G20 INDONESIA 2022

Indonesian Civil Society Position Paper

Three Main Challenges of Indonesia's Digital Transformation

Arranged by:

Indonesia Civil Society of Digital Transformation Task Force (ID-CSO DTTF)

For:

Digital Economy Working Group (DEWG) of G20 Presidency of Indonesia 2022

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Facilitator:

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Pembahasan dan penyusunan kertas posisi ini juga dilakukan bersama oleh sekitar 50 organisasi masyarakat sipil dan institusi di Indonesia, melalui 3 (tiga) kali focus group discussion secara hybrid (online dan onsite) yaitu 25 Maret 2022 di Jakarta, 16 April 2022 di Jogjakarta dan 23 April 2022 di Makassar. Draf pertama dari kertas posisi disusun dan diterbitkan oleh Common Room, ELSAM, dan ICT Watch dengan dukungan dari (berdasarkan urutan abjad) Association for Progressive Communications (APC), Foreign Commonwealth & Development Office (FCDO), Luminate dan UNICEF.

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Foreword

Going through digital transformation efforts, as proclaimed by Indonesia as Presidency, of course 2022 Indonesia one of the priority issues of the G20 requires synergy and collaboration of multiple stakeholders (government, civil society organizations, private sector, academics and technical communities) to ensure maximum economic benefits for the society. In order to support this issue, the government through the Ministry of Communication and Information Technology (Kemkominfo) specifically has formed a Digital Economy Working Group (DEWG) with three digital pillars: digital .infrastructure / connectivity, skills / digital literacy, and cross border data flow Each pillars have a number of challenges of their own, given the number of demographic conditions and inadequate regulations in a number of related sectors. For example, there is still a gender-based digital gap, limited access to knowledge, the prevalence of hoaxes and the never-ending ratification of the Personal Data Protection Bill. Those are homeworks that must be seriously done and completed by Indonesia if the country wants to carry the issue of .digital (economic) transformation as a strategic national interest

The position paper included recommendations and lessons learned which have been initiated by three civil society organizations that carry out advocacy and community capacity building activities related to the Internet, namely (in alphabetical order) the Common Room (in collaboration with Padjadjaran University/UNPAD), ELSAM, and ICT Watch. The Civil Society Position Paper: Three Main Challenges of Indonesia's Digital Transformation is adapted to the three pillars of the DEWG, emphasizing the "link-and-match" aspects between national commitments, current challenges, policy .recommendations and proposals, along with case studies and lessons learned

Some of the key recommendations include:

1. The need to continue to promote the development of Internet infrastructure and meaningful digital platforms that carry out empowerment agenda and a human-centered approach community assistance.
2. The need for a synergy of national digital literacy policies that are able to coordinate across ministries, institutions and regions, with the involvement of multi-stakeholders in a meaningful, inclusive manner, and prioritize the ability of human resources to think critically.
3. The need to establish a good and comprehensive personal data protection governance framework through the ratification of the Personal Data Protection Bill, as an important reference in regulating cross-border data transfers.

This position paper is a living document that will continue to be updated regularly based on the latest suggestions, inputs and recommendations from a number of civil society consultations as part of Indonesia Civil Society Organisation of Digital Transformation Task Force (ID-CSO DTTF).
This position paper is also intended as one of the joint efforts to encourage collaborative and inclusive work of multi-stakeholders in the preparation of public policies related to digital transformation. Narrating and communicating the position of civil society to the public needs to be a continuous effort to ensure that the implementation of digital transformation in Indonesia can be based on the respect for human rights, equality, and gender transformative perspective.

Thank you,

Indonesia, March 21st, 2022

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A. National Commitments

Indonesia's position, which is increasingly being taken into account globally, still has various development challenges[1]. Some of them are the rapid population growth, the widening gap in urban and rural development, the emergence of the influence of the climate change situation, the influence of global political and economic contestation, to the impact of the COVID-19 pandemic. During the COVID-19 pandemic, the digital divide has become one of the important problems Indonesia faced.[2] So far, the government has attempted to address the issue of the digital divide, as stated in various policies, regulations, and programs developed in the information and communication technology sector.

National policies and regulations on information and communication technology (ICT) have undergone many changes and developments, some of which are:

1. Law Number 36/1999 concerning Telecommunications, which emphasis focused on encouraging the openness of the telecommunications sector by establishing a more competitive ecosystem and reducing centralized and monopolistic control by the state. This law also explains that telecommunications operations can be carried out by State-Owned Enterprises (BUMN), Regional-Owned Enterprises (BUMD), the private sector, and cooperatives (koperasi);

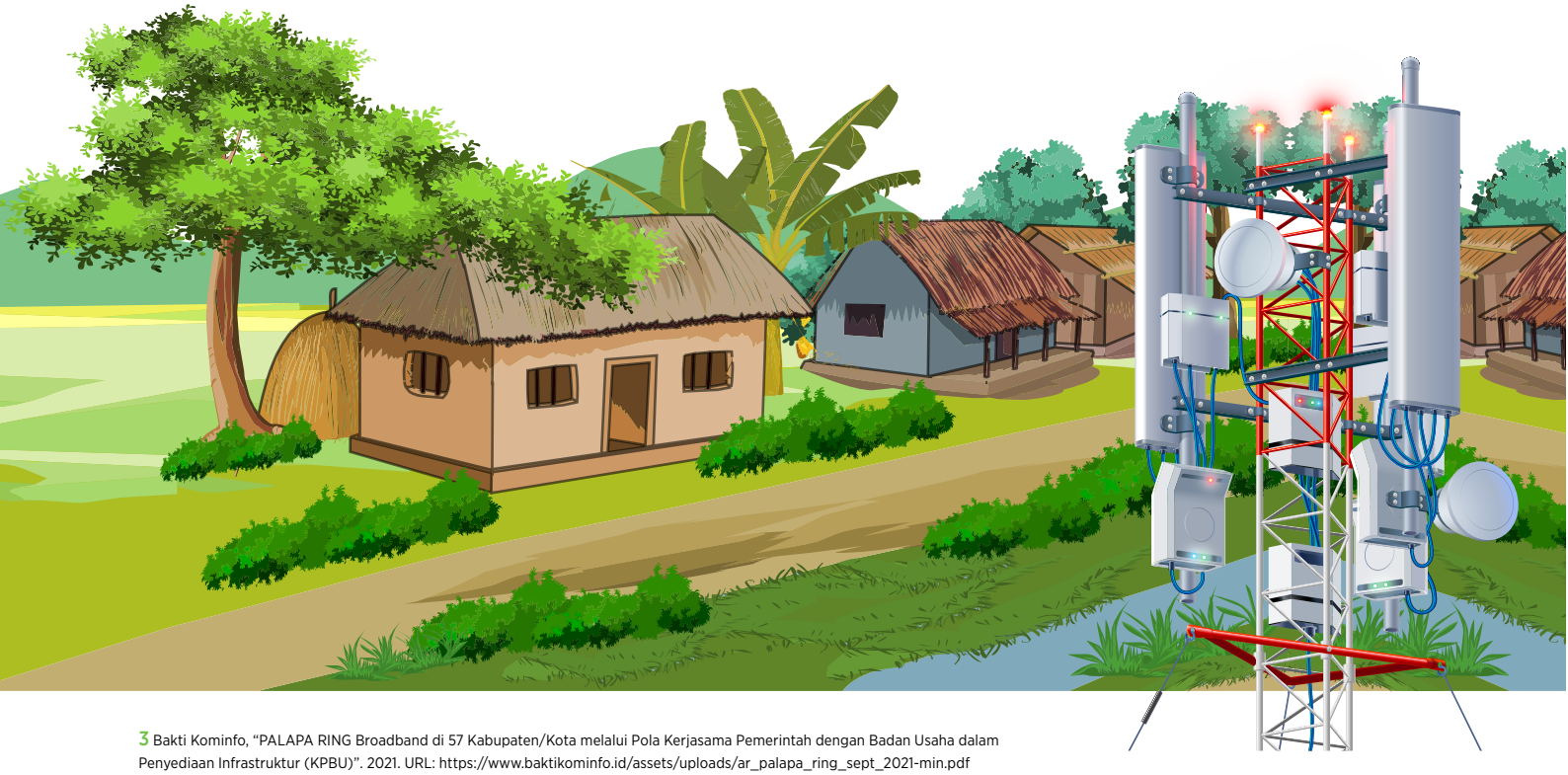
2. Government Regulation Number 52/2000 concerning Telecommunications Operations, which classified as a multimedia service, including voice over internet protocol (VoIP), internet and intranet, as well as data communication and video conferencing;

3. Law Number 11/2008 concerning Electronic Information and Transactions (UU ITE). In general, the core policies regulated in the UU ITE are aimed at some of the negative impacts that occur due to the rapid development of global information and communication technology on the economy and trade;

1 Worldbank, "The World Bank in Indonesia". 2021. URL: https://www.worldbank.org/en/country/indonesia/overview#1
2 Harian Kompas, "Tantangan Indonesia: Literasi Rendah, Privasi Pun Bermasalah". 2021. URL: https://www.kompas.id/baca/ilmu-pengetahuan-teknologi/2021/03/18/literasi-rendah-privasi-pun-bermasalah

4. Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration Number 7/2021, related to the priority of village fund allocations that allow Village-Owned Enterprises (BUMDES) to become telecommunications service providers.

In the field of infrastructure development, in 2019 the government has completed the national fiber optic cable network through the Palapa Ring project, which connects 90 regencies/cities throughout Indonesia, with 57 service regencies/cities and 33 interconnecting regencies/cities.[3] On the other hand, the agenda for increasing literacy and digital skills has also been carried out by various civil society organizations in Indonesia such as ICT Volunteers, ICT Admin Pace-Mace (Pemantik) in Jayapura Regency (Papua), ICT Watch, SAFEnet, and the Information and Communication Technology Awareness Village Community Group (PokDarTik) in Central Java Province.



3 Bakti Kominfo, "PALAPA RING Broadband di 57 Kabupaten/Kota melalui Pola Kerjasama Pemerintah dengan Badan Usaha dalam Penyediaan Infrastruktur (KPBU)". 2021. URL: https://www.baktikominfo.id/assets/uploads/ar_palapa_ring_sept_2021-min.pdf

B. Current Challenges

Based on data from the Central Statistics Agency (BPS) for 2015 - 2019, internet users in Indonesia has increased by 22%. However, this has not been followed by internet access that reaches and is evenly available in Indonesia. If referring to the 2000 UN Universal Declaration of Human Rights (UDHR) document, equitable and quality internet access should be part of human rights.[4]

The gap in internet access and infrastructure in Indonesia is caused by many things, ranging from the very wide and varied geographical conditions, to the limited supply of electricity resources. The gap is also reflected in the large difference in bandwidth costs (outside and within Java), the unavailability of adequate and affordable tools, the inability to produce local content and knowledge, including a lack of literacy, digital skills, and gender-based disparities.

On the other hand, the challenges of the gender-based digital divide can have an impact on the emergence of other problems, such as the risk of vulnerability to online gender-based violence, the lack of representation of women in the issue of using technology, and limitations in accessing economic, political, information and knowledge rights.[5]

The low digital literacy index among citizens also increases the risk of adverse effects of internet use, for example dealing with the spread of negative content, hoax or fake news, hate speech, bullying, various modus operandi of online fraud, to radicalism.[6]

In the context of the COVID-19 pandemic, the gap in internet network access has also impacted four primary service sectors, such as:

1. Public Administration Services

Referring to BAKTI Kominfo data for 2021, there are still 12,548 villages that have not been able to access the internet due to limited internet infrastructure. For example in Mata Redi Village, Central Sumba Regency, which until now still has limited access to electricity and the internet, so that to carry out its activities, the village government must go to the sub-district capital so that it can input data and activity reports online.

4 Donny B.U., "Internet, Kebebasan Berekspresi dan Hak Asasi Manusia (HAM)". 2014. URL: *http://referensi.elsam.or.id/wp-content/uploads/2014/12/Internet-Kebebasan-Berekspresi-dan-Hak-Asasi-Manusia-HAM.pdf*

5 Commonroom.id, "CommonTalks: Kesenjangan Digital Berbasis Gender". 2021. URL: *https://commonroom.info/kesenjangan-digital-berbasis-gender/*

6 Katadata Insight Center dan Kominfo, "Status Literasi Digital Indonesia 2020 - Hasil Survei di 34 Provinsi". 2020

2. Education during the COVID-19 Pandemic

It was recorded that 42,000 students in West Java were unable to access the learning process due to limited internet access during the COVID-19 pandemic.[7] Many students in other regions in Indonesia have similar experience. This situation has the potential to reduce the quality of education and socio-culture relations, and raises three challenges in education: limited internet access, limited access to teaching aids, and limited skills of teachers in operating online teaching aids.

3. Health during the COVID-19 Pandemic

Various efforts to handle COVID-19 have been carried out by the government, including the use of the PeduliLindungi application and the provision of telemedicine services. Unfortunately, this service cannot be enjoyed by residents who do not have internet access and adequate devices. Another obstacle is the ability to access available devices and applications. Capacity building in the form of training for health workers and service users needs to be provided periodically because the applications created will continue to change over time.

4. Economic Recovery

Since President Joko Widodo targeted Indonesia to become ASEAN's largest digital economy power by 2020, various accelerations of economic development have been carried out by the government. It is estimated that the number of digital consumers in Indonesia has risen to 137 million by 2020, or 68% of the total population.[8] However, this increase in numbers is not in line with the fact that there is a gap in telecommunication infrastructure in Indonesia.

The increase in the digital economy should be in line with the increase capacity of the human resources as they are the frontline and active driver in the e-commerce sector. This requires the support of a comprehensive ecosystem, such as an easily accessible market, adequate ICT infrastructure, regulatory framework, licensing, and other enabling components.

7 Harian Pikiran Rakyat, "42.000 Siswa di Jabar Tak Dapat Layanan Internet". 2020.
8 KataData.co.id, "Dipicu Corona, Konsumen Digital Asia Tenggara Melonjak Jadi 310 Juta". 2020. URL: https://katadata.co.id/desysetyowati/digital/5f4cb66115c34/dipicu-corona-konsumen-digital-asia-tenggara-melonjak -jadi-310-juta

Ideally, the use of ICT should be developed by prioritizing inclusion and equity principles. In relation to the development principles of the Sustainable Development Goals (SDGs), the principles of justice and inclusion also refer to the state's obligation to ensure that none of its citizens are left behind, forgotten, or marginalized from efforts to obtain their rights.

In the issue of eradicating the digital divide, the efforts made are always linked to the latest innovations and technologies. However, providing even distribution shouldn't be taken in a literal manner. It is unwise to consider that each area have the same characteristics, access, and challenges. Efforts to reduce the digital divide have become difficult due to the following factors:[9]

1. Lack of knowledge on the root of the problems and efforts to find solutions;
2. The solutions offered are not interactive and ignore the humanistic approach;
3. The solutions offered are too focused on results, which tends to encourage linear development rather than finding multiple solutions;
4. Solusi yang ditawarkan mengabaikan keragaman dan keunikan kondisi di lapangan sehingga cenderung memperlebar kesenjangan;
5. The solutions offered are superficial and change rapidly without a clear direction;
6. There is a tendency to reduce the risk of failure, but it closes the possibility of finding new solutions that are suitable to face the challenges at the local level.

9 Penerapan Human-Centered Design dalam Pengembangan Model Pemberdayaan Masyarakat (Studi Kasus Pemberdayaan Masyarakat Desa Sugeng, Trawas Jawa Timur), Prosiding Konferensi Nasional Pemberdayaan Masyarakat menuju Sustainable Communities (ISBN 978-602-18625-0-6, 2012). URL: *https://docplayer.info/45198452-Penerapan-human-centered-design-dalam-pengembangan-model-pemberdayaan-masyarakat-studi-kasus-pemberdayaan-masyarakat-desa-sugeng-trawas-jawa-timur.html*

Solutions that refer to the principle of universal access, ideally are in line with the principle of meaningful access, that the community is not only considered as a user, but also as a subject who can encourage change and innovation at the local level.

C. Policy Recommendation and Proposals

There are five important pillars in efforts to reduce the digital divide:

- Meaningful equal access
- Improving the quality, ability, and skills of human resources
- Locality aspect
- A sense of belonging
- Presence of key actors/agents

The existence of these five pillars reflects the principle of equity in development. In this case, the development process and efforts to reduce the digital divide cannot be considered equally in every area, including in terms of the need or utilization of the technology used.

To overcome the challenges of the digital divide, efforts not only focus on universal access in all regions, but also meaningful access which is achieved with a humanist approach. Technology utilization policies are not only made based on the assumption of needs and users, but also must understand the chain of needs, motivations, and barriers at the local level. Society as a subject, needs to be accompanied during the adaptation process so that it can go beyond the phase of doubt and discomfort. Some things that can be developed together are:

1. Encouraging a multi-stakeholder approach and cross-disciplinary collaboration to support the adoption of meaningful use of internet technology and digital platforms, especially for rural and remote areas.

2. Implementing the latest technology gradually, for example in terms of digital transformation for public administration services. The transformation process is not carried out by eliminating face-to-face services (offline) immediately, given the constraints on access, ability, and community empowerment to the use of certain technologies.

3. Providing or encouraging the emergence of information service centers as well as internet-based learning and empowerment spaces and digital platforms, both formally and non-formally. This is related to efforts to support innovation at the village level and remote places, in order to bridge the gap in the community's ability and understanding of the use of various technologies.

4. Pushing integrated efforts to build internet infrastructure and digital platforms with an agenda to empower and assist citizens, with the orientation of a human-centered approach.

5. Pushing the integration of the use of new technology (new media) with old technology (old media), in addition to developing a hybrid method that combines online platforms and offline services to support public administration services, education, health, and economic recovery.

The main idea is no longer about how to encourage the use of technology to be easily accepted by the societies, but offers the use of technology that helps meet the needs and answer the challenges faced.

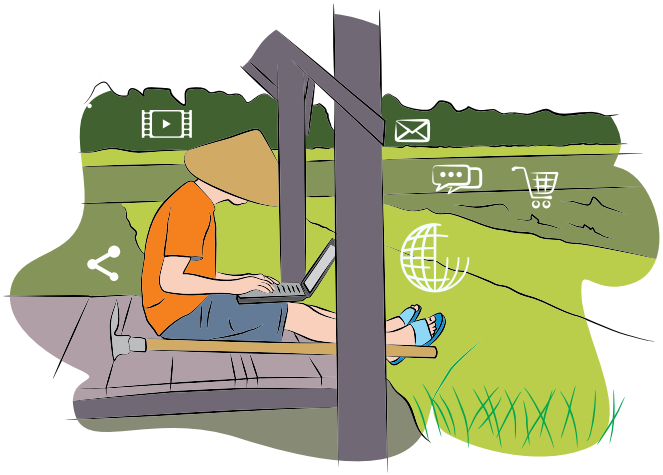
D. Case Studies and Lessons Learned

To encourage the eradication of the digital divide through meaningful use of internet technology and digital platforms, here are some case studies and good practices that can serve as examples and common references:

1. Community-based internet infrastructure

Case Studies: In 2016, Mandalamekar Village together with five other villages in the same area, formed the Panca Mandala Inter-Village Cooperation Agency (BKAD). This BKAD oversees the Joint Village-Owned Enterprise (BUMDESMA) and builds community-based internet infrastructure that can be accessed by residents in Ciwarak Village, Kertarahayu Village, Mandalahurip Village, Paparan Village, and Mandalamekar Village. They use village funds to build internet infrastructure that can be enjoyed by all villagers who are members of the Panca Mandala BKAD. In addition to the Mandalamekar area, the management and utilization of community-based internet infrastructure has also developed in the Bokondini (Papua) and Kasepuhan Ciptagelar (West Java) areas.

Lessons Learned: law community of Kasepuhan Ciptagelar, located in the interior of Mount Halimun-Salak, West Lessons Learned: Java, since 2019 has been developing and utilizing community-based internet infrastructure. In addition to daily communication, the internet is used to support the process of recognizing and determining customary areas, so that the traditions and culture of this community are maintained in a sustainable manner, in addition to protecting forest areas as a way to adopt and mitigate the impacts of climate change.



2. Public Administrative Services

Case Studies: One of the common problems of the public administration sector in Indonesia is that it is considered too time consuming and complicated. This challenge can be answered by the Population Administration Management Information System (SIMAK) application launched by the Ambon City Government in 2020. In this area, the community can get a referral and token number from the neigborhood unit/hamlet (RT/RW), to then continue the administrative process at the local sub-district office.

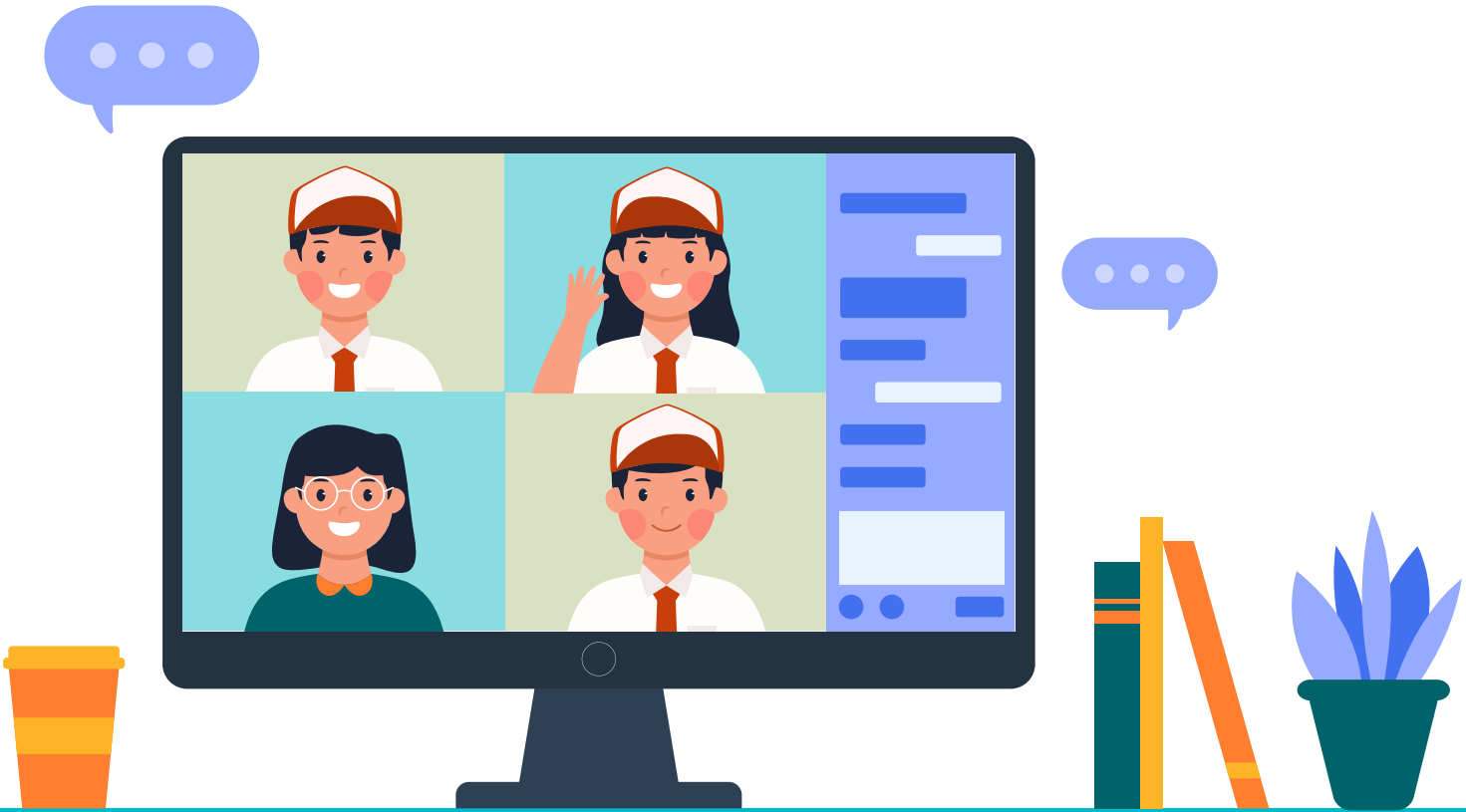
Lessons Learned: In addition to saving time, the SIMAK application, which is equipped with a kiosk to print the cards/letters needed by residents, is in accordance with the pandemic handling protocol that requires the public to minimize contact with many people. Through the automation of such system, extortion that usually occurs can also be eliminated. The application of humanistic approach such as SIMAK integrates the use of new technologies, without compromising the structural role of local institutions such as RT/RW.

3. Education

Case Study: Communities have initiated various innovative actions to deal with educational problems in the COVID-19 pandemic era, including:

- E-klepon (Electronic Kit for Learning on Emergency Pandemic and Offline Network) is a Raspberry Pi mini computer based tool with mini SD Card, HDMI to RCA converter, keyboard, and a mouse. For the screen display, e-klepon can use all types of television sets at home. This innovation was initiated by ICT Watch to help students keep learning without having to rely on the internet.
- In Sukadana Village, North Lombok, community radio manager Nina Bayan facilitates Distance Learning (PJJ) activities and the handling of COVID-19 through their studio. Teachers in primary and secondary schools are given a certain amount of time to broadcast their teaching materials, as well as provide question and answer activities by telephone.

Lessons Learned: The innovative devices, such as e-klepon or radio broadcasts, would help teachers deliver their teaching materials, even with uneven distribution of internet infrastructure. It doesn't always require an internet network, making it easier for those in areas with poor internet networks. In this context, we can see concrete examples that show the innovation process carried out directly by citizens to overcome challenges in everyday life.



A. National Commitments

The current number of Indonesian Internet users is 204.7 million people or about 73.7% of Indonesia's total population[10]. The average duration of Indonesian people using social media is 3 hours 17 minutes, out of a total of 8 hours 36 minutes connected to the Internet. However, the large number of Internet users has not been accompanied by an increase in digital literacy skills, for example: the ability to access, manage, understand, integrate, communicate, evaluate, and create information safely and accurately through digital technology[11].

Most Indonesian get and seek information from the Internet (social media and instant messengers), but on the other hand, the Internet is also considered as the most frequent space for spreading false news or hoaxes[12]. Based on The Inclusive Internet Index Simulator 2021, Indonesia is ranked 74th out of 120 countries for the capacity of its people to access the Internet[13]. This index measures the level of digital literacy through education on readiness to use the Internet, the culture of using the Internet safely, and the existence of national regulations or policies that support the widespread and safe use of the Internet. Digital literacy has become a necessity to open up job opportunities and facilitate the mastery of other important skills,[14] and digitization on an ongoing basis can create and transform jobs across the dynamics of the job market.

Digital literacy skills undoubtedly give young people the ability to excel and adapt in this dynamic environment. Responding to the need to increase digital literacy in Indonesia, a number of stakeholders in Indonesia, including the government, civil society organizations, the private sector, academia and the technical community, in October 2017 expressed readiness for collaborative digital literacy work by jointly launching an initiative called Siberkreasi[15].

10 We Are Social, "DIGITAL 2022: INDONESIA". 2020. URL: *https://datareportal.com/reports/digital-2022-indonesia*
11 UNESCO, "A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2". 2018. URL: *http://uis.unesco.org/sites/default/files/documents/ip51-global-framework-reference-digital-literacy-skills-2018-en.pdf*
12 Mastel, "Hasil Survey Wabah HOAX Nasional 2019". 2019. URL: *https://mastel.id/hasil-survey-wabah-hoax-nasional-2019/*
13 The Economist, "The Inclusive Internet Index". 2021. URL: *https://theinclusiveinternet.eiu.com/simulator/countries/ID*
14 UNESCO, "Digital literacy in education" (2011). URL: *https://unesdoc.unesco.org/ark:/48223/pf0000214485*
15 Kominfo, "Gerakan Nasional Literasi Digital #SiBerkreasi Ajak Masyarakat Sebar Konten Positif". 2017. URL: *https://kominfo.go.id/index.php/content/detail/10801/siaran-pers-no-184hmkominfo102017-tentang-gerakan-nasional-literasi-digital-siberkreasi-ajak-masyarakat-sebar-konten-positif/0/siaran_pers*

President Joko Widodo reaffirmed this commitment to increase digital literacy skills in his Annual Speech at the MPR/DPR (16/08/2018)[16] that it's imperative for younger generation to master digital literacy skills. On the momentum of Commemorating National Awakening Day 2021 on May 20, 2021,[17] The President launched the National Digital Literacy Program. A number of commitments and initiatives above, of course, need to be complemented by government regulations/policies that must be prepared jointly by multiple stakeholders. Until this position paper was prepared, there was no government regulation/policy that could show the seriousness and follow-up of the President's commitment.

B. Current Challenges

There are at least 3 things that are the main challenges in Indonesia which later become a kind of challenge in implementing digital literacy: the prevalence of COVID-19 hoaxes, inequality in access to knowledge, and the lack of solid and synergistic policies related to digital literacy programs. Information that is consumed in cyberspace, without being equipped with digital literacy skills will be able to influence perceptions, decision making, to unethical behavior and it can lead to the law violation.

Hoaxes are one of the serious threats that endanger the democratic climate and tolerance also hampers the handling of public health related to post-COVID-19 recovery. Three types of hoax categories that are often found on the Internet are related to political issues (69.3%), health (39.7%) and religion (29.2%). Data from the Ministry of Communication and Information Technology (Kemkominfo) shows no less than 2,133 Indonesian-language hoaxes were discovered during the COVID-19 pandemic (end of January 2020 - end of February 2022).[18] On average, there are 3 new hoaxes per day that are circulated, even up to 5 new hoaxes under certain conditions, such as at the beginning of the national vaccination program and related to the Adverse events following immunization (AEFI). Without obtaining correct and factual information, the public can take a stance against complying with health protocols and refusing to be vaccinated against COVID-19, thereby hampering the recovery process for public health at large.[19]

16 Kominfo, "Literasi Digital Siapkan SDM Unggul dan Cerdas di Era Revolusi Industri 4.0". 2018. URL: *https://kominfo.go.id/content/detail/13943/siaran-pers-no-181hmkominfo082018-tentang-literasi-digital-siapkan-sdm-unggul-dan-cerdas-di-era-revolusi-industri-40/0/siaran_pers*
17 Setkab RI, "Luncurkan Program Literasi Digital Nasional, Presiden: Dorong Masyarakat Makin Cakap Digital", 2021, *https://setkab.go.id/luncurkan-program-literasi-digital-nasional-presiden-dorong-masyarakat-makin-cakap-digital/*
18 Kominfo, "Isu Hoaks COVID-19 (28 Februari 2022)", 2022. URL: *https://trustpositif.kominfo.go.id/assets/hoaks_covid/Total%20Isu%20Hoaks%20Covid-19%20sd%2028%20Februari%202022.pdf*
19 WHO, "Fighting misinformation in the time of COVID-19". 2021. URL: *https://www.who.int/news-room/feature-stories/detail/fighting-misinformation-in-the-time-of-covid-19-one-click-at-a-time*

In another study, it was also found that hoaxes spread faster and further than their clarifications. This is because deploying clarifications[20] requires at least two time-consuming processes:

1. the duration spread of hoaxes as if they were normal news in general[21]
2. the duration that people need to know that that information are hoaxes

With these characteristics, the handling of hoaxes can't be done only by a handful of parties. Multi-stakeholder collaboration is needed to handle hoaxes from the aspect of digital literacy education, fact checking, to handling aspects of legal action.

The 2019 National Socio-Economic Survey by the Central Statistics Agency (BPS) which collected data on internet users from 2016 to 2019 shows a situation of gender inequality, namely in 2019 the number of women using the internet was 6.06% less than men.[22] It's not a huge gap, but coupled with other factors such as the growing wage gap between men and women, with men having higher wages, it could mean that women have fewer opportunities to access digital technology.[23]

20 MIT Initiative on The Digital Economy, "The Spread of True and False News Online". 2018. URL: *https://ide.mit.edu/wp-content/uploads/2018/12/2017-IDE-Research-Brief-False-News.pdf*
21 Taichi Murayama, et. al., "Modeling the spread of fake news on Twitter. 2021". 2021. URL: *https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0250419*
22 BPS, "Statistik Kesejahteraan Rakyat 2019". 2019. URL: *https://www.bps.go.id/publication/2019/11/22/1dfd4ad6cb598cd011b500f7/statistik-kesejahteraan-rakyat-2019.html*
23 Infid, "Laporan Akhir Peran Organisasi Masyarakat Sipil (OMS) Dalam Mendorong Kesetaraan Gender Dalam Demokrasi Indonesia di Era Digital: Ketimpangan Akses Internet bagi Perempuan Konsisten". 2021. URL: *https://www.infid.org/publication/read/ketimpangan-akses-internet-bagi-perempuan-konsisten*

A number of patriarchal cultures that place women in domestic work and space, have resulted in the condition that women in Indonesia spend 4.1 times more time doing domestic tasks than men, and account for 80% of the total working hours for domestic tasks. As a result, although women have access to ICT, their public involvement is still limited.

Education and age profiles also revealed more significant differences in digital literacy and skills. Younger and less educated Internet users are more digitally savvy than older, less educated users.[24] Society, of course, cannot fully reap the benefits of digital technology in a safe, secure and productive way because of a lack of digital literacy and skills.[25]

In terms of policy in Indonesia, the initiative to increase digital talent is one of the five goals of the government's plan to accelerate the national digital transformation.[26] However, there is a lack of adequate and coordinated policies in Indonesia to promote digital literacy. One of several applicable policies is the Minister of Education and Culture Regulation Number 37/2018 concerning informatics subjects in the primary and secondary school curriculum. Regarding digital literacy, it is still limited to the sub-discussion on the Social Impact of Informatics as a basic skill in its learning objectives.

The Ministry of Communication and Information Technology (Kemkominfo) cooperates with Siberkreasi partners regularly to organize several digital literacy activities such as seminars and workshops and provide online references in the form of videos, articles, and electronic books through the http://literasidigital.id website. A Digital Literacy module has also been created, covering the four pillars of digital literacy: digital skills, digital security, digital ethics and digital culture. Of course, the scope of this program still needs to be expanded and requires further evaluation to measure the success of increasing digital literacy as a result of its implementation.[27]

24 World Bank, "Beyond Unicorns: Harnessing Digital Technologies for Inclusion in Indonesia". 2021. URL: *https://www.worldbank.org/en/country/indonesia/publication/beyond-unicorns-harnessing-digital-technologies-for-inclusion-in-indonesia*

25 ANTARA, "Survey John Hopkins: 40 persen lansia Indonesia tidak mau divaksin". 2021. URL: *https://www.antaranews.com/berita/2456525/survey-john-hopkins-40-persen-lansia-indonesia-tidak-mau-divaksin*

26 Setkab, "Antisipasi Perubahan, Presiden Berikan 5 Arahan Soal Perencanaan Transformasi Digital". 2020. URL: *https://setkab.go.id/antisipasi-perubahan-presiden-berikan-5-arahan-soal-perencanaan-transformasi-digital/*

27 *CIPS, "Memajukan Keterampilan Literasi Digital Siswa melalui Pemutakhiran Kurikulum Sekolah". 2021. URL: https://id.cips-indonesia.org/post/memajukan-keterampilan-literasi-digital-siswa-melalui-pemutakhiran-kurikulum-sekolah*

C. Policy Recommendations and Proposals

Responding to the various challenges that exist regarding digital literacy issues in Indonesia, the following are things that can be pushed together:

1. Ensuring the synergy of national digital literacy policies across ministries, institutions and regions

So far, digital literacy programs run in a sectoral manner, not yet strong enough to show sustainable collaboration due to the absence of national strategies and policies. The form of policy required is not sufficient if it is limited to certain ministries, but must be a national policy at the Presidential level, for example Presidential Instructions or Presidential Regulations, thus it could be the umbrella for numbers of digital literacy initiatives, either vertically (from the central government to provincial governments) or horizontally (in the form of across ministries/agencies, at the central and regional levels)..

2. Ensuring meaningful multi-stakeholder engagement

The Ministry of Communication and Information Technology (Kemkominfo) and the Ministry of Education, Culture, Research and Technology (Kemendikbudristek) can lead the strengthening of digital literacy policies nationally, for example by supporting the digital literacy national curriculum for primary and secondary education, in which the preparation and implementation involve meaningful, inclusive, and collaborative multi-stakeholders from the government, civil society organizations, the private sector, academia, and the technical community. The role of the multi-stakeholder is to ensure that the resulting policies remain in the context of upholding human rights and the nobility of the Pancasila.

3. Ensuring the implementation of digital literacy is not a one-size-fits-all solution

Digital literacy materials that are prepared need to be based on concrete needs in the field, adjusted to factual demographic segmentation. A number of research results show that differences in age, education level, domicile and gender have an influence on the ability to access knowledge and mastery of digital literacy. It is important to ensure that digital literacy can be understood by people regardless of the existing demographic diversity and backgrounds. The curriculum and literacy education materials should not be a one-size-fits-all solution, but follow a tailor-made concept so it can be adapted to the needs of the existing demographic.

4. Ensuring inclusion and an accountable performance evaluation mechanism

Inclusion must be supported by an open knowledge approach. Digital literacy materials that are prepared and used for the public interest should use an open intellectual property rights (HaKI) protection model, such as a Creative Commons License. Efforts to respect the Intellectual Property Rights belonging to other parties remain, while at the same time not hindering the distribution, use and utilization of knowledge for the benefit of the wider community.

In order for digital literacy that follow the principle of appropriate benefits and appropriate audiences to be delivered inclusively, it needs to be supported by careful planning based on the availability of factual and adequate supporting data. It is also necessary to have transparent and accountable evaluation mechanism to check the achieved inclusion level. This evaluation of inclusivity needs to be strengthened to measure the performance of digital literacy programs, rather than simply recording the numbers/number of participants.

5. Ensuring digital literacy also focuses on critical and ethical thinking skills as well as expertise in navigating information in the digital ecosystem

The ability to think critically is an important and fundamental prerequisite in digital literacy. With this capability, we can select, understand, validate, optimize various information references in the digital ecosystem to get positive, creative and productive benefits. Without the ability to think critically, the use of digital technology is like a double-edged sword. One of the main pillars of digital literacy is awareness of the standards of behavior that are required and expected in the digital ecosystem. Digital literacy is a combination of proficiency in using digital tools, critical thinking skills, and social communication skills.

Some examples of the application of digital literacy accompanied by critical thinking are the ability to protect one's reputation and digital footprint by determining what content is safe / appropriate to be created and distributed, not just being proficient in using social media for imagery and pursuing the number of followers; or the ability to sort and select the following credible information by seeking and finding references to factual sources, not just being adept at collecting and disseminating any information that could possibly are hoaxes.

D. Case Studies and Lessons Learned

In an effort to improve digital literacy for Indonesian people, there are several examples of best practices that can inspire the preparation and implementation of a national digital literacy policy, such as:

1. Elderly Participation in Handling Hoaxes

Case Study: The Indonesian Anti-Defamation Society (Mafindo) and Google initiated an educative program called Tular Nalar, which engage the elderly in an effort to improve their digital literacy skills, especially the ability to protect privacy and personal data, as well as the ability to be able to sort out facts vs. hoaxes.[28] According to Mafindo, the elderly are vulnerable to becoming victims of Internet crime. This is due to their many limitations in accessing digital technology, including the access to digital devices, and physical limitations due to a decrease in some bodily functions. The elderly group was invited to analyze 3 themes, such as online fraud, incitement news, and hoaxes or fake news. The purpose of this training is that participants become more proficient in understanding information on social media and can become digital facilitators in their respective environments. The Tular Nalar program runs throughout March-August 2022, involving young people to aid the elderly.

Lessons Learned: Tular Nalar is one example of how digital literacy materials can be delivered focusing in a particular demographic profile, in this case the elderly.

28 Informasi selengkapnya dapat diakses di *http://tularnalar.id*

(Visual credit: pikiran-rakyat.com)

2. Online Platform for Digital Literacy Capacity Building

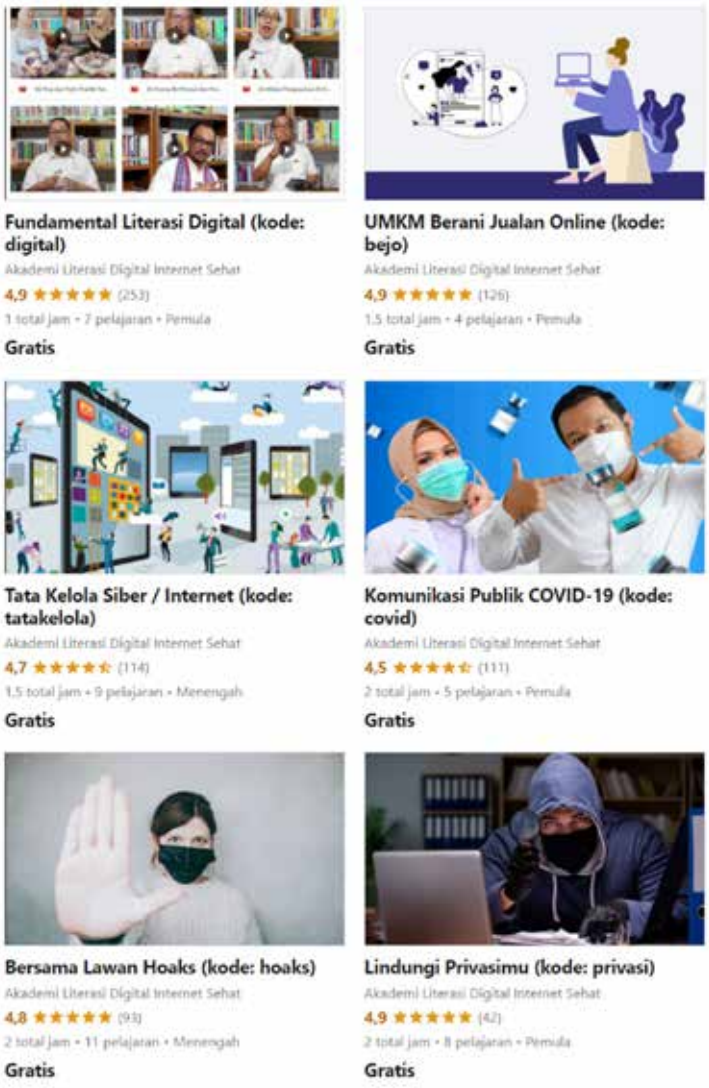
Case Study: Untuk menjawab kebutuhan materi literasi digital untuk dimanfaatkan oleh masyarakat, ICT Watch menyediakan layanan Akademi Literasi Digital Internet Sehat secara online. Akademi ini berisi pelatihan online yang ringkas, gratis dan bersertifikat dengan kelas tematik, yaitu: Lindungi Privasimu, Bersama Lawan Hoaks, Fundamental Literasi Digital, UMKM Jualan Online, Tata Kelola Internet, Komunikasi Publik COVID-19 dan Guru Milenial.[29]

Kelas ini tidak dikenakan biaya apapun dan peserta dapat mengatur sendiri waktu belajar sesuai keleluasaan waktunya untuk. Setelah menyelesaikan pelajaran / pelatihan hingga tuntas, peserta dapat mengikuti ujian online dan mendapatkan sertifikat digital.

Akademi dengan 5.800 peserta aktif ini menggunakan ragam materi digital (video dan e-book) dengan lisensi Creative Common untuk menyampaikan pengetahuan, sehingga bebas untuk diunduh, dimanfaatkan dan didistribusikan kembali. Narasumber dan rujukan yang digunakan pun dikurasi secara cermat dan seksama, untuk memastikan materi yang disampaikan tetap kontekstual, faktual dan berkualitas

Lessons Learned: Akademi Internet Sehat ini adalah salah satu upaya untuk memastikan proses edukasi ke masyarakat dapat tetap berjalan secara berkelanjutan. Keleluasaan waktu belajar bisa menjadi keuntungan tersendiri bagi peserta yang memiliki keterbatasan waktu luang.

29 Informasi selengkapnya dapat diakses di *http://akademi.internetsehat.id*



(Visual credit: ICT Watch)

3. Traditional Mask Art Collaboration in the Virtual World

Case Study: One of the public communication efforts to convey the risk of COVID-19 hoaxes is to use local cultural instruments, thus it could be easily and fully understood by people with certain cultural backgrounds. Common Room Indonesia and ICT Watch conducted a social experiment called "Cultivated and Empowered in the Virtual World: More Digitally Skilled, The COVID-19 Hoaxes Bounces Off (Berbudaya dan Berdaya di Dunia Maya: Makin Cakap Digital, Hoaks COVID-19 Terpental)". The event combines two traditional art performances from different regions: the Bondres Susik mask art from Buleleng, Bali and the Kolot Pusaka Mulya mask art from Ciptagelar, West Java, through online space.[30]

30 Informasi selengkapnya dapat diakses di *http://s.id/topengmaya*

The experiment, which was conducted in October 2021, succeeded in arranging the traditional artists onto “one performative stage”. They then took turns conveying messages about digital literacy to participants who were present at the onsite location, using their respective local languages, but still using Indonesian language when interacting with each other. A number of competent resource persons from cultural practitioners, local government officials, and UNICEF representatives were also presented. The activity was broadcasted through local radio to broaden the audience coverage especially those who do not have access to the Internet.

Lessons Learned: Delivering digital literacy messages through cultural art performances certainly has its own challenges, both from digital technical aspects to socio-cultural aspects. However, these efforts must continue to be carried out and developed, with the support of all parties. Hybrid format events (online and onsite) with a local approach, apart from being able to preserve Indonesian culture, also tend to be more easily understood by certain segment of the community due to demographic closeness.

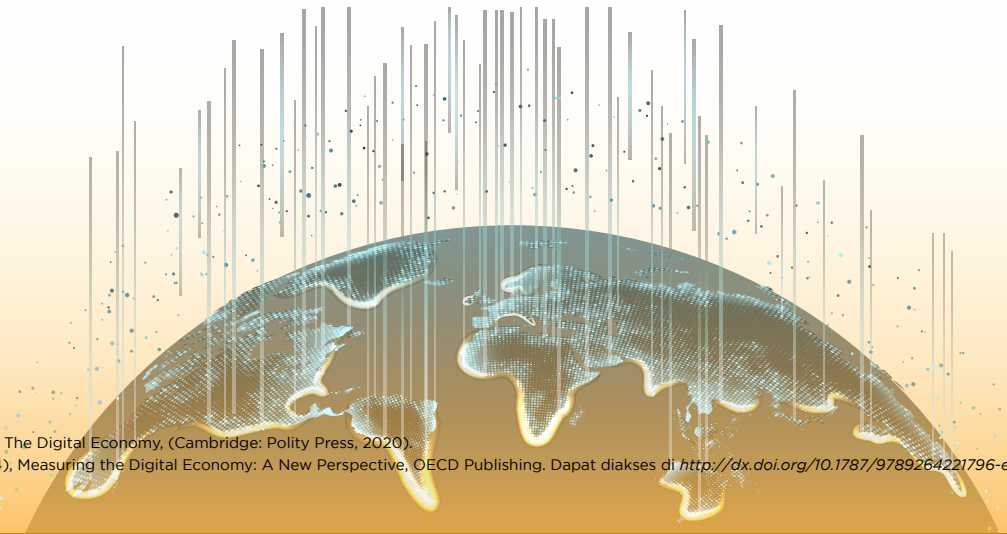
(Visual credit: Kolaborasi Rembug Nusa)

A. National Commitments

The digital revolution has created a new innovation in the capacity to acquire, store, manipulate and transmit volumes of data in real time, vast and complex. This data is generated through and by human activity, about us—humans, and for the purpose of understanding and ultimately managing, and perhaps manipulating—engineering human life. This practice is driven, among other things, by the discovery of added value from the development of information, communication, and computing technology, which we commonly know as the digital economy or computational economy, which is based on data.[31]

In its development, the digital economy has had a very significant contribution to the Gross Domestic Product (GDP) of a country. Current estimates have it reached between 5% and 15% of global GDP; and contribute 3% to 10% of global jobs. Unfortunately in many developing countries, the growth of the digital economy is often out of sync with the size of the market economy itself, which at some point is usually influenced by policy issues. Therefore, one of the steps taken to accelerate the development of this sector is to develop a digital economic policy, which also means the development of a digital policy ecosystem in a country.[32]

Digital policy itself is the entire policy related to the utilization and promotion of opportunities offered by digitization, one of the important aspects is related to the data flow policy.



31 Lihat: Tim Jordan, The Digital Economy, (Cambridge: Polity Press, 2020).
32 Lihat: OECD (2014), Measuring the Digital Economy: A New Perspective, OECD Publishing. Dapat diakses di *http://dx.doi.org/10.1787/9789264221796-en.*

A number of countries in the world have earlier developed cross-border data flow policies, which have developed along with the large movement of data across countries, as well as the development of personal data protection laws in their countries. OECD countries, for example, since 1980 have issued The Organization for Economic Co-operation and Development (OECD) Guidelines on the Protection of Privacy and Transborder Data Flows of Personal Data, which was then amended in 2013. Furthermore, in 1981 for the first time European countries issued The Council of Europe Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data (No. 108), and has undergone several modernizations and additions, it's also known as Modernised Convention 108.[33] In 2001 the Council of Europe specifically issued an Additional Protocol related to supervisory authorities and cross-border data flows (ETS No. 181).[34] At present, the principles and mechanisms of cross-border data transfer are almost certainly an integral part of any negotiation material for international trade agreements, both PTA (Preferential Trade Agreement), RCEP (Regional Comprehensive Economic Partnership), and CEPA (Comprehensive Economic Partnership).

Indonesia has only specifically discussed the regulation of cross-border data flow, including its protection aspect, in line with the issuance of Law Number 11/2008 concerning Electronic Information and Transactions (UU ITE). The provisions of Article 26 of the EIT Law specifically regulate aspects of personal data protection, which is further regulated in more detail through Governmental Regulation No. 82/2012 concerning the Implementation of Electronic Systems and Transactions and later amended through Governmental Regulation No. 71/2019 (PP PSTE).

33 Lihat: *https://www.coe.int/en/web/data-protection/convention108/modernised.*
34 Lihat: *https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatynum=181.*

In the context of personal data protection, although the definition of personal data only surfaced in the Explanatory of Article 26 of the EIT Law, a number of sectoral legislations that have been present previously have regulated and emphasized the importance of protecting citizens' personal data. Until 2021, Indonesia doesn't yet have a comprehensive personal data protection legislation, although from a study done by ELSAM, at least there are 48 laws in Indonesia in which the content is related to the processing of personal data. The sectors are diverse, ranging from telecommunications and information; trade and industry; finance, banking, and taxation; population, election, and archives; health services; and human rights, social, law enforcement, and security.[35]

Furthermore, specifically talking about cross-border data flow policies, a number of existing laws and regulations can be identified as part of the national commitment to regulate it:

35 Lihat: Wahyudi Djafar, Ruben Sumigar, dan Lintang Setianti, "Memetakan Hukum Perlindungan Data Pribadi di Indonesia: Problematika dan Usulan Pengembangannya dari Perspektif HAM". 2021.

1. Law No. 11/2008 concerning Electronic Information and Transactions as amended through Law No. 19/2016 (EIT Law).
2. Law No. 1/2020 concerning The Ratification of Indonesia-Australia Comprehensive Economic Partnership/IA-CEPA.
3. Law No. 1/2021 concerning The Ratification of Indonesia-EFTA Comprehensive Economic Partnership/IE-CEP).
4. Law No. 4/2021 concerning The Ratification of ASEAN Agreement on Electronic Commerce (AAEC Ratification Law)
5. Governmental Regulation No. 71/2019 concerning the Implementation of Electronic Systems and Transactions (PP PSTE).
6. Governmental Regulation No. 80/2019 concerning Trading Through Electronic Systems (PP PMSE).
7. Presidential Regulation No. 95/2018 concerning Electronic-Based Government System (Perpres SPBE).
8. Presidential Regulation No. 39/2019 concerning One Data Indonesia (Perpres Satu Data Indonesia).
9. Ministerial Regulation No. 20/2016 concerning Protection of Personal Data in Electronic Systems (Permenkominfo 20/2016).

From the various laws and regulations above, it showcases that Indonesia supports the free flow of data across countries, with a set of conditions and requirements. The PP PSTE, for example, regulates a number of requirements related to registered electronic shipments, which will be further regulated in a ministerial regulation.[36] In the context of personal data protection, the transfer of personal data is also recognized as part of the processing of personal data, as regulated in Article 14 paragraph (2) of PP PSTE. Further in relation to the transfer of personal data, Permenkominfo No. 20/2016 has set a number of requirements in the transfer of personal data across national borders. Provisions of Article 22 Permenkominfo No. 20/2016 regulates:

36 Lihat Pasal 68 dan Pasal 69 PP PSTE, yang antara lain mengatur perihal kewajiban untuk mengidentifikasi pengirim dan penerima data.

(1) The Sending of Personal Data managed by Electronic System Operators to government and regional government agencies as well as to the public or private sector domiciled within the territory of the Republic of Indonesia to outside the territory of the Republic of Indonesia must:

a. be coordinated with the minister or official/institution that is authorized to do so; and

b. apply the provisions of laws and regulations regarding the exchange of personal data across national borders.

(2) The implementation of coordination as referred to in paragraph (1) letter a is in the form of:

a. reporting the implementation plan for the sending of personal data, at least containing the clear name of the destination country, the clear name of the recipient subject, the date of implementation, and the reason/destination for sending;

b. asking for advocacy, if needed; and

c. reporting the results of the implementation of activities.

In addition to the aforementioned regulations, PP PSTE also applies a number of categorizations to the data in relation to the security of such data. It include the prohibition on cross-border data transfer for data that is categorized as strategic data, as regulated in Article 99 of PP PSTE.[37] In other words, strategic data managed by the government (public institutions that manage strategic data), are subject to data localization obligations (data storage in the country). The financial sector is one that is qualified as strategic data. However, with the issuance of PP PMSE which provides an obligation for domestic and/or foreign PMSE actors to store financial transaction data for a minimum of 10 years,[38] does that mean specifically related to financial transaction data, referring to PP PMSE, private institutions are also required to localize data storage?

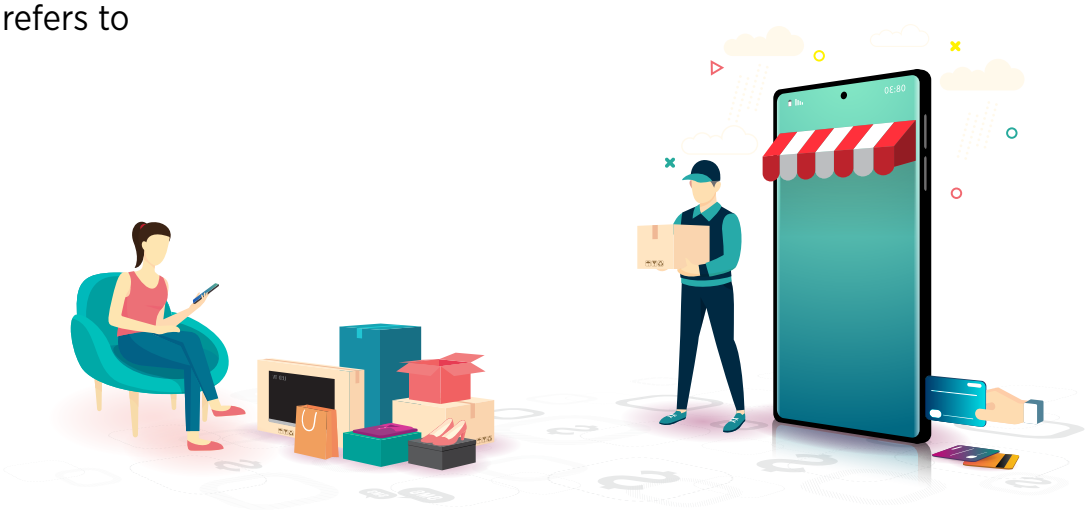
37 Data strategis meliputi data: sektor administrasi pemerintahan; sektor energi dan sumber daya mineral; sektor transportasi; sektor keuangan; sektor kesehatan; sektor teknologi informasi dan komunikasi; sektor pangan; sektor pertahanan; dan sektor lain yang ditetapkan oleh Presiden.
38 Read: Article 25 of PP PMSE

In another situation, there is Perpres SPBE which is closely related to the steps taken by the Indonesian government to prepare a national data center. It is intended to ensure data interoperability across all government, central and regional government agencies. In other words, even though the national data center is developed as a cloud computing-based technology, it provides an obligation for all government agencies to store data in national data centers located in the country.[39]

This confirms the order from PP PSTE, which requires data with strategic qualifications, especially government data, to be stored domestically. The interoperability of government data which is emphasized by the Perpres SPBE is further intended to be able to support the implementation of One Data Indonesia. Referring to the Perpres Satu Data Indonesia, in its development, in addition to involving all government agencies, it also involves state institutions and other public legal entities. This then raises questions related to access restrictions, especially on the "other legal entities", including limitations on the flow of data managed by these "other legal entities".[40]

In various international trade agreements, such as the Indonesia-Australia Comprehensive Economic Partnership Agreement (IA-CEPA), the Regional Economic Comprehensive Partnership (RCEP), and the Indonesia-European Free Trade Association (EFTA) Comprehensive Economic Partnership, Indonesia government fully supports the free cross-border data flow, emphasizing a commitment to the protection of personal data.

For example, in CHAPTER V of the IA-CEPA on E-Commerce, there are regulations regarding the obligation to protect personal information and cross-border data flow, which refers to



39 Lihat Lampiran Perpres No. 95 Tahun 2018 tentang SPBE.
40 Lihat Pasal 41 Perpres No. 39 Tahun 2019 tentang Satu Data Indonesia.

the respective domestic laws. Then, Article 12 of the RCEP regulates the obligations of states parties to protect personal information and determines the promotion of cross-border data flows for electronic data. In the trade agreement with EFTA countries, there is also the appendix on financial services that specifically regulates the obligation to protect personal data, and procedures for cross-border data flow. Specifically regarding data protection obligations, apart from being regulated in the financial services annex, it is also regulated in the travel and tourism annex.[41]

The commitment is also in line with the ASEAN Agreement on Electronic Commerce, which was only ratified in September 2021. In the agreement, ASEAN countries are committed to eliminating and minimizing obstacles in the transfer of electronic data across national borders, and the prohibition of data localization obligations.[42] It also emphasizes the commitment to improve and strengthen the legal and regulatory framework regarding the protection of personal data in the online space.[43] This is also in line with the four strategic priorities of The ASEAN Framework on Digital Data Governance agreed in December 2018, including: (i) ASEAN Data Classification Framework; (ii) ASEAN Cross Border Data Flows (CBDF) Mechanism; (iii) ASEAN Digital Innovation Forum; and (iv) ASEAN Data Protection and Privacy Forum.[44]

In its development, the commitment of the ASEAN Data Classification Framework was later changed to the ASEAN Data Management Framework (DMF), and in January 2021 succeeded in agreeing on the Model Contractual Clauses (MCC) for Cross-border Data Flow (CBDF). The DMF has six basic components, consisting of: (i) governance and oversight; (ii) policies and procedural documents; (iii) inventory data; (iv) impact/risk assessment; (v) controls; and (vi) monitoring and continuous improvement.[45] The DMF will be a guide for small and medium-sized businesses (SMEs) to implement a data management system, which includes data governance structures and data protection.

41 Selengkapnya lihat: *https://www.dfat.gov.au/trade/agreements/in-force/iacepa/iacepa-text/Pages/iacepa-chapter-13-electronic-commerce,* lihat *https://rcepsec.org/wp-content/uploads/2020/11/All-Chapters.pdf, dan https://www.efta.int/free-trade/Free-Trade-Agreement/Indonesia#anchor-7.* Perjanjian kemitraan ekonomi komprehensif antara Indonesia dengan Australia, juga dengan negara-negara EFTA telah disahkan menjadi undang-undang nasional, sementara komitmen dengan RCEP (ASEAN + Australia, New Zealand, Korea Selatan, China, dan Jepang), masih dalam proses untuk disahkan (ratifikasi) ke dalam hukum nasional Indonesia.

42 Lihat: Pasal 7 ayat (4) huruf a-c dan ayat (6) huruf a-c UU Pengesahan AAEC.

43 Lihat: Pasal 7 ayat (5) huruf a-c UU Pengesahan AAEC.

44 ASEAN, "ASEAN Telecommunications and Information Technology Ministers Meeting (TELMIN): Framework on Digital Data Governance". 2012. URL: *https://asean.org/wp-content/uploads/2012/05/6B-ASEAN-Framework-on-Digital-Data-Governance_Endorsedv1.pdf*

45 ASEAN, "ASEAN Data Management Framework: Data governance and protection throughout the data lifecycle". 2021. URL: *https://asean.org/wp-content/uploads/2-ASEAN-Data-Management-Framework_Final.pdf*

Meanwhile, like standard contractual clauses in general, MCC is a condition and framework of contractual provisions that may be included in a binding business-to-business (B to B) legal agreement which transfers personal data to each other across national borders. However, MCC has received a lot of criticism, one of which is because it has not fully protected the rights of data subjects. In addition, MCC is also considered to contain low data governance and data protection standards when compared to the EU Standard Contractual Clauses (EU SCC).[46] Therefore, the MCC is potentially only useful as a legal basis for cross-border data flows between countries that have low or no personal data protection laws.

The clause to support the free flow of data is also in line with Indonesia's participation in the Asia Pacific Economic Cooperation (APEC) Forum, which has also issued the APEC Privacy Framework in 2015. In addition to setting out basic principles for protecting personal information, including encouraging APEC member states to strengthen data protection legislation, this framework specifically regulates cross-border data transfers, such as in paragraph 69 and 70 that regulates the obligation of the member states to refrain from restricting the cross-border flow of personal information. Therefore, there is a need for legislative instruments to provide adequate safeguards, including effective enforcement mechanisms, to ensure a sustainable level of protection. It is also emphasized that any restrictions on the cross-border flow of personal information must be commensurate with the risks posed by the transfer, taking into account the sensitivity of the information, its purpose, and the context of the cross-border transfer.

Unfortunately, although Indonesia has committed in various international agreements, the country is yet to pass the personal data protection law. As a result, the regulation of personal data protection in Indonesia is still sectoral in nature and is formulated in various hierarchies of laws and regulations. This situation has an impact on overlapping rules for protecting personal data, which has implications for the low level of trust in the protection of personal data in Indonesia.

46 174 Privacy Laws & Business International Report, "ASEAN Model Contractual Clauses: low and ambiguous data privacy standards". 2021. Hlm. 22-24

So far, the personal data protection law in Indonesia has not adequately regulated the processing of personal data, the rights of personal data subjects, the obligations of data controllers and processors, clarity in international data transfers,[47] including ensuring clarity of institutions that effectively enforce data protection laws. This condition is exacerbated by a series of cases of alleged leakage of personal data, both involving the public and private sectors, at least in the last two years. As a result, it is difficult to ensure that there is a reference to effective instruments and enforcement in data protection as an important aspect that determines trust in cross-border data flow. It also means that it's difficult to obtain an adequate status in data protection with other countries that already have strong and comprehensive personal data protection laws.

In the context of the G20 countries, the topic of protecting personal data and the cross-border data flow have always surfaced in the recent discussions of its member countries, and have even become one of its strategic topics. It can be seen from the Declaration of the Leaders of the G20 countries which always emphasizes the two topics as a key pillar in the development of the digital economy. In 2020 during the G20 Presidency of Saudi Arabia, Indonesia has developed a proposal related to "Data Free Flow with Trust and Cross-Border Data Flows", which emphasizes four principles: lawfulness, transparency, fairness, and reciprocity.

Referring to the agreement formulated in the 2021 G20 Leaders Declaration at the meeting in Italy, the importance of the free flow of data with trust and the cross-border data flow is recognized. They reaffirm the role of data for development and will continue to work towards addressing challenges such as those related to privacy, data protection, security and intellectual property rights, in accordance with the relevant legal framework in force. They will also continue to share common understanding and work to identify commonalities, complementarities, and elements of convergence between existing regulatory approaches and instruments that enable data to flow with trust, to foster future interoperability.

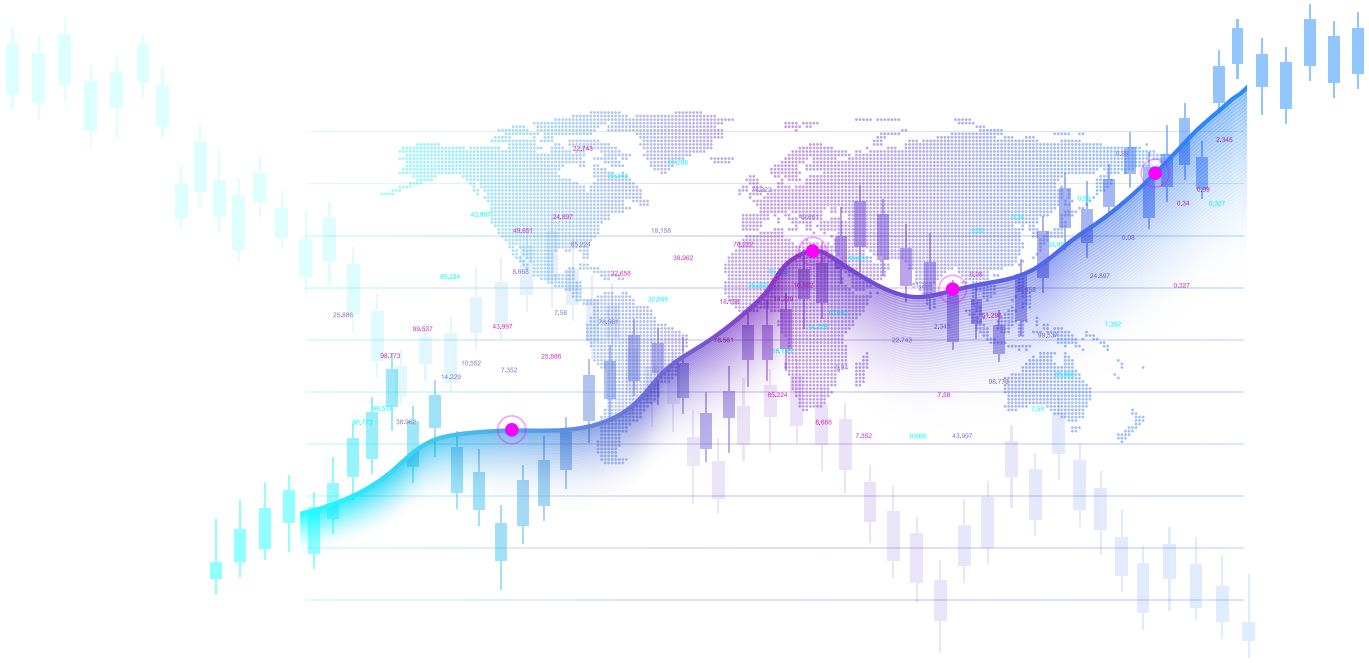
47 APEC, "APEC: Privacy Framework". 2015. URL:
https://www.apec.org/docs/default-source/publications/2017/8/apec-privacy-framework-(2015)/217_ecsg_2015-apec-privacy-framework.pdf?sfvrsn=1fe93b6b_1

B. Current Challenges

In economic development, it is very important to ensure that the economic value generated by cross-border data flows can be enjoyed by all parties, including developing countries. The United Nations Conference on Trade and Development (UNCTAD) revealed that there is an unequal distribution of benefits from cross-border data flows, which are currently concentrated in several countries and global technology companies.[48] Developing countries risk becoming mere data providers, while having to pay for digital intelligence generated from their own data. Different countries have different levels of readiness in terms of capacity to utilize data for development, including Indonesia.

From a development point of view, beyond the economic value the nature of data as a public good has implications beyond national borders. Sharing health data for research purposes during the COVID-19 pandemic is an example of a time when cross-border data flows can be beneficial in responding to COVID-19 given its 'Public Health Emergency of International Concern' status.

Regarding the non-economic value, cross-border data flows also have implications for human rights, which vary depending on the type of data (commercial data, government data, and consumer data). Each type of data has the possibility of containing personal data, including sensitive data that demands higher protection. According to Bauer, et al (2013) also Chander and Lê (2015), the free cross-border flow of data is necessary to support human rights, freedom of expression,



48 UNCTAD, "Digital Economy Report 2021: Cross-border data flows and development: For whom the data flow". 2019. URL: *https://unctad.org/system/files/official-document/der2021_en.pdf.*

and democracy. Even though it should be accompanied by an adequate regulatory framework, including protection of personal data, cybersecurity, legal accountability, and interoperability between countries (WEF, 2020b). The risk of personal data breaches does not only come from the private sector, but also from the public sector: the government.[49] This has the potential to affect trust and hinder the potential benefits of a data-driven digital economy.

There are currently at least three models for managing cross-border data flows. **First**, a free cross-border data flow model; **second**, a conditional cross-border data flow model; and **third**, a strict cross-border data flow model.[50] In practice, the forms of restrictions and requirements in the cross-border data flow will largely depend on the type of data being transferred. These three models are followed by various countries in the world according to their domestic laws, although they are often inconsistent in their regulations and applications. For example, a country is involved in an international agreement regarding the prohibition of data localization obligations, but the country's national law actually implements data localization obligations. There are also countries that in principle recognize the free flow of data, but their domestic rules prohibit the transfer of data across national borders, for certain categories of data.

Countries that implement strict models generally based it on the concept of data localization, which requires that the data be within certain limits, and remain within certain territorial jurisdictions. Data localization is generally based on the need for data security, which emphasizes the existence of a fortress around the data. This concept is different from the concept of data protection, which emphasizes the law of data collection, use, sharing, storage and transfer, and emphasizes control over personal data by the data subject, where and by whom the data is processed and stored. The concept of data protection is more in line with today's definition of data sovereignty when the data flow cross-

49 Referensi: Tempo, "Data Dukcapil di 4 Daerah Diduga Bocor, Anggota DPR Minta Polisi Bertindak". 2021. URL: *https://nasional.tempo.co/read/1472775/data-dukcapil-di-4-daerah-diduga-bocor-anggota-dpr-minta-polisi-bertind*ak; dan Kompas.com, "Data Kependudukan Diduga Bocor di Situs Pemkab Magelang Berawal dari Bimtek Admin Desa". 2021. URL: *https://regional.kompas.com/read/2021/06/09/055803678/data-kependudukan-diduga-bocor-di-situs-pemkab-magelang-berawal-dari-bimtek?page=all*

50 Martina F. Ferracane, "Ecipe Working Paper (No. 1/2017): Restrictions on Cross-Border data flows: a taxonomy". 2017. URL: *https://ecipe.org/wp-content/uploads/2017/11/Restrictions-on-cross-border-data-flows-a-taxonomy-final1.pdf.*

border. Data sovereignty emphasizes the self-determination aspect of data subjects to control their personal data.[51]

While the conditional model is usually applied in countries that basically support the free flow of data but their national laws prohibit the transfer of certain categories of data, the common reasons are due to national interest or national security. This model can also be in the form of applying special conditions to be able to transfer data across countries, for example the requirement to obtain approval from the data subject for certain data, or the need to obtain permission or approval from certain authorities, or other requirements such as to prepare a backup record (copy of the data within the country.

Indonesia itself can be qualified as a country that applies a conditional model for the cross-border data flows. This is as emphasized especially in PP PSTE and PP PMSE which require strategic category data to be stored in the country and cannot be transferred outside Indonesian jurisdiction. Permenkominfo No. 20/2016 also specifically regulates procedures and permits in cross-border data transfer, including the requirements. Indonesia has adopted the principle of adequacy in data protection law as the main prerequisite for cross-border data flow. This is confirmed in Article 59 paragraph (2) letter h of PP PMSE:

"personal data may not be sent to other countries or regions outside Indonesia, unless the country or region is declared by the minister to have the same standard and level of protection as Indonesia"

However, the regulation regarding the adequacy of data protection as the main prerequisite in the transfer of personal data across countries, has actually created legal uncertainty in the data transfer requirements, especially regarding the minister authorized to determine the legal equality. Referring to Permenkominfo No. 20/2016, the authorized minister to determine whether or not it is permissible to transfer data across national borders is the Minister of Communication and Information Technology. On the other hand, according to PP PMSE, the minister who can declare a country has the same standard and level of protection as Indonesia or not,

51 RadimPolc˘ák and Dan Jerker B. Svantesson, "Information Sovereignty: Data Privacy, Sovereign Powers, and the Rule of Law". 2017.

is the minister who organizes government affairs in the trade sector. So, for the electronic system operator, especially in the trade sector, which authority must make a notification and obtain a cross-border data transfer permit?

This illustration gives us an idea, apart from the increasingly diverse actual challenges in the context of cross-border data flows, Indonesia is still facing challenges at the policy and regulatory level. It's not only regulations that guarantee legal certainty in cross-border data flow, but also the clarity of policies related to the protection of personal data, which is the main element to determine the level of trust in ensuring the smooth flow of data across countries. Therefore, a comprehensive personal data protection law is needed, which places the individual at the center or emphasizes a human-centric approach. This is to ensure that the personal data of individuals is protected, regardless of whether their data is processed within or outside the region in which they are located—in this case: Indonesia. This protection can be achieved by stipulating that the law:

> applies to data controllers and processors established in the country, even if the processing is carried out outside the jurisdiction of the country; and
>
> applies to the processing of personal data by controllers and data processors established outside the jurisdiction of the country.

To ensure optimal data protection, including the ensuring of data flow and the processing, the adequacy of data protection laws is important, and essential to determine trust in the process. Transfers of personal data to entities abroad will be easier if the data receiving country has an equivalent data protection level to the provisions in the sending country. Economically, the adequacy of data protection laws will have a major impact on the development of the digital economy in Indonesia. This will open wider opportunities for industries in Indonesia to develop their markets abroad, and will also open up a large space for data storage businesses in the country, due to the growing trust to store and process data in Indonesia.

For Indonesia citizens, the adequacy of data protection laws with other countries will play an important role in ensuring data protection for data subjects, wherever the data subject's personal data is processed due to the enactment of the human-centric approach of the law. However, this ease of protection is only possible through an international cooperation between data protection authorities that are considered equal, particularly in relation to their independence. Therefore, the presence of strong and comprehensive personal data protection legislation must be followed by the existence of an independent monitoring mechanism, to be able to effectively and proactively implement and enforce personal data protection laws.

stadion sriwedari

C. Policy Recommendations and Proposals

Given its multidimensional nature, it is important to be able to formulate policies that take into account the balance between economic and non-economic aspects. The proposed recommendations are related to the cross-border data flow priority issues:

1. Instead of implementing a strict data localization policy, it is important for the Digital Economy Working Group to establish a good and comprehensive personal data protection governance framework, through the passage of the Personal Data Protection Bill, as an important reference in regulating data transfer across national borders. The presence of this legislation later can also become the basis for synchronizing and harmonizing various regulations related to cross-border data flows that currently is overlapping with one another;
2. The Personal Data Protection Bill itself has placed the adequacy of data protection law as the main reference in international data transfer, which if not fulfilled can be done as long as there is an agreement between data controllers (B to B), with clarity regarding the mechanism of standard contractual clauses (SCC), or international agreements between countries (G to G). In addition, the yet-to-pass bill needs to ensure that there are exceptions to international data transfers, which can also be done on the grounds of having obtained prior consent from the data subject, for the public interest, for the sake of the legal defense process, or necessary to protect the vital interests of the data subject;
3. It is important for the Digital Economy Working Group to ensure that there is an adequate governance framework in place, coupled with effective and proactive enforcement mechanisms through the establishment of an independent data protection authority, which enables cross-border cooperation, to guarantee the protection of Indonesian citizen's personal data;

4. It is also importance to ensure the consistency of the Indonesian government's commitments in relation to the cross-border data flow policies in various international agreements in a comprehensive economic framework that supports and guarantees the free flow of data, accompanied by an adequate protective framework through the establishment of domestic law. It is also important to ensure the consistency of the Indonesian government's commitments, related to the flow of data across national borders, in various international agreements in a comprehensive economic framework, which supports and guarantees the free flow of data, accompanied by an adequate protective framework, with the establishment of domestic law. Especially ensuring the presence of data protection law as the main pillar of trust in the cross-border data flows;

5. It's significant that The Digital Economy Working Group ensure the voice of the governments (inter-ministerial/agencies) is equal and consistent in talks and negotiations related to cross-border data flows, including aspects of data protection as a prerequisite. This will have a substantial impact on legal clarity and certainty in the implementation of personal data protection in the country, especially for personal data that is exchanged across borders.

D. Case Studies and Lessons Learned

Data flows have occurred both on a national and regional scale in Indonesia, for example in the practice of population data, social assistance, to general elections.

1. Population Data

Case Study: The Minister of Home Affairs Regulation Number 61/2015 concerning Requirements, Scope and Procedures for Granting Access Rights and Utilization of Population Registration Numbers, Population Data, and Electronic Identity Cards; and the Minister of Home Affairs Regulation Number 102/2019 concerning Granting of Access Rights and Utilization of Population Data are two regulations that legitimize the access and use of population data by ministries/agencies, local governments, and legal entities—as long as they are related to their activities. It is difficult to be able to distinguish when access related to its activities is carried out and when it is not, given that there are no parameters to determine.

Lessons Learned: In practice, there have been many uses of population data by various agencies.[52] Unfortunately, this utilization often escapes the protection of comprehensive population data. This fact is proven by the various leaks of population data, such as what happened in Semarang City,[53] Malang Regency,[54] and Magelang Regency.[55]

2. Implementation of Social Assistance

Case Study: Law Number 13/2011 concerning Handling of the Poor is the basis for collecting personal data of the poor. The collected data is verified and validated periodically at least once every two years, must be based on information technology, and serve as integrated data which under the responsibility of the Minister of Social Affairs. Regarding integrated data, there is also the Minister of Social Affairs Regulation Number 5/2019 concerning Management of Integrated Social Welfare Data which regulates the use of integrated social welfare data by ministries/agencies by submitting a written application to the Minister of Social Affairs.

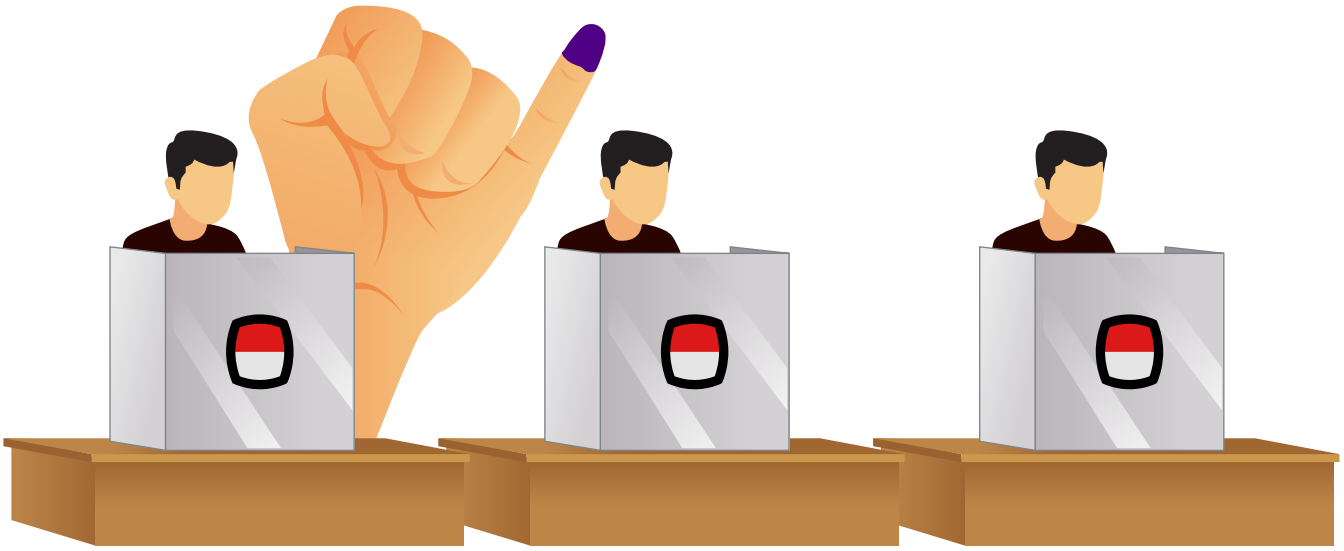
Lessons Learned: There is one important thing that needs to be criticized from the regulation, namely the provision that still allows the distribution and provision of data to third parties. Taking such actions is carried out without notification to the data subject, therefore it is very prone to misuse of the collected data.

52 Berikut merupakan daftar pemanfaatan data kependudukan oleh berbagai lembaga:
1. 45 Kementerian/Lembaga telah menandatangani MoU;
2. 1.227 Lembaga Pengguna yang telah melakukan penandatanganan Perjanjian Kerja Sama (PKS);
3. 944 Lembaga Pengguna yang telah melakukan penandatanganan Petunjuk Teknis (Juknis);
4. 666 Lembaga Pengguna terkoneksi ke Data Warehouse (DWH) Ditjen Dukcapil;
5. 661 Lembaga Pengguna Alat Pembaca KTP-el (card reader) dan terdapat 30.498 alat pembaca KTP-el (card reader); dan
6. 3.190.636.810 NIK yang telah diakses oleh Lembaga Pengguna (per 8 Juli 2019).
Lihat: Zudan Arif Fakrulloh, "Pembukaan Asistensi Pengelolaan Database Pejabat Dukcapil Daerah: Pemanfaatan Data dan Dokumen Kependudukan untuk Mendukung Pelayanan Publik". URL: *https://dpdd.kemendagri.go.id/files/sosialisasi/BAHAN%20PAPARAN%20BKD_Dirjen.pptx.pdf* diakses pada 19 Oktober 2020
53 Suara.com, "Waduh! Ribuan Data Pribadi Warga Bocor ke Publik, Ada Gubernur Jateng dan Walkot Semarang". 2021. URL:
https://jateng.suara.com/read/2021/07/14/175859/waduh-ribuan-data-pribadi-warga-bocor-ke-publik-ada-gubernur-jateng-dan-walkot-semarang
54 Tempo.co, "Data Dukcapil di 4 Daerah Diduga Bocor, Anggota DPR Minta Polisi Bertindak". 2021. URL:
https://nasional.tempo.co/read/1472775/data-dukcapil-di-4-daerah-diduga-bocor-anggota-dpr-minta-polisi-bertindak
55 Kompas.com, "Data Kependudukan Diduga Bocor di Situs Pemkab Magelang, Berawal dari Bimtek Admin Desa". 2021. URL:
https://regional.kompas.com/read/2021/06/09/055803678/data-kependudukan-diduga-bocor-di-situs-pemkab-magelang-berawal-dari-bimtek?page=all

3. General Elections

Case Study: The provisions of Article 201 paragraph (8) of Law Number 7 of 2017 concerning General Elections state that voter data is updated every six months, with reference to population data submitted by the government to general election organizers. These data, apart from names and addresses, also include the National Identity Number (NIK) and gender. Worse, this provision places an obligation on election administrators to submit copies of voter data to all political parties participating in the election, including NIK and Family Card Numbers (NKK). This situation further opens the potential threat of data exploitation related to elections. This situation further opens the potential threat of data exploitation relating to elections. This is displayed in the event that occurred on May 21, 2020 as the Twitter account @underthebreach, an Israeli data leakage monitoring and prevention account, mentioned the sale of 2 million voter data from the Indonesian General Elections Commission (KPU) on a hacker forum site.[56]

Lessons Learned: The event shows huge risk and potential for data misuse or abuse. It is clear that there is a need for review and reformulation of the way data is sent and received from one another, even more if the actors who will later be involved as data controllers and processors are cross-border. The role of countries to share responsibility for and benefit from cross-border data flows is important.



56 Lembaga Studi dan Advokasi Masyarakat (ELSAM), "Data DPT Dijual Bebas: Besarnya Risiko Eksploitasi Data Pribadi". 2020. URL: *https://elsam.or.id/data-dpt-dijual-bebas-besarnya-risiko-eksploitasi-data-pribadi/*

3. General Elections

A. Community Based Internet Infrastructure

Internet Access Restrictions/Limitations

Regarding the distribution of physical infrastructure, it is also necessary to pay attention to regulations related to internet connectivity, to guarantee the right to internet access, which is a human right, is not violated. Indonesia has a policy related to shutdown internet access, which is an actual challenge to the fulfillment the right to internet access even though the infrastructure is ready. In principle, restricting internet access for any reason is inconsistent with the principles of equality and meaningful connectivity as emphasized in this position paper. In addition, it is also necessary to ensure that access to the fulfillment of the right to internet access is not limited due to other factors, such as high or discriminatory costs.

Meaningful Connectivity

It must also be interpreted as a connection that is useful and answer the challenges faced by its users, as well as ensure protection for its users, regardless of age (elderly or children), gender (women and other vulnerable genders), and people with disabilities. Therefore, it would be better if this position paper could also provide practical examples or more good practices in the field from the policy recommendations provided, so that these recommendations can be fully understood by the government and not mistranslated.

National Commitments

The Indonesian government already has a national commitment that requires telecommunications operators to have a Universal Service Obligation (KPU). This is regulated through a derivative of the Telecommunications Law, as well as through Government Regulation No. 46/2021 concerning Post, Telecommunications, and Broadcasting, which regulates the amount of percentage that must be contributed by telecommunications companies to conduct KPU.

This KPU contribution can then be used to build infrastructure, the ICT ecosystem, and the digital economy, especially in the 3T (underdeveloped, frontier, and outermost) areas or other disadvantaged areas.

The policy on KPU should be pushed so it can have more impact on internet penetration in Indonesia. The governing of Universal Service Obligation have to be more participatory, so that it can accommodate according to needs at the grassroots level. Its contribution percentage in Indonesia is still quite low, at 1.25%, compared to other Southeast Asian countries, such as Malaysia, which reached up to 6%.

Various Challenges

In Indonesia, challenges related to equitable distribution of infrastructure are not limited to the geographical location of the archipelago, but are also related to other aspects, such as the security in building the infrastructure. it should be acknowledged that there have been improvements related to internet connections in several 3T (disadvantaged, leading, and outermost) areas in Indonesia. For example, in the Lanny Jaya and Paniai areas in Papua Province, internet access is now available. Another challenge is that the presence of internet access is not necessarily accompanied by digital literacy, resulting in culture shock. A gap emerges between the areas that are just having internet access with the other areas that has already experienced it earlier.

However, it is not necessary to go all the way to Papua to discuss the infrastructure. On the island of Java alone there are still locations with internet access blank spots. It is necessary to create an ecosystem that allows villages to have their own power to provide community-based local internet access. In addition, the obstacle faced is that policies from the central government are often not flexible enough to be adapted to the context of needs in the village. This position paper must highlight the need to strengthen regulations related to the procurement of digital infrastructure in accordance with their respective contexts.

B. Digital Literacy Skills

Comprehensive Education

The development of digital infrastructure must go hand in hand with the development of human resources as well as through digital literacy. Not only related to hoaxes, but also on digital security, privacy, and personal data protection. It should also include the technologies behind the use of digital technology, such as social media algorithms and their power and impact.

Educating people is a complex matter, therefore the involvement of many stakeholders is imperative in digital literacy efforts. One of them is related to community media activists who play a major role in their community, but their position is not as strong as that of mainstream media activists. Strengthening these joints in society, such as community media activists, can also encourage more inclusive and intersectional discussion of issues, for example related to the digital divide from a gender perspective, or child protection in the digital space.

Regarding hoaxes and the existence of the disinformation industry or the phenomenon of disinformation for hire, interventions have been carried out from downstream to upstream, from the downstream by law enforcement, blocking, deletion of content; then in the middle there are organizations/communities/initiatives that carry out identifying, debunking, and fact checking hoaxes; last, in the upstream there are educational efforts that are driven by many stakeholders. However, all of these interventions are often still carried out partially.

The idea of having a national digital literacy curriculum has a long way to go due to the complicated bureaucracy. One alternative to deal with this situation is to have digital literacy education as part of local content in educational institutions.

Inclusive Information Access

Digital technology has become an assistive technology that is needed by persons with disabilities, although it is not perfect. Unfortunately, there are still many misperceptions regarding which accessibility is needed by each person with disabilities. For example, regarding website accessibility for the visually impaired, the need is simple: images or logos are accompanied by alternative text (alt-text) or captions, rather than having the website adding unnessecarry plugins/add-ons.

There is still a gap regarding access to and knowledge of using digital technology for the visually impaired, even for users in big cities. According to 2018 National Socio-Economic Survey (SUSENAS) data, only 34.89% of people with disabilities have access to digital technology, and only 8.5% have internet access. This condition affects the fulfillment of other rights, such as the right to work and a decent living. Not to mention if the issue is intersectional and crosses with women with disabilities who have different vulnerabilities.

The distribution of digital literacy for a diverse society is very important. The emphasis is on the diverse needs of society itself. So, if there is an effort to incorporate digital literacy into formal institutions, the challenge is equal to the challenge of infrastructure equity: the need to contextualize according to these diverse needs.

For an example is the need for remote learning program (PJJ) during COVID-19 pandemic. The responses coming from the Ministry of Education, Culture, Research and Technology (Kemdikbudristek) tend to focus only on students, even though the parents of the students themselves and the teaching staff also need to improve their digital literacy skill to accommodate the remote learning mechansim.

Increasing the capacity of all human resources from the ecosystem is important. On the other hand, PJJ also shows that various digital technologies can be used creatively, but it should be noted the creativity comes from limited situations. The inequal situations of remote learning in Indonesia that causes learning loss is also influenced by the different ways the digital technology is used in the city and in the village. The digital literacy needs to be linked to the issue of learning loss.

Parents and Children

Talking about the digital literacy gap between parents and children is important, especially when it is associated with child protection issue. For example, related to the age of consent, of which underage's consent must be represented by the parent or guardian. This becomes complex, when the parents/guardians don't have adequate knowledge, and representing consent to their children instead could increase the risk of violence against children in the digital space.

Siberkreasi

In Indonesia, there is already a national movement for digital literacy: Siberkreasi, which continues to encourage collaboration with many stakeholders. For example, the development of a digital literacy curriculum for the elderly with Japelidi. It's just that the activities ran one-way, top-down, and on top of it, their achievement indicators or monitoring and evaluation of their activities are not yet concrete. However, the positive impact is recognized, that public awareness about digital literacy increases. There needs to be recommendations to build practical indicators that can serve as a basis for various stakeholders seeking to improve digital literacy skills.

As a response, Siberkreasi also listens to inputs from all sorts of stakeholders, such as starting at the end of 2021 it has sought a tailor-made digital literacy curriculum according to the profile of the target audience, such as children, parents, MSMEs, and so on.

Indonesian Citizens Abroad

The uneven distribution of digital literacy is also contributed by geographical challenges. If domestically, the government has various policies and actions taken to filter negative content, then when Indonesian citizens are abroad, this does not apply, even within the country this can be easily bypassed through a VPN. This then makes vulnerable Indonesian citizens abroad, for example Indonesian migrant workers, easily expose to negative content, such as those related to terrorism.

C. Cross-Border Data Flow

The Flow Direction

Inequal situations related to data flows, such as trans-pacific and trans-atlantic countries, or between Java and Non-Java Islands, instead of rising inclusivity for various cross-identities, it instead could create exclusivity or new gaps. There must be an equal regulatory model for cross-border data flow between parties that exchange data, so it prevent the widening of the gap, and data exchange takes place reciprocally.

Policy Harmonization

The presence of the Ministry of Home Affairs Regulation (Permendagri) No. 102/2019 concerning the Granting of Rights to Access and Utilization of Population Data is good in the aspect of data protection, but it also makes it harder to do data analysis at the regional level. This is also displayed in the situation related to the prohibition of integrating social assistance data under the central government and local government due to the implementation of the Ministry of Social Regulation (Permensos) No. 3/2021 concerning Social Welfare Integrated Data Management.

Ministries and Agencies (K/L) in Indonesia tend to make data service regulations centralized, and thus cause local authority related to data sovereignty to be limited.

In fact, the space for data interoperability or the ability of data to be shared and used between electronic systems is opened in Presidential Regulation (Perpres) No. 39/2019 concerning One Data Indonesia. Moreover, adding to the situation is not all data that can be retrieved from the data system at the central government is valid. The policies in Indonesia which is still sectoral also creates legal uncertainty, especially in terms of the mechanism for handling various violations that arise, for example when data breaches occur.

There is a need to harmonize regulations to resolve the tug-of-war between the interests of Ministries/Agencies at the center and local governments without neglecting data protection, but also providing space for the government or local stakeholders to analyze their own data.

Child Data Protection

One of the other emerging data flow issues is related to the protection of children's data. Of the 48 legislations concerning children in Indonesia, nothing is related to the processing of children's personal data, not even in the Child Protection Law and the National Education System Law. The current draft of Personal Data Protection Law in Indonesia has categorized children's data as sensitive data that requires explicit consent from the data subject, but the problem is that children as data subjects cannot give explicit consent.

In the European Union, the General Data Protection Regulation provides restrictions on data processing for children under the age of 13 years old, requiring the consent of their parents/guardians, but for those aged 13 and over it is not necessary. The Indonesia's Personal Data Protection law needs to add specifications for processing child data and a clause on child protection (the protection of minors).

Consent and Technology

Regarding the application of consent in data flows or technology development in general, the approach that needs to be encouraged is not only a human-centric approach, but also an inclusive design. For example, consent that accommodates the situation of the data subject, such as providing alternative technology designs so that consent does not have to be in writing and thus able to accommodate persons with that category of disabilities. This can be a good practice of a human-centered and inclusive design approach.

Data and Elections

A new issue that arises related to data processing is the discourse of holding online elections (internet voting). In this case, the question is always about the integrity of the data being processed. Estonia as one of the countries that implement internet voting also faces the same challenges. However, the situation is not the same with Indonesia, both in terms of the number of voters, the infrastructure it already has, or the threat situation related to data integrity and the integrity of the election results themselves.

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Village Empowerment and Data

The challenge in implementing the policy of One Data Indonesia is that the participation of villagers needs to be encouraged so that they can build data that suits their own needs. Furthermore, education about what to do with the data that has been collected is also needed. One Data Indonesia policy may be applicable, but may not be compatible to use in certain contexts or for certain needs. The point is, don't let the reasoning at the grassroots level become eroded, that the data is collected collectively and the instruments are developed in a participatory manner, but then it's said that it's not in accordance with the data set by the state.

Grey Regulations and Implementations

There is still a lot of uncertainty in regulation and implementation regarding data management within Indonesia itself, especially regarding the flow of data across national borders. This may also be influenced by the political situation at the regional or global level.

D. General Comments

Algorithm

Algorithm development needs attention, especially in terms of who dominates it and how the social impact takes place. In 2021, a manifesto entitled "The Public Service Media and Public Service Internet Manifesto" was published, and one of the things that was mentioned in it was how algorithms that tend to be created, used, and developed for commercial purposes began to undermine democracy.

This manifesto encourages the existence of a Public Service Internet with its algorithms intended for public services have to be open source and transparent. There are many biases in the algorithm, so human intervention is needed, for example in the form of affirmative action as a safeguard that can protect vulnerable or marginalized groups from digital platform algorithms usage.

Equitable Digital Transformation

There has not been an even distribution of digital transformation in Indonesia, although this has been an issue for many years. The main obstacle is the various digital divide that have not been successfully bridged in encouraging digital transformation. Apart from what has been mentioned in the position paper, other matters that we need to pay attention to are how data security and digital security issues are discussed on a policy scale. For example,

For example, related to accessing population data, it is discussed that the government will charge fees for system maintenance, or related to attacks on journalists or other human rights defenders which are increasingly rampant but there are no clear mechanisms or policies in the case handling, especially for women human rights defenders who face attacks or gender based violence. Talks about digital transformation in accordance with the human rights framework still need to be voiced.

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Indonesian Civil Society Position Paper

Three Main Challenges of Indonesia's Digital Transformation