable Development with multi-stakeholder participation.
5. **Combining policies and institutional arrangements for SDGs implementation** with e-government at the national and subnational level. Since early 2020, the global pandemic has reinvigorated the role of e-government with open government data portals established to promote transparency and accountability in the provision of basic services. In addition to the institutional, policy, and implementation aspects of SDGs, it is also examined in the document where digital connectivity has impacted several sectors, such as:
 - **The education system** shows the urgency of digital connectivity for the rural and low-income groups, to prevent digital divide. The COVID-19 pandemic also proves that digital connectivity is indispensable to guarantee equal education opportunities for students.
 - **The health care system** discusses the booming digital health industry after the COVID-19 pandemic. This not only provides an efficient way to address contagious diseases (such as global pandemic), but also offers timely help to vulnerable and remote groups.
 - **The agriculture sector** explores the fast development of technologies that connect smallholder farmers and the policy instruments that facilitate such connectivity.

THE KEY TAKE AWAYS

This report aims to enhance the UN's current definition of human-centered connectivity² by drawing on the emergent concept of institutional resilience as it relates to the role of digital connectivity in supporting the 2030 Agenda. Furthermore, it adds another layer to the discourse on digital connectivity which contextualizes the current global situation.

In working towards this goal, the institutional resilience lens provides a pathway for expanding the current understanding of digital connectivity and its role in the post-COVID-19 era. The key takeaways comprise:

- **Overarching policies and regulatory measures to expand connectivity.** These are, as suggested in OECD (2021a), policies and measures aimed at expanding digital connectivity through the promotion of competition and investment and reduction of network deployment costs.
- **Tailoring policies and regulation to close connectivity divides in rural and remote areas.** On top of overarching policies, tailored policy measures can be a method to address communities in vulnerable situation resulting in persisting connectivity divides, both in the public domain and non-profit sector.
- **Building capacity to address future shocks.** Phenomena such as the COVID-19 pandemic and other public health crises have highlighted the importance of building capacity and addressing the disruptions caused to all sectors of society.

² Human-centered connectivity defined as affordable access by individuals to connectivity and devices, digital literacy and skills, and to applications that provide basic human services (UN, 2021b).

- **Integrating online mode of functioning in the national planning effort.** Despite the quick adaptations made in society to work to adapt to an online mode of functioning and accompanying policies enacted towards this end, there remain huge challenges in terms of their integration with the national planning effort.



ANNEX 2

Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situations in the Digital Economy

INTRODUCTION³

The rapid acceleration of digital technologies, in response to the COVID-19 pandemic, has increased the risk of exacerbating the digital divide. Bearing the brunt of this widening digital divide are underrepresented groups, women, children, people in rural communities, elder generations, and persons with disabilities. We also recognize the impact of the digital divide on micro, small and medium enterprises (MSMEs). For the purpose of this document, such people will be referred to as 'vulnerable groups' as they are prone to various socioeconomic challenges. Such vulnerable groups experience different barriers and enablers for accessing the digital economy, hence it is important for policymakers to acknowledge the intersection between these groups of people and their diverse experiences.

Indonesia, as the G20 Presidency in 2022, has commissioned the development of this Compendium to support building inclusive digital economies. Drawing upon existing policies developed and implemented by the G20 member States, the Compendium provides references to frameworks that support the formulation of digital economy policies which can enable more inclusive outcomes.

Key policy areas for analysis include digital infrastructure and connectivity, digital platforms and digital trade, digital financial services, digital entrepreneurship, digital skills and human capacity, and digital ID.

STRATEGIES AND INITIATIVES SUPPORTING THE PARTICIPATION OF VULNERABLE GROUPS IN THE DIGITAL ECONOMY

- **Women**

Digital skills and human capacity: Strategies associated with enhancing the digital inclusion of women are universally broad in their reach. Some G20 members are working to build a digital system that embraces, develops, and attracts women's expertise and skills in support of the digital transformation process, and increase the sustainability of quality work opportunities for women.

Digital entrepreneurship and trade: Much attention has been focused on developing women's digital entrepreneurship and trade. Some G20 members work with e-commerce firms to support women entrepreneurs to grow their e-commerce business, and/or introduce dedicated programs for woman entrepreneurs.

³ This annex of the Bali Package is part of UNESCAP's deliverable "Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situation in the Digital Economy" under Priority Issue 2: Priority Issue 2 – Digital Skills and Digital Literacy. This annex was prepared through the collaborative efforts of ESCAP and the Griffith Asia Institute, Griffith University, Australia.

- **Children**

Digital infrastructure and connectivity: An important precursor to providing opportunities to develop digital skills is the provision of devices and connectivity. Many G20 members are expanding digital infrastructure to support children's education through extending telecommunications networks into underserved areas, schools and low-income families.

Digital skills and human capacity: Some G20 members have launched smart education initiatives which integrate resource service platforms, such as the national smart education platform for primary and secondary schools. These initiatives have played a significant role in promoting application and resource sharing.

- **Rural communities**

Digital infrastructure and connectivity: For countries with remote and hard-to-access locations, a multidimensional approach to infrastructure connectivity is likely to reach more households and boost digital inclusion. Common themes among G20 members are related to digital infrastructure investment and the expansion of fibre-optic and satellite networks to improve rural connectivity. Some G20 members have a multi-pronged approach to upgrade digital infrastructure, incentivize smart agriculture innovation, and improve digital governance capabilities in rural areas.

Digital skills and human capacity: Opportunities to engage rural communities in acquiring digital skills are simultaneously enabled with improved digital infrastructure. Some G20 members have opened digital learning centres to teach rural communities how to use digital devices and develop their skills.

Digital entrepreneurship and trade: A key economic opportunity of digital expansion, within rural communities is to improve agricultural productivity and entrepreneurship. Some G20 members provide education and training related to agriculture and fisheries and smart farm systems in areas of demand.

- **Elder generations**

Digital skills and human capacity: Some G20 members have dedicated programs for elder generations. These countries partner with young volunteers, NGOs, and non-profit organizations in digital facilitation and education services. Some G20 members provide physical access points for elder generations including libraries, schools, and community centres, while other G20 members work with a network of community organizations who deliver one-on-one, small group, and online learning support for elder generations.

- **Persons with disabilities**

Digital skills and human capacity: Some G20 member States have been working to expand educational opportunities for persons with disabilities for some time. A number of G20 members use welfare centres to provide information literacy to this vulnerable cohort. Where individuals are not mobile, they provide customized instruction in the residence. Some G20 members work with local service providers, such as librarians and operators of employment/senior/social assistance organizations who have been instrumental in rolling out digital skills learning centres across the country.

Digital platforms and digital trade: Another approach to improve digital inclusion for this vulnerable cohort is to consider accessibility issues within e-government platforms. Some G20 members provide architectural guidelines for IT systems that consider the usability and accessibility aspects which fit the needs and abilities of persons with disabilities.

Digital ID: Some G20 members have implemented digital IDs for persons with disabilities. Digital ID systems enable the exercise of rights and access to benefits (medicine, equipment, treatment, free public transport, school aid, family allowances, etc.), for persons with disabilities.

- **Micro, small, and medium enterprises (MSMEs)**

Digital skills and human capacity: Some G20 members support MSMEs to both train their workforce and adopt new technologies by providing skills-training activities (e.g., big data and data analytics, artificial intelligence, human-machine interface, Internet of Things, digital integration of business processes, or cybersecurity). Some G20 members assist MSMEs to increase their use of digital services with various kinds of funding, such as a voucher, conditional grant, or microgrant, to help cover the costs related to adopting digital technologies.

Digital entrepreneurship and trade: Focusing on start-up and venture capital investments are a key feature of policies that support MSMEs in the digital economy. Some G20 members provide MSMEs with education, mentoring, networking, and further advice for scaling up their digital needs at each development phase.

INSIGHTS FOR ENABLING VULNERABLE GROUPS TO BENEFIT FROM THE DIGITAL ECONOMY

The experiences of G20 members provide important lessons for formulating, reforming, and implementing policies that enable vulnerable groups to benefit from and participate in the development of the digital economy. Key insights are summarized below:

Design and implement “targeted” policies

1. Acknowledge the diversity and intersectional needs of each vulnerable cohort.
2. Take into account national conditions, identify vulnerable groups accordingly, and develop measures for an inclusive society, while following developments in the international arena.

3. Consider the costs, tools, and training needed by the targeted groups need to participate in the program in order to guarantee its full access. Policies and initiatives must reflect the challenges of the digital divide caused by lack of access to technology and affordability of digital devices and gaps in digital skills. These challenges can be addressed by providing additional support in the form of data plans or devices, so that members of underrepresented groups are able to take full advantage of the initiatives.
4. Anticipate obstacles that may arise in the implementation process to ensure the success of policies.
5. Pilot projects should be implemented before scaling up the initiative.
6. Identify experiences (from both the public and private sectors and civil society) that can be considered as best practices.

Increase consultations

7. Adopt the “nothing about us without us” model to co-create policies with vulnerable groups targeted by the initiative, so as to take in account their specific needs.
8. Undertake multi-sectoral consultations is crucial in developing appropriate policies and goals throughout the entire digital ecosystem. This involves creating engagement strategies and advisory groups.
9. Design and implement public policies for the digital inclusion of vulnerable groups with more societal participation, based on public consultations and other mechanisms of participation.

Take a whole-of-government approach

10. Promote a whole-of-government approach in designing, implementing, and evaluating policies. Collaboration with all levels of government and locally placed agencies reduces the risk of fragmentation and redundancy.

Build partnerships

11. Encourage public-private partnership to leverage from specific expertise and perspectives of multiple actors.
12. Involve various stakeholders, such as the government, private sector, academics, and practitioners, so that the policies and programs that target vulnerable groups can resonate and get more support in their implementation.
13. Integrate all available resources, incorporating local availability (e.g., schools, libraries, associations, digital facilitation points, etc.) as well as the opportunities offered by radio, television, and the web.

Monitor and reform policies

14. Consider the skills that people need in everyday life, as the demands are changing rapidly. Monitor and submit digital inclusion policies for vulnerable groups for constant improvement.

Raise awareness through communication and promotion

15. Promote, at both national and local levels, the benefits of digital literacy as it is essential when targeting vulnerable groups. Any messaging must communicate the benefits of a digital literacy initiative. For example, that the learner will be able to undertake their weekly grocery shopping through the online skills they learn.
16. Raise awareness about the opportunities available to vulnerable groups which will benefit their socioeconomic status by conducting events.

Focus on sustainability

17. Promote initiatives that stimulate social and digital inclusion based on sustainable models and that do not depend exclusively on governments.
18. Build a digital system that embraces, develops, and attracts women's expertise and skills in support of the digital transformation process and increase the sustainability of quality work opportunities for women.

Address the challenges posed by development of the digital economy

19. Address the unique challenges, including economic, community, and individual risks, in order to fully harness the benefits of the digital economy. The key to addressing these risks is greater transparency and accountability and the empowerment of users through education, awareness, digital literacy, and digital skills (i.e., upskilling).



ANNEX 3

Report on Identifying Key Enablers on Digital Identity

INTRODUCTION⁴

Ensuring that individuals and businesses can prove who they are is central to a well-functioning society and economy, unlocking easier access to a range of essential services. In the 21st century, many of these interactions take place in a digital context and it is vital that they can do so in a trusted and secure way.

Too often, Digital Identity is reduced to a question of technology and software engineering. After all, for those that can access it, there is a world of services at their fingertips. However, for those that cannot, there is the potential to be excluded from even basic services.

Digital identification can allow easier access to services from government and other providers. These range from declaring taxes, to claiming government benefits, to accessing basic banking services, or verifying remotely the qualifications of job applicants. Digital identification underpins accountability for every sensitive transaction in the digital world involving a natural or legal person. Reliable and robust digital identity can thus offer greater security, efficiency, and productivity across sectors, as well as simplifying the lives and well-being of citizens and businesses.

Given the critical role of digital identity in today's society, governments can play an important role. This is the case not matter how diverse digital identity solutions may be across countries or whether they are providing access to a public or private sector service. It includes providing the very foundations for a public identity infrastructure (to prove legal identity of citizens and businesses) and coordinating and/or delivering digital identity solutions domestically and engaging in international conversations to support cross-border recognition of digital identity management. However, it also means ensuring that the design and implementation of digital identification systems take account of broader economic and societal objectives, mitigating any possible harms to individuals, while facilitating their active participation in societal and economic activities.

At the same time, governments have an opportunity to see digital identity as an enabler for even higher ambitions. There is a window of opportunity to use the design of digital identity as a means to re-imagine interactions to allow for more inclusive, seamless, and joined-up experiences that solve whole problems for users from end-to-end and which are available through a range of channels.

Building on the previous G20 Collection of Digital Identity Practices, the work of other international fora, and in support of the Indonesian G20 Presidency in 2022, this Annex sets out relevant suggestions for governments to develop a solid basis for establishing a sound Digital Identity within their own jurisdictions and across borders. The scope of the Annex is limited to digital identification of natural and legal persons (i.e., natural persons representing a legal person), thus excluding the identification of things (such as goods). It refers to digital identification and the provision and sharing of digital attributes and credentials to access public and private sector services.

⁴ This Annex of the Bali Package was prepared with the support of the OECD under Priority Issue 3: Data Free Flow with Trust and Cross-Border Data Flows.

This Annex is expected to support governments to benefit from the full potential of digital identity in fostering digital economies and governments at the G20 level, while acknowledging that the development of standards and regulations in this area is being discussed more widely.

KEY ENABLERS FOR DIGITAL IDENTITY AS A SERVICE

Realising the potential offered by digital identity for the transformation of societies and economies is not a short-term and simple task. There are many elements that contribute to its success and so it is important that governments have a clear understanding and appreciation of the breadth of the key “enablers” required. This Annex focuses on four foundational enablers:

1. Effective design of digital Identity

Effective design of digital identity is critical to its success, bearing in mind that “digital” should never be the default as face-to-face interactions should always remain an option to ensure access for people with specific needs. Whether just starting, or building on existing solutions, work on digital identity should begin with the needs of the users, focusing in particular on those who may face barriers to engaging with digital services such as lack of financing, skills, or connectivity. For example, the enrolment process should be made as easy for users as possible, according to their needs, and according to the context of the specific services requiring identification. However, an important design concern is balancing the needs and experience of users with the need for security and privacy protections, including protections of misuse from any malicious actors. If designed poorly, digital identity solutions and systems may cause security harms. Identity theft and fraud are for instance a global problem impacting the lives of millions every year. Therefore, one of the most important decisions for service providers is understanding and defining the appropriate level of identity assurance required to access a given service, while empowering users with consent over their personal data. Finally, even if portability is not a priority at first, international standards that shape a global understanding of identity proofing and authentication can support any future changes or adaptations.

In summary, securing effective design highlights for prioritising the following:

- Being inclusive and understanding the needs of users.
- Facilitating enrolment and access through multiple channels.
- Empowering users with consent over their personal data.
- Developing systems and solutions that are trusted and secure.
- Developing mechanisms for liability in the event of damages to natural or legal persons.
- Improving technical interoperability.
- Utilizing relevant international standards.

2. Collaboration and coordination across the digital identity ecosystem

Identity is relevant for all those who rely on secure identification to provide or access critical services. Trusted and portable digital identity is critical for the digital economy and government to fully function. Collaboration and coordination between all relevant actors, including those providing digital identity solutions, attributes, and credentials, is essential. For fully justifiable reasons, countries may have taken

different approaches in the provision of Digital Identity. Yet, in all cases an important consideration remains the need for collaborating across the public and private sectors to ensure a sustainable approach that empowers citizens and businesses with access to digital identity wherever and whenever they want to use it. This is particularly important for services that have regulated requirements for verifying the identity of the user. Government can play an essential role in these conversations.

Making this work efficiently implies:

- Understanding the actors involved, and collaborating across sectors.
- Developing mechanisms for oversight and enforcement.
- Engaging in bilateral and multilateral co-operation.

3. Sustainable investments in digital identity

From a government perspective, the development of a business case for digital identity is how to justify why it matters, taking into consideration the specific situation and identity management system at play. The benefits of digital identity are both short and long-term and depend on the usability, performance, and adoption of digital identity solutions and schemes. Aside from the benefits, there are notable costs associated with digital identity systems which can be separated into initial investments and running costs. These include ongoing funding for domestic digital identity programmes and individual solutions, which is connected to the overall national approach to governing digital identity, including roles and responsibilities for delivery, for either public or private sector actors. To justify investments, assess impact, and make necessary improvements to digital identity policies and regulations, countries should monitor and evaluate digital identity performance, including but not limited to security, adoption (by end-users and service providers), and user satisfaction. To ensure sustainability, it is critical that governments focus on:

- Understanding the benefits, costs and risks associated with digital identity for society at large.
- Securing sustainable funding.
- Monitoring compliance and evaluating performance.

4. Implementation: A fit for purpose regulatory framework for digital identity





A comprehensive regulatory framework –with regulations, laws, and other instruments– that is fit-for-purpose is essential for securing wide access to digital identification for individuals and businesses, and to answer the multiple needs of services and service providers across sectors and borders. Developing a regulatory framework that is effective in addressing these multiple needs, yet flexible enough and future proof, for example could benefit from regulatory experimentation and agile regulatory governance.






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