



**MINISTRY OF FOREIGN AFFAIRS
OF DENMARK**
Danida

**STUDY ON
DIGITAL DEVELOPMENT
& HUMAN RIGHTS
HOW TO STRENGTHEN
RESPONSIBLE
TECHNOLOGICAL
DEVELOPMENT AND DIGITAL
RESILIENCE TO ENHANCE
DEMOCRATIC GOVERNANCE?**

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Prepared by:
HN Consultants
Lars Adam Rehof
Helena Puig Larrauri

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Contact: elk@um.dk

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LIST OF ABBREVIATIONS

APD	Africa, Policy and Development
AI	Artificial Intelligence
CSO	Civil-Society Organisation
DAC	Development Assistance Committee
DAPP	Danish-Arab Partnership Programme
ICESCR	International Covenant of Economic, Social and Cultural Rights
EIG (SAT)	Export, Innovation and GPA (Sector Advisory Team)
EKF	Danmarks Eksportkreditfond
EU	European Union
EUACI	European Union Anti-Corruption Initiative
GDK	Green Diplomacy and Climate
GSMA	Global System for Mobile Communications
HCE	Humanitarian Action, Civil Society and Engagement
ICANN	Internet Corporation for Assigned Names and Numbers
ICCPR	International Covenant on Civil and Political Rights
ISO	International Organisation for Standardization
ITU	International Telecommunication Union
JTFM	International Law and Human Rights
MENA	The Middle East and Northern Africa
MFA HQ	Ministry of Foreign Affairs Head Quarters
NGO	Non-governmental Organisation

OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the United Nations High Commissioner for Human Rights
SME	Small and medium-sized enterprises
SPa	Strategic Partnership Agreement
TC	Trace Council
TECH	Techplomacy
UN	United Nations
UNHCR	United Nations High Commissioner for Refugees
USAID	United States Agency for International Development
WFP	World Food Programme
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation

Editorial note

E.g. (exempli gratia – for the sake of example) is used copiously throughout the study in order to highlight the fact that it is outside the scope of this study to be a comprehensive examination of all relevant aspects of the digital revolution. The study is sample-based and many other angles, cases and samples could have been identified.

Hyperlinks were active as of end of June 2021. Pdf.-copies have been retrieved and are deposited with ELK.

EXECUTIVE SUMMARY

This study describes the all-pervasiveness of digitisation with primary emphasis on its effects on democratic governance and citizens' rights. The present stage of globalisation is driven by digitisation. Access to digital services is fast acquiring the status of a basic need. Digitisation presents enormous opportunities and creates very significant challenges that need to be managed in a forward-looking manner. Digitisation disrupts and upends many assumptions about development assistance and changes the way we work with development policy and programming.

The study takes its point of departure in a distinction between structure (systemic and structural drivers) and agency (capability for citizens to influence their own 'destiny' in the socio-digital context in which they live and act).

The study proposes the following overall development objectives in the context of digitisation:

(i) The overall development objective of democratic governance is to

- support and enhance an enabling environment which guarantees and promotes the digital commons as a collective social good facilitating participation, inclusion, transparency and democratic values;
- promote and support basic digital space as a public utility and precondition for democratic governance and citizen agency.

(ii) The overall development objective of empowerment of citizens and civil society¹ is to support and enhance citizens' independent and free digital agency in order to access, use, develop and disseminate digital tools and services in the exercise of their human rights and freedoms.

1 On terminology: 'civil society' and 'civic society' are partly overlapping concepts. A distinction may be made, where 'civil society' may denote "1) the aggregate of non-governmental organisations and institutions that manifest interests and will of citizens or 2) individuals and organisations in a society which are independent of the government", see https://en.wikipedia.org/wiki/Civil_society, while civic society, which may be a more limited concept, may focus more on organisational and legal aspects. In this study, civil society is the preferred term. The term 'civic space' is used to denote a more formal role for civil society, a legally and/or otherwise protected sphere for civil society/citizens to exercise 'agency', see para. 8 below.

(iii) The overall development objective of a digitised aid administration is to fully conceptualize and internalize the opportunities and implications of digitisation in Danish development and humanitarian aid policy as well as harnessing digital services in the management, programming and implementation of Danish development and humanitarian aid.

Denmark and the Ministry of Foreign Affairs (MFA) are already engaged in numerous ways with aspects of the digital revolution. There is broad and consistent political commitment to give continued high priority to 'techplomacy' and 'techvelopment'. The agenda engages MFA HQ and representations (embassies and missions) in many different ways. The office for Humanitarian Action, Civil Society and Engagement (HCE) has taken the lead on support to digital citizen agency and civil society (civic space) and has provided strategic partners (SPa) with innovation funds, The office for TechPlomacy (TECH) is advancing the global dialogue on tech, the Danish EU representation in Brussels, and the Danish UN missions in New York and Geneva have for years been engaged in the dialogue on aspects of the digital revolution, including business and human rights.

The office for International Law and Human Rights (JTFM) is in charge of human rights policy. The Danish OECD delegation in Paris is engaged with the broad digital agenda of the OECD. The office for Evaluation, Learning and Quality (ELK), the office for Green Diplomacy and Climate (GDK), the office for Export, Innovation and GPA (EIG/SAT team) and the Trade Council (TC) are managing aspects of digitisation and embassies are implementing programmes with digital aspects. Funding has been provided for multilateral organisations and Danish civil society partners and their partners to use digital tools. Thus, there is a solid basis for incremental and pragmatic scaling up of initiatives regarding international advocacy, standard-setting and programmatic support.

With regard to the amplification of Danish policy objectives, the EU is identified as the crucial partner and platform for further leverage and promotion of policies and initiatives, fully in line with the Strategy for Denmark's Tech Diplomacy 2021-2023.

INTRODUCTION

1. This study was commissioned by the Office for Evaluation, Learning and Quality (ELK), Danish Ministry of Foreign Affairs (MFA). The potential field of study is complex and broad. The focus is on actionable recommendations for further steps to be taken, be they further preparatory steps and/or initiatives that can be implemented without further ado.
2. The emphasis is on strengthening human rights in digital tech development and the implications for democratic governance, civic engagement and digital resilience of civil society. It is an agenda with broad implications for development policy and actual engagements. It touches upon some of the fundamental framework conditions for policy dialogue, analyses, prioritization, resource allocation, programme and project design. Since digital tech is cross-cutting, the implications, consequences and impact may also cut across many other policy areas, including foreign policy, security policy and trade policy.
3. The study was authored by Lars Adam Rehof (lead), Helena Puig Larrauri and Astrid Brink Knudsen, during April-June 2021 and was managed by Anne Kahl (ELK). Martin Westad Bertelsen assisted with the editing of the manuscript.

An Inception Report was finalised on 15 April and the Study was completed on 25 June 2021.

The study and its recommendations do not necessarily reflect the views of the Danish Ministry of Foreign Affairs.

- Denmark is one of the most digitised countries in the world.² For Denmark as a donor, given focus and commitment, ‘techvelopment’³ presents an opportunity for being among one of the comprehensive first-movers and could provide strong synergy with Denmark’s traditional role as a major actor in the field of human rights, good governance and ‘green’ growth.⁴ Early on, the Danish government identified ‘tech diplomacy’ (‘TechPlomacy’) as a priority area and

2 In Denmark, the level of trust vis-a-vis public authorities is very high, which has paved the way for a very high degree of digitization of citizen interaction with public and private entities, but it has also left citizens in a very vulnerable situation if trust breaks down or the systems are compromised. As a Danish citizen, if you are impeded or disbarred from using ‘NemID’, your life will become very complicated and you might find yourself in a kind of ‘digital prison’. The Danish Agency for Digitization produced a Digital Strategy 2016-2020, https://en.digst.dk/media/14143/ds_singlepage_uk_web.pdf where the overall vision is that “Public sector digitization creates value and growth, it provides efficiency improvements and it secures the confidence of Danish people in the digital society”. The Strategy sets three goals: 1) “Digital solutions must be easy-to-use, quick and ensure high quality”, 2) “Public sector digitization must provide good conditions for growth”, 3) “Security and confidence must be in focus at all times”, which stresses that the “great confidence Danes have in each other and in the public sector is the foundation of Danish welfare. We must safeguard this sense of security in an ever-more digital society. Therefore, we will improve information security in the public sector and enhance the digital competences of citizens and of businesses. A digital infrastructure for the public sector that is crucial for society must be robust and it must meet the needs of its users. Moreover, Denmark will be an inclusive society in which everyone can participate, both those who are ready to digitize, and those who cannot use the digital solutions or who do not have access to them”.

3 See <https://um.dk/en/danida-en/strategies%20and%20priorities/techvelopment/>.

4 In the context of this study digitisation addresses SDG 16 and also has potential impact on most other SDGs, including 4, 5, 8, and 10, <https://sdgs.un.org/goals>. Aspects of digitization may impact negatively on SDG 13, the ‘dirtiness’ of mining of bitcoins requires enormous amounts of electricity, see <https://cbeci.org/>. It has become a major environmental and climate change issue due to carbon emissions, see <https://techcrunch.com/2021/03/21/the-debate-about-cryptocurrency-and-energy-consumption/?guccounter=1https://www.bloomberg.com/opinion/articles/2021-05-25/bitcoin-s-btc-cost-to-society-is-impossible-to-ignore>. ‘Dirty’ mining of bitcoin is prevalent in Xinjiang, see <https://www.bloomberg.com/opinion/articles/2021-05-31/bitcoin-pays-the-wages-of-xinjiang-so-beijing-will-find-it-hard-to-outlaw-crypto>. The Association for Computing Machinery’s (ACM) Code of Ethics and Professional Conduct (2018), para. 1.1, requires that “computing professionals should promote environmental sustainability both locally and globally”, see <https://ethics.acm.org/>.

established the office of the ‘tech ambassador’ to further the international dialogue on (digital and other new forms of) technology.⁵

The vision for Denmark’s tech diplomacy 2021-23 is “a responsible, democratic and secure technological future that delivers solutions to the world’s greatest challenges”. This vision is supported by focus on three strategic priorities, including the following:

- responsibility: the tech industry meets its societal responsibility and operates on a level playing field. Denmark intends, i.a., to contribute to international policy development and mechanisms of action for cases where major tech companies fail to meet societal expectations and
- democracy: global digital governance builds on democratic values and human rights. Denmark intends to support the EU as a strong voice in international cooperation on global digital rules and regulations, including proposals for an active tech foreign policy for the EU and a stronger transatlantic dialogue on new technology and global digital rules and regulations. Denmark will defend the open, global and free internet and work to ensure that human rights are respected and promoted online and in the development of new technologies, through strategic partnerships with NGOs, like-minded countries and tech companies to monitor digitally driven acts of violence. Denmark will present a specific policy proposal on the role of the tech industry in protecting human rights online; help strengthen civil society’s digital resilience in developing countries; and put responsible technology on the agenda of the UN Human Rights Council.⁶

5 The strategy explicitly states that for Denmark, “it is critical that technological development supports and upholds democratic values, human rights and the integrity of our societal model. Technology should contribute to better, freer and more meaningful lives and assist humanity in solving the shared global challenges of the 21st century, especially the climate crisis”, see Strategy for Denmark’s Tech Diplomacy 2021-2023 <https://techstrategi.um.dk/strategy-english> and <https://techstrategi.um.dk/-/media/techstrategi/strategy-for-denmarks-tech-diplomacy-2021-2023.ashx>. Digital Hub Denmark provides a portal to digital ecosystems in Denmark, see <https://digitalhub-denmark.dk/about/>.

6 See Strategy for Denmark’s Tech Diplomacy 2021-2023 p. 6ff.

BOX 1: TECHPLOMACY

As part of the Danish TechPlomacy, Denmark has played an active role in increasing the international focus on technology and human rights: through engagements with like-minded countries, civil society and multilateral organisations and not least the private tech industry, who are increasingly becoming key gatekeepers of human rights online. As an example, Denmark has inspired and supported the UN's High Commissioner for Human Rights in establishing a new team that explicitly engages with the private tech industry in Silicon Valley, on issues such as the industry's responsibility of integrating human rights standards in tech products and platforms. As part of Denmark's membership of the Human Rights Council Denmark has played an active role in putting technology on the Council's agenda and has signed agreements with selected CSOs to support digital resilience and human rights defenders. Additionally, since 2018 Denmark has actively supported and impacted the UN Secretary General's work with new technology, which lead to the release of a new Roadmap for Digital Cooperation in June 2020. The Danish support was, e.g., illustrated through concrete policy contributions, financial support to enable consultations in developing countries and enhance awareness as well as joint events in Silicon Valley and Copenhagen (e.g. TechFestival). Denmark has contributed to the Roadmap ensuring a balanced approach to technology, where both opportunities and challenges are emphasised, including that human rights, the responsibility of the tech industry and equal access to advantages of digitisation are key priorities.

OUTLINE OF THE STUDY

5. Given the complexity and enormity of the challenges and opportunities digitisation is facing us (politicians, states, regulators, investors, corporations, technologists, citizens) with, the possible main contribution of this study is to identify issues and pose questions. Given the rapid speed with which the situation develops, an approach of constant catching-up is needed together with identification and adoption of anticipatory regulations and preventive initiatives and measures where possible.

Chapters 1-4 describe some of the main challenges, opportunities, obstacles and constraints created by the digital revolution in the area of democratic governance and citizens' rights.

Chapter 5 seeks to summarize and generalize some of the main trends facing governments and citizens going forward.

Chapter 6 sets forward some tentative principles regarding prioritization and allocation of donor funding.

Chapter 7 seeks to identify possible recommendations for future action.

6. The study includes a number of 'text boxes' highlighting some examples of Danish-funded initiatives in partner countries and support for global public goods. This goes to show the commitment and breadth of Danish foreign policy and development policy engagement.

BOX 2: CIVIC SPACE (HCE)

In § 06.32.08.70 of the Danish Finance Act 2020, DKK 39 million was set aside for 'civic space' supporting a strengthened effort for civil society's room for maneuvering in developing countries, including in Africa. Among other things, the facility may give grants to organisations that provide emergency assistance to human rights defenders and civil society actors at risk. The effort will also involve support for international advocacy and capacity building of civil society in the south through cooperation with organisations such as the global civil society platform CIVICUS and the International Center for Not-for-Profit Law (ICNL), which works with legal framework conditions for civil society. Grants are also provided for initiatives that address the digital aspects of civil society's room for maneuver, as restrictions on freedom of expression, association and assembly increasingly take place by blocking access to the Internet or otherwise influencing and manipulating modern technologies. From 2022, a renewed contribution to the organisation Front Line Defenders is planned, which assists, i.e. female human rights defenders at acute risk.⁷ Grants: Claim Your Space: DKK 9,929,600 in 2021-2022 Denmark supports human rights defenders in danger through a mechanism at Globalt Fokus. Front Line Defenders: DKK 7.15 million in 2018-2021 for work with female human rights activists, including emergency assistance, resilience, etc. Digital Defenders Partnership: DKK 11.25 million in 2020-2022 for quick help to CSOs that come under digital pressure and to enhance digital resilience. Access Now: DKK 11.25 million in 2020-2022 to support actors under digital pressure, advocacy activities, i.e., in relation to digital legislation. WITNESS: DKK 4.4 million in 2020-2022 for the Africa programme with a focus on documentation of human rights abuses through video recordings in the training of human rights defenders in the use of video/including mobile phones in connection with demonstrations and other activities.

7 See <https://fm.dk/media/17673/fl20a06.pdf> p. 83.

7. Turning some of the issues identified and questions posed in this study into concrete action will require further identification of synergies between the different instruments (diplomacy, trade, development assistance, concessional financing, etc.) at the disposal of the MFA. When it comes to development policy engagements,
- the structural issues ('level playing field' broadly speaking) mentioned in this report are probably most effectively addressed in broader country programmes and regional programmes, and international advocacy and standard-setting, while
 - other issues, such as is already happening with civic space, including citizens' rights and digital self-defence, can be addressed, designed and implemented at many levels and with many partners, including CSOs.

Structure, agency and paradigms

8. This study is conceptually based on a broad distinction between structure and agency⁸ as pointers for analyses and discussion. 'Structure' deals with the systemic drivers and the (regulatory and other) response. 'Agency' deals with capability of citizens and the empowerment of citizens and civil society. In the 'field of force' between structure and agency emphasis is put on state and corporate capture, on pros and cons of regulating and on innovation.

For the purposes of this study, it is assumed that certain powerful structures, such as basic market forces, cannot be decisively influenced by development policy and funding, but grosso modo, have to be taken as an operational framework condition to be modified and moderated by adequate policies and measures.

However, this basic operational assumption should be modified by an assessment whether a digital development strategy sets out to a) strengthen an existing structure; b) work on shifting the paradigms, the directionality of existing structures; or c) work on shaping new structures. The differentiation between engaging in existing structures and attempting to influence the shape of new ones is especially important in the fast-moving area of digital technology where time is of the essence and proactive interventions may be more cost-effective.⁹

8 This distinction is inspired by the sociological concept of structure and agency which focuses on social structure of societies (social and physical context in which people live) and the capability of humans to act independently and/or individually or collectively and make meaningful choices https://en.wikipedia.org/wiki/Structure_and_agency and <https://www.britannica.com/topic/agency-political-theory>.

9 See for inspiration Charles Leadbeater and Jennie Winhall Building Better Systems – A Green Paper on System Innovation (2020).

Digital sovereignty

9. The concept of 'digital sovereignty' denotes on an aggregated level, e.g., at the level of states, whether a state has real agency (in essence 'digital self-determination') in the digital realm in the face of structural corporate market power and knowledge accumulation. Only very few states have the capacity to exercise real digital sovereignty and the EU and its member states are not among them as things stand.¹⁰ From a practical point of view, aspects of digital sovereignty may be more important than more traditional aspects of (national) sovereignty.¹¹

10 See para. 4 of the EU Presidency conclusions on the EU Charter of Fundamental Rights, AI and digital change <https://www.consilium.europa.eu/media/46496/st11481-en20.pdf>.

11 See, e.g., Zwölf Thesen zur deutschen Softwareindustrie (2021), "These IV: Die digitale Souveränität ist für Deutschland und Europa ein (geo-)politisches Problem, das mit der Verbreitung von globalen (US-amerikanischen, chinesischen, etc.) Plattformen immer größer wird. Bereits jetzt durchleuchten außereuropäische Konzerne europäische Bürger und, wie in den letzten Jahren bekannt wurde, nutzen fremde Staaten diese Macht aus, um Demokratien in nie zuvor dagewesener Weise zu destabilisieren. Das bedroht den Frieden und die Einheit auch in

1. A DIGITAL WORLD

This chapter presents some of the structural factors and major developments driving digital social change. Access to digital services may have become a basic need. The ideal of an open and inclusive digital realm, as a global common and a possible global public good, is confronted with market forces and a manifest absence of comprehensive regulation.

Tech is not value-free

10. Despite the fact that many of the 'tools' will be new, old issues still play a prominent role. Tech, tech design, tech choices and tech decisions are not value-free. Moreover, they have a direct and not seldom systemic and disrupting impact on existing power structures, social, economic and cultural conditions.¹² Thus, what may appear as technical discussions and decisions are in essence often intensely political as well.

This becomes an existential issue when it produces disruption of public discourse and democratic political processes developed and honed over centuries.¹³ It may even apply to the core mechanics of formal democratic decision-making. By way of an example, it is by no means certain that digitisation of elections is a step forward

12 See, e.g., Raul L. Katz Social and Economic Impact of Digital Transformation on the Economy https://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2017/Soc_Eco_impact_Digital_transformation_finalGSR.pdf.

13 See the preamble to the Vienna Manifesto on Digital Humanism (2019) stating that "Digital technologies are disrupting societies and questioning our understanding of what it means to be human. The stakes are high and the challenge of building a just and democratic society with humans at the center of technological progress needs to be addressed with determination as well as scientific ingenuity. Technological innovation demands social innovation, and social innovation requires broad societal engagement", <https://dighum.ec.tuwien.ac.at/dighum-manifesto/>. See also Moshe Vardi Technology Is Driving the Future, But Who Is Steering? From the Vienna Circle to Digital Humanism, the 2021 Vienna Gödel Lecture, <https://informatics.tuwien.ac.at/news/2040> and <https://www.tuwien.at/goedellecure-live>.

when it comes to the key issue of trust in the democratic process.¹⁴ The fact that digital technology allows for instant referenda on issues normally debated in parliament does not necessarily mean that it should be used. There is a reason why most democracies are not direct democracies, but representative democracies; one key element being that the quality of many important and difficult political decisions is not necessarily improved by great speed. Consensus building takes time, compromises take time. Historically, a key role of democratic political systems has been to mitigate and transform extreme and/or populist views and channel them into the mainstream – for the common good – and to weigh the interests of the majority up against protection of minorities. It takes time, discussion and accommodation. The sheer speed of digital democratic decision-making processes afforded by digital technologies may in itself increase the risk of polarisation, manipulation and abuse of minorities.

The main drivers of the tech industry are primarily profit and related efficiency gains. Governments are primarily driven by efficiency gains relative to political goals pursued. The drivers of development assistance are complex – ranging from economic development, foreign policy objectives, climate change, human rights to inclusive societies and responsive democracies. The origin of tech thinking was primarily concentrated in the North-Western Hemisphere and initially solutions were often devised in a ‘Western’ context. Thus, attention will have to be focused on how to stimulate home-grown tech solutions that are appropriate to the local contexts, inclusive and sustainable in local economies. Software ecosystems are already present in Lagos, Nairobi, Johannesburg and elsewhere, so the ground is fertile.

14 § 31, section 1, of the Danish Constitution states that “The members of the Folketing shall be elected by general, direct and secret ballot”. Draft Bill L 132 (Parliamentary Session 2012-13) proposed the introduction of electronic voting systems, but was never brought to the vote, <https://www.ft.dk/samling/20121/lovforslag/L132/bilag.htm>. It will be very difficult, if not impossible, to guarantee secrecy in a digital voting system as required by the Constitution. It can be argued that anonymity in digital systems cannot be fully guaranteed, including by establishing data patterns that can be generated by inference. Moreover, crucially, digitization may eo ipso imperil public trust in the democratic process, a key public good. The recent scandal concerning the partly digitized process for registration of new Danish political parties eligible to participate in parliamentary elections highlights the severe dangers related to digitization of core elements of the most important political processes, see <https://valg.sim.dk/media/37919/afgoerelse-af-30-marts-2020.pdf>.

We are all in it together

11. One fascinating aspect of techvelopment is that the issues are relevant to all of us, as citizens of North and South. Today globalization is primarily being driven by digital technology.¹⁵ When it comes to the opportunities and challenges, we are truly living in one world, although digital divides no doubt are more prevalent in the Global South.

The structural drivers are at work globally while citizen agency is more fragmented and scattered. The structural drivers are to a large extent defining not only content (e.g. software) but also the framework (e.g. the 'social contract' broadly speaking), in part due to the failure of the political system to act timely.¹⁶ There seems to be a systemic asymmetry between the challenges and the response.¹⁷

Thus, overall, this study takes as its point of departure a more global and international perspective than a specific developing countries' perspective. At the same time, it creates the frame of mind for more

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- 15 Susan Lund, James Manyika and Jacques Bughin Globalization Is Becoming More About Data and Less About Stuff <https://hbr.org/2016/03/globalization-is-becoming-more-about-data-and-less-about-stuff> and McKinsey Global Institute Digital Globalization: the New Era of Global Flows (2016) <https://www.mckinsey.com/-/media/McKinsey/Business%20Functions/McKinsey%20Digital/Our%20Insights/Digital%20globalization%20The%20new%20era%20of%20global%20flows/MGI-Digital-globalization-Executive-summary.pdf>.
- 16 The Danish government recently published a White Paper Towards a Better Society with Tech Giants (2021) in which 9 principles are put forward: 1) the business models of the tech giants are subject to democratic frameworks; 2) children and young people can have a safe childhood in good balance between the digital world and the physical world; 3) the tech giants support the democratic conversation – rather than undermine it through digital echo chambers and polarization; 4) the tech giants are taking greater responsibility for the content on their platforms; 5) free, well-functioning media help to support democratic dialogue and where everyone receives a fair payment for their creative work; 6) workers' rights are protected – also on digital platforms; 7) the tech giants must contribute to the financing of the welfare state in line with all other companies; 8) competition is fair and transparent and where consumers can shop safely online; 9) democracy sets the framework for the tech giants – not the other way around, see <https://www.regeringen.dk/nyheder/2021/regeringen-vil-diskutere-tech-giganternes-rolle-med-ny-hvidbog/>.
- 17 'Collective intelligence' properly used may offer a constructive way forward of combining humans and machines, see <https://www.morningfuture.com/en/article/2018/09/05/geoff-mulgan-ceo-nesta-ai-collective-intelligence-social-innovation/407/>. See also UNDP Accelerator Labs and Nesta Collective Intelligence for Sustainable Development Getting Smarter Together (2021) https://smartertogether.earth/sites/default/files/2021-05/UNDP_CI_Report_1_052021.pdf. 'Civic hacking' and the Sunflower Movement in Taiwan are moving towards using the internet in a more democratic way, see <https://www.wired.co.uk/article/taiwan-democracy-social-media>; <https://vtaiwan.tw/> and <https://polis.pdis.nat.gov.tw/report/r77xrzjr7nnf6872eidp>.

equal partnerships with the Global South facing and grappling with the same issues as the North.

Digital citizen

12. If data,¹⁸ as a key 'natural' commodity, is the new 'oil' of the international economic system,¹⁹ then access to the internet (here primarily

18 'Data' has to be understood in a very broad sense. In essence and in the context of this study, it is any kind of information which can be processed with digital means, whether originated as digital data or transformed to digital data. One definition specifies that "digital data is data that represents other forms of data using specific machine language systems that can be interpreted by various technologies. The most fundamental of these systems is a binary system", <https://www.techopedia.com/definition/24872/digital-data>; see also <https://www.computertechreviews.com/definition/digital-data/>. Digital data can be sourced from audio, video, text, biology (DNA/genome and many other forms of biometric data), chemistry, physics, etc. Data produced by mobile phones, including mobility data (location and many other kinds of information allowing for user profiling and much more), has become a very important source of data. Digitisation of data allows for processing at speed and software (including AI/algorithms) allows for processing of data in growing complexity. The sensitivity of data collected and the sensitivity of aggregated data are growing exponentially. Anonymous data may no longer exist, see https://en.wikipedia.org/wiki/Data_re-identification. One of the most important corporate data collectors and processors is Google. Google's mission is to, euphemistically, "organise the world's information and make it universally accessible and useful" <https://www.google.com/search/howsearchworks/mission/>. Google most likely bought and developed the Android operating system to maximize data collection; and the Google apps installed on other operating systems likewise facilitate tracking and data collection, see, e.g., <https://thehackernews.com/2021/03/google-to-reveals-what-personal-data.html>. There are many other important private or semi-private data collectors, and processors, including, to name a few, Facebook, Microsoft, Apple, Palantir, and Huawei, Alibaba, Tencent just to name a few. States are massive collectors and processors of data, both openly and clandestinely, both from individuals and in bulk. Both private and public collectors and processors are increasingly capable of real-time surveillance of whole populations via 'fusion' technology, see, e.g., <https://www.wired.com/story/there-are-spying-eyes-everywhere-and-now-they-share-a-brain/>. Private and public actors are often exchanging data, including buying and selling data without (fully) informing those immediately or mediately concerned. On data protection related to development assistance see USAID Using Data Responsibly <https://www.usaid.gov/sites/default/files/documents/15396/USAID-UsingDataResponsibly.pdf>.

19 See <https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data>. However, data is more than oil, while oil is a commodity to be bought and sold, data is an asset that grows in value through use and aggregation, see <https://medium.com/@ODSC/data-valuation-what-is-your-data-worth-and-how-do-you-value-it-b0a15c64e516>

understood as ‘the world-wide-web’, www.) and digital services²⁰ soon becomes as fundamental a resource as access to water and electricity.

This realization is truly mind-boggling and will have all sorts of implications and consequences.²¹

Being a ‘digital citizen’ is just as important as other fundamental aspects of citizenry. In practice, ‘free’ access to the internet and digital services often does not exist, data has become the ‘currency’ with which users ‘pay’ in more or less opaque contexts.²²

The ‘promise’ of techvelopment

13. ‘Techvelopment’ holds enormous promises for increased exchange of information and ideas, transparency, accountability, inclusion/inclusiveness, gender equality, enhanced citizen agency (civic dialogue, political participation, civic self-organisation, as market participant),

20 In USAID’s Digital Strategy (2020-2024), see https://www.usaid.gov/sites/default/files/documents/15396/USAID_Digital_Strategy.pdf, provides some useful definitions of digital technology and digital ecosystems which are adopted for the purposes of this study. “Digital technology” is defined broadly as “not only to describe a type of technology but also to refer to the platforms, processes, and range of technologies that underpin modern information and communications technologies (ICT), including the Internet and mobile-phone platforms, as well as advanced data infrastructure and analytic approaches”, and “digital ecosystem” is defined as comprising “the stakeholders, systems, and enabling environments that together empower people and communities to use digital technology to gain access to services, engage with each other, or pursue economic opportunities”. The World Bank applies a broader lens and has conceptualised the scope of interest as “Disruptive and Transformative Technologies” because the technologies are “often based on digital technologies and products,” but that these “go far beyond connectivity and the potential of the internet”, see Box 1.3 in the World Bank Independent Evaluation Group’s (IEG) report on Mobilizing Technology for Development (2021), assessing World Bank Group preparedness regarding disruptive and transformative technologies (DTT) <https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/Mobilizing-TechnologyforDevelopment.pdf>. The IEG found (p. ix) that the “Bank Group’s definition of DTT, however, lacks operational clarity and does not sufficiently distinguish among digital, disruptive, and transformative. To date, much of the Bank Group’s focus has been on digital technologies”. See also WB/IMF Development Committee Mainstreaming the Approach to Disruptive and Transformative Technologies at the World Bank Group, doc. DC2019-0002, March 20, 2019 <https://www.devcommittee.org/sites/www.devcommittee.org/files/download/Documents/2019-04/DC2019-0002-Mainstreaming%20disruptive%20%204-13.pdf>.

21 See PEW report on The ‘New Normal’ in 2025 (2021) <https://www.pewresearch.org/internet/2021/02/18/experts-say-the-new-normal-in-2025-will-be-far-more-tech-driven-presenting-more-big-challenges/>

22 Data value cannot simply be seen as the price others are willing to pay. This distinction, from data value to data valuation, is critically important. Data value is a property, see <https://medium.com/@ODSC/data-valuation-what-is-your-data-worth-and-how-do-you-value-it-b0a15c64e516>.

lower transaction costs,²³ lower access thresholds (markets, services, etc.), more efficient and potentially more equal access to opportunities, financing,²⁴ education, health services,²⁵ more responsive and agile public administrations etc.²⁶ Applied in the right way, the potential for positive 'disruption' is potentially game-changing.

Development assistance itself is being disrupted. Techvelopment will probably affect the understanding of key concepts, such as impact, efficiency and effectiveness in ways that we have not yet fully understood and realized.²⁷

14. The global tech-economy has created new power structures, new de-facto monopolies or oligopolies,²⁸ new capital accumulation dynamics which have deep effects worldwide.²⁹ It is estimated that "the 10 largest tech firms, which have become gatekeepers in commerce, finance, entertainment and communications, now have a combined market capitalization of more than USD 10 trillion. In gross domestic product terms, that would rank them as the world's

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- 23 Decentralized finance (DeFi) holds great promises for lowering transaction costs, see Campbell R. Harvey, Ashwin Ramachandran, Joey Santoro DeFi and the Future of Finance https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3711777. It is startling, yet understandable that the uptake of cryptocurrencies among consumers from countries in Africa, Asia, and South America is bigger than in the US and Europe, see <https://www.statista.com/statistics/1202468/global-cryptocurrency-ownership/>.
- 24 See, e.g., UN Secretary General's Task Force on Digital Financing of the Sustainable Development Goals <https://digitalfinancingtaskforce.org/about-the-task-force/>
- 25 See, e.g., the International Covenant on Economic, Social and Cultural Rights (ICESCR, 1966) articles 12 and 13 <https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx>.
- 26 See, e.g., art. 25 of the International Covenant on Civil and Political Rights <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CCPR.aspx> and World Development Report (WDR) 2016 Digital Dividends <https://www.worldbank.org/en/publication/wdr2016>; WDR 2019 The Changing Nature of Work <https://www.worldbank.org/en/publication/wdr2019>, and WDR 2021 Data for Better Lives <https://www.worldbank.org/en/publication/wdr2021>. A national initiative to speed up digitisation is the so-called India Stack <https://www.indiastack.org/> and <https://medium.com/wharton-fintech/the-bedrock-of-a-digital-india-3e96240b3718>.
- 27 See <https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm>. OECD/DAC does not seem to have a marker that captures digitisation <https://www.oecd.org/development/financing-sustainable-development/development-finance-standards/dacandcrscodelists.htm>.
- 28 See US House of Representatives Investigation of Competition in Digital Markets (2020) https://judiciary.house.gov/uploadedfiles/competition_in_digital_markets.pdf. As an example, the EU Commission has opened (2021) a formal antitrust investigation to assess whether Google has violated EU competition rules https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3143 and <https://www.bloomberg.com/opinion/articles/2021-06-22/eu-google-probe-into-online-ads-hits-tech-giant-where-it-hurts-most>.
- 29 See, e.g., Abhijit V. Banerjee and Esther Duflo Good Economics for Hard Times (2019), pp. 241ff.

third-largest economy" (April 2021).³⁰ Covid-19 has accelerated this development.³¹ Part of the explanation is that scaling up of digital services, not least social digital platforms, tend to wipe/crowd out competition through so-called network effects,³² systematic acquisition of potential competitors and winner-takes-all dynamics. National and international competition laws have proven to be woefully inadequate.³³ International and national legislatures³⁴ have generally not caught up with the social and regulatory implications of these developments.³⁵ We are striving for the balance of not massively hindering innovation while putting in place regulatory frameworks that reflect what we as societies agree on in terms of ethical tech.

A cross-cutting issue

15. If digital access has become or is becoming as important as access to water and electricity, it implies that we need to accommodate our thinking to this new reality. It will affect all aspects of donor development policies, staff-composition, analyses, programming and monitoring. Techvelopment has become a cross-cutting issue requiring structural analyses and systemic application.
16. As always, political economy analyses of the underlying economic systems and structural drivers creating the real-world framework

30 See <https://www.nytimes.com/2021/04/20/technology/global-tipping-point-tech.html?action=click&module=Spotlight&pgtype=Homepage>. See also <https://www.bloomberg.com/graphics/2021-biggest-global-companies-growth-trends/>.

31 According to Bloomberg research, the top global 50 companies by value added USD 4.5 trillion of stock market capitalization in 2020, taking their combined worth to about 28 per cent of global gross domestic product (technology companies dominates the top of the list with 21 out of 50). Three decades ago the equivalent figure was less than 5 per cent. The biggest companies generally earn more and pay less in taxes than they did in decades past. Their median effective tax rate of 35 per cent in 1990 had dwindled to only 17 per cent in 2020 while profit margins soared from 7 per cent to 18 per cent over the same period while devoting a smaller portion of their earnings to job-creating investments. The supply-side argument that lower taxes spur growth by fueling hiring and investment, which was never particularly well supported by data, now looks even more tenuous. And the idea that central banks can achieve the same effect with lower interest rates is questionable when the mega-corporations have amassed so much cash they do not need to borrow. In addition, government rescues worked best for the biggest companies, which benefited from central bank backstops that kept borrowing costs low and stock prices high, see <https://www.bloomberg.com/graphics/2021-biggest-global-companies-growth-trends/>.

32 See <https://online.hbs.edu/blog/post/what-are-network-effects>

33 See, e.g., <https://thehill.com/opinion/technology/509933-big-tech-and-the-antitrust-debate-do-network-effects-outweigh-competition>.

34 'Legislature' is used broadly in this study to describe rule-creating bodies duly empowered to adopt and enunciate rules governing private and public action and omission (national parliaments, international bodies such as the UN, EU, etc.).

35 <https://www.csis.org/analysis/advancing-data-governance-g7>.

conditions for development will have to underpin the design of international advocacy as well as design of programmes at implementation level. Tech should not necessarily be the entry point.³⁶

It will also affect the analyses of the potential and options for and restrictions on citizen agency as part of the development process. Increased empowerment of citizens is a potential outcome of digital development but cannot be fully understood and assessed without a clear-eyed understanding of the structural drivers and how they affect real-world power structures. The dark side is that techvelopment can also lead to disempowerment of citizens³⁷ and suppression of democratic governance. Structural drivers may compromise real and equitable access to technology and may be intersecting with structural drivers that compromise access to power in general, such as race, and may add to the potential adverse effects of tech on citizen agency.

Depending on the context, 'empowerment' of citizens may be an equivocal term. A citizen could be empowered to vote without hassle from home, while still having ever-expanding surveillance systems capture and analyse data he/she produces in his/her private and professional lives and through his/her interactions with the health care system for example. This data capture could be used in the future to deter this citizen from participating in civic engagement.

Digital development, especially the daily usage of digital media has effects on issues such as mental health, personal identity creation as well as inter-personal relationships, including inter-group dynamics. Arguably, these effects are and will be different depending on context, and so far the evidence base is quite thin on these effects. It may be anticipated that this will play an important role for issues such as social cohesion, racism, unilateralism and others.

It is clear that we have to err on the side of caution going forward – anti-discrimination and do-no-harm principles will be increasingly important. We need to actively work to dismantle the structures of

36 See, e.g., Mariana Mazzucato *The Value of Everything: Making and Taking in the Global Economy* (2018) criticizing the economic theory of value creation.

37 The UN Special Rapporteur on extreme poverty and human rights criticised the Dutch "System Risk Indication" (SyRI), which was used to identify specific individuals as more likely to commit benefit fraud. Central and local authorities were authorized to share and analyze data that was previously kept in separate "silos". SyRI employed a hidden algorithmic risk model and was exclusively targeted at neighborhoods with mostly low-income and minority residents. Through SyRI, entire poor neighborhoods and their inhabitants were targeted and spied on digitally, without any concrete suspicion of individual wrongdoing, see <https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25522>.

racism and oppression that both affect access to technology and determine its impact on increasing discrimination. This means, e.g., not just ensuring that the design of algorithms driving data tech follow do-no-harm-principles, but also making sure they promote equality and anti-racism.

The Internet – a global commons?

17. The importance of the Internet and digital interaction have grown immensely, and the Internet is fast acquiring the de-facto status of a global commons and a global public good. Many of the risks, challenges and to some extent opportunities are the same whether one is a citizen of the developing world or the developed world.³⁸ In this sense, techvelopment is closely linked to other global, trans-boundary issues such as climate change and pollution. This also means that by helping others, we are helping ourselves as citizens and communities of a globalized and inter-connected world.

New tools for development assistance and humanitarian aid

18. Tech creates fascinating new possibilities when scoping, planning and to some extent implementing development programmes. Geospatial analyses and imagining, also highly relevant in humanitarian aid operations and when investigating violations of human rights and humanitarian law, allow for cheap and deep analyses of patterns and trends that might not otherwise easily be detected.³⁹ 'Big data' provides new insights into needs and other patterns relevant to design of interventions⁴⁰ and even for configuration of staff skills. It may even change the conceptual framework from 'aid'

38 The EU Digital4Development (D4D) Hub builds on five operating principles: Local ownership & win-win partnerships: Facilitate partnerships that provide added value and base cooperation activities on local demand; Multi-Stakeholder involvement and expertise: Promote a sustainable digital transformation requires a whole-of society approach (governments and administrations, private sector, civil society, academia); Sustainable and green digital transformation: Promote the twin green and digital transition; Human-centric approach: Put people at the heart of the digital transformation to ensure the full protection of human rights in the digital age; Data security and protection: Promote a comprehensive and consistent response to safeguard the global threat of cyber breaches, misuse of data and breaches of data privacy, see <https://futurium.ec.europa.eu/en/Digital4Development/discussion/flagship-digital4development-d4d-hub>.

39 See the UN Integrated Geospatial Information Framework <https://ggim.un.org/>, and the growing body of World Bank resources, see, e.g., <https://www.worldbank.org/en/topic/land/brief/geospatial-technology-and-information-for-development> and <https://datacatalog.worldbank.org/data-type/geospatial>. GIS Lounge is a collaborative information site covering research and case studies about the applications of geographic information systems, geospatial technologies, and cartography <https://www.gislounge.com/>, including Open Street Map <https://www.gislounge.com/openstreetmap-one-of-the-worlds-largest-collaborative-geospatial-projects/>.

40 See, e.g., <https://www.centre4innovation.org/stories/using-data-to-analyse-wfps-digital-cash-programme-in-lebanon/>.

to 'services' and from 'victims' to 'users'. Crowdsourcing may perhaps allow individuals to play a more direct role in helping affected populations.⁴¹ Digitally assisted solutions may also allow individuals to play an active role in providing information to responders and user feed-back to public and private service providers.

19. Tech holds great promises for humanitarian aid operations,⁴² and for cash-based livelihood support in mid-income countries under stress.⁴³ In fragile states with a functioning finance infrastructure, e-cards have become a potential game changer both in terms of efficiency, cost effectiveness/lower transactions costs, less distortion of local markets, corruption prevention (blockchain, etc.) and reach. Data protection in humanitarian operations has become a crucial issue, not least when it concerns refugees and asylum seekers.⁴⁴

Digital access – a basic human need

20. Access to digital services may soon be a basic human need. Thus, it can be argued that it should also be recognised as a human right.⁴⁵ However, mere access may not be sufficient, the 'quality' of the access needs to be considered (e.g., does access provide more reliable actionable knowledge?). The innocent assumption that tech is a neutral factor when it comes to risks and opportunities will

41 See, e.g., <https://www.weforum.org/agenda/2018/01/3-ways-big-data-is-changing-the-humanitarian-sector/>; <https://hhi.harvard.edu/technology-and-innovation>.

42 See, e.g., <https://www.mercycorps.org/blog/tech-humanitarian-aid>, <https://www.ictworks.org/mobile-technology-trends-humanitarian-relief/> and GSMA's Mobile for Humanitarian Innovation Annual Report (February 2021) <https://www.ictworks.org/wp-content/uploads/2021/03/M4HAnnualReport2020.pdf> (part of the GSMA Mobile for Humanitarian Innovation (M4H) programme funded by UK Aid). The report identifies five trends: 1) The pandemic has accelerated the need for inclusive digital humanitarian assistance; 2) There is a greater focus on digital ethics, privacy and data protection; 3) Accountability to affected populations and inclusion are being prioritised, raising awareness of the digital divide; 4) A climate emergency is underway; and 5) Digital cash assistance is proving to be a scalable solution.

43 Cash Learning Partnership (CALP) The State of the World's Cash 2020 <https://reliefweb.int/sites/reliefweb.int/files/resources/SOWC2020-Executive-Summary.pdf>.

44 See the ICRC Data Protection Handbook dealing, inter alia, with blockchain, digital identity, connectivity as aid, social media, artificial intelligence <https://www.icrc.org/en/data-protection-humanitarian-action-handbook> and For a critique of digital governance in the humanitarian aid system. The EU General Data Protection Regulation (GDPR) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R0679-20160504&qid=1532348683434> may in practice have extraterritorial effects for humanitarian operations financed by the EU. see <https://medium.com/berkman-klein-center/decolonial-humanitarian-digital-governance-48b35b05b110>.

45 See Resolution 32/13 adopted by the UN Human Rights Council on 1 July 2016 The promotion, protection and enjoyment of human rights on the Internet <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G16/156/90/PDF/G1615690.pdf?OpenElement>

have to be reassessed. It seems that the odds are stacked in specific directions.

21. In the early, heady days of the Internet there was great hope and optimism that digital technology would mean increased global transparency and accountability vis-à-vis state and corporate exercise of power, improved citizen participation in democratic governance and a modernized checks-and-balances system.

Privacy – a precondition for human agency and a gold mine for data extraction

22. Those promises are still there, but it seems that the overall balance between citizens, on the one hand, and narrow state and corporate interests (power and profit), on the other, is tilting towards the latter.⁴⁶ Corporations and states/public authorities know more and more about citizens and citizens are often – and paradoxically increasingly so it seems – curtailed when it comes to access to important information. Thus, citizens live in a panopticon where they do not even know to which extent they are being surveyed, where their data is located⁴⁷ and the extent to which their data is processed, used and sold. The potential for state and corporate interference with peoples' lives, the 'privacy pressure', has grown exponentially, both in scope and in depth.
23. The penetration and undermining of privacy and anonymity at home and in public spaces have and will have far-reaching consequences. Privacy, and to some extent anonymity, as a precondition for being 'human' are not yet fully understood and appreciated despite centu-

46 The 'father' of the World Wide Web, Tim Berners-Lee established Contract for the Web. (www.contractfortheweb.org) to keep the internet as a protected global common good. See also Human Rights Watch <https://www.hrw.org/topic/technology-and-rights> where the duality is emphasized: "The internet and other technologies are critical tools to defend rights and hold powerful actors to account. But technology can also be used in ways that curtail rights and deepen inequality".

47 Cloud computing raises a number of jurisdictional and other regulatory issues, see, e.g., Damon C. Andrews, & John M. Newman, Personal Jurisdiction and Choice of Law in the Cloud, 73 Md. L. Rev. 313 (2013) <https://digitalcommons.law.umaryland.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=3605&context=mlr>. On the EU cloud strategy, see https://ec.europa.eu/info/sites/default/files/ec_cloud_strategy.pdf. The Danish State Auditor in 2019 severely criticized public authorities' lax data protection and enforcement with regard to outsourced management of highly sensitive data. It is the overall assessment that the public authorities have not adequately ensured that outsourced sensitive and confidential personal data about the citizens are secure, and therefore are at risk of being compromised, see <https://www.eurosai.org/en/databases/audits/Report-on-outsourcing-of-personal-data/> and <https://www.ft.dk/-/media/sites/statsrevisorerne/dokumenter/2019/beretning-15-2019-om-outsourcete-persondata.ashx>.

ries of political fights for increased protection of privacy.⁴⁸ Privacy is not only a question of protection of private life/sphere, but also closely related to the ability to exercise other human rights, including political rights and key procedural rights, such as the right against self-incrimination and the presumption of innocence. Break-down of structural safeguards, such as a clear distinction between foreign and domestic intelligence, have widespread detrimental consequences for century-old legal guarantees against eavesdropping and illegal gathering of evidence.

In the digital space, national and international payment systems do not provide sufficient safeguards against privacy violations and monetizing of private payment and movement data. When the 'cash-free' society is fully implemented the risks will have grown significantly worse.⁴⁹ Introduction of 'internet-of-things', including so-called 'smart' electricity meters, will enable massive monitoring of peoples' domestic lives. Combine this with algorithmic decision-making, bulk surveillance of internet activity and mobile phones, closed-circuit video surveillance (CCTV) in private and now increasingly public places/spaces,⁵⁰ facial recognition, 'smart' roads, computerised autonomous driving, automatic number plate readers, electronic tickets, dynamic pricing, etc., and it becomes clear that the combined 'privacy pressure' is growing exponentially. This privacy pressure and the 'panopticon effect' are stealthy in the sense that people often only (choose to) experience the convenience-side of the equation and do not register the constant encroachment on their personal space, partly because it is done in the digital shadows and can be presented as 'services'.

48 See for different definitions of privacy and why it matters, e.g., <https://www.privacyinternational.org/explainer/56/what-privacy>; and <https://plato.stanford.edu/entries/privacy/>. As an example Google's scanning of Gmail raises serious privacy concerns, especially with regard to incoming email from non-Gmail users. The often heard somewhat gratuitous statement regarding surveillance: 'if you have got nothing to hide, you have nothing to fear', is, of course absurd, not only because it is turning the presumption of innocence principle on its head, but also: who would like to have their medical records freely available for public inspection?

49 It is encouraging that the European Central Bank (ECB) is contemplating privacy protection when deciding to move ahead with a digital euro, see Fabio Panetta A digital euro to meet the expectations of Europeans <https://www.bis.org/review/r210414h.pdf>; the ECB Report on the public consultation on a digital euro (2021) https://www.ecb.europa.eu/paym/digital_euro/html/pubcon.en.html where one of the conclusions is that "Privacy is considered the most important feature of a digital euro by both citizens and professionals. A digital euro should also be secure, cheap and easy to use throughout the euro area". See also https://www.ecb.europa.eu/pub/pdf/annex/ecb_sp210414_1_annex-43eee6196e.en.pdf?73a2079ad4db449714b0ab7966429a86

50 See, e.g., <https://www.comparitech.com/vpn-privacy/the-worlds-most-surveilled-cities/>

24. One of the interesting and worrying aspects of the present 'digital rights crisis' is that there is a confluence, if not deliberate convergence, between corporate and state interests in gathering, exchanging and increasingly monetising⁵¹ data about individuals and groups of individuals (be it as consumers, be it as citizens) in most intrusive ways.⁵²

Capital accumulation and under-taxation

25. Large internet platforms providing 'free' services (think Google, Facebook, Twitter and similar, partly or fully government-controlled platforms in China and Russia and elsewhere) have been allowed to develop a business model which facilitates enormous accumulation of capital and highly sensitive data (which can be monetised).⁵³ The lack of national and global regulatory frameworks has contributed to inadequate taxation/under-taxation,⁵⁴ profit shifting, dividend

51 See, e.g., the debate about UK NHS patient data <https://www.nhs.uk/your-nhs-data-matters/>; <https://digital.nhs.uk/services/national-data-opt-out/understanding-the-national-data-opt-out/confidential-patient-information> and <https://www.theguardian.com/commentisfree/2021/jun/03/gp-nhs-digital-data-patients-records-england>.

52 See, e.g., <https://www.pewresearch.org/internet/2020/02/21/concerns-about-democracy-in-the-digital-age/> and <https://www.pewresearch.org/internet/2020/11/13/the-future-of-democracy-and-civic-innovation/>.

53 Shoshana Zuboff *The Age of Surveillance Capitalism. The Fight for the Future at the New Frontier of Power* (2019) has pointed out that mining, aggregation and use of personal data is the new 'oil', a 'natural resource' of immense value which creates new capital accumulation dynamics. Thomas Piketty *Capital in the Twenty-First Century* (2017) and *Capital and Ideology* (2020) has described the social and political implications of enormous concentrations of capital over the last decades.

54 The Fair Tax Foundation found that over the period 2011 to 2020 the gap between the expected headline rates of tax and the cash taxes actually paid by the Silicon Six (Facebook, Apple, Amazon, Netflix, Google and Microsoft) was USD 149.4bn, the gap between the current tax provisions and the cash taxes actually paid by the Silicon Six was USD 96.3bn. "The bulk of the shortfall almost certainly arose outside the United States, given that the foreign current tax charge was just 9.3% of identified international profits over 2011-20. This would be expected to have a significant impact on the cash taxes paid contribution given 58.9% of total profits and 50.6% of total revenues are identified as being foreign over the decade", see <https://fairtaxmark.net/silicon-six-end-the-decade-with-100-billion-tax-shortfall/>. The lack of taxation may perhaps be said to constitute de facto state support to business models exploiting sensitive data of their citizens without adequate compensation and safeguards.

arbitrage and tax arbitrage,⁵⁵ 'fake' foreign direct investments⁵⁶ and spreading of 'fake news'⁵⁷ and manipulation,⁵⁸ which perversely stimulate further income generation for some of the digital platforms. This affects citizens all over the world, but even more so in states with weak governance systems and/or lack of democratic checks-and-balances. Perhaps a global political momentum is slowly gaining traction which might produce more balanced outcomes.

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- 55 For many years, the OECD has tried to negotiate and agree on how to regulate tax base erosion and tax avoidance, see <https://www.oecd.org/tax/beps/>. The initiative has come up against powerful resistance from vested interests and some states, including France, have tried to move forward on their own. The fact that the economic cooperation organisation of the Western economies cannot agree on this vital measure shows to what extent poor countries are exposed. On 5 June 2021, the G7 Finance Ministers and Central Bank Governors endorsed "the efforts underway through the G20/OECD Inclusive Framework to address the tax challenges arising from globalisation and the digitalisation of the economy and to adopt a global minimum tax", including "a global minimum tax of at least 15% on a country by country basis" to be further discussed at the July 2021 meeting of G20 Finance Ministers and Central Bank Governors, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/991640/FMCBGs_communique_-_5_June.pdf, para. 16. Also EU member states are actively engaged in facilitating tax arbitrage within the EU, a problem which is likely to persist until an EU fiscal union is established, see also <https://www.economist.com/finance-and-economics/2021/06/03/twilight-of-the-tax-haven>. The EU Commission has presented a digital levy roadmap in order to address digital businesses' "ability to operate in certain jurisdictions and earn revenues elsewhere. Digital businesses rely heavily on intangible assets. They are also able to generate large revenues by making particular use of and by monetising consumer and user data and user-created content. Much of this value created by users is not captured by the current tax systems. Furthermore, the place of value creation might not be aligned with the place of taxation. Taxes are thus often paid, if at all, in locations different from where the value is created", see https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12836-A-fair-&-competitive-digital-economy-digital-levy_en. An internationally agreed minimum corporate tax for multinational companies will have potentially significant effects, see with regard to the EU <https://www.taxobservatory.eu/wp-content/uploads/2021/06/EUTO2021-1.pdf>.
- 56 See Jannick Damgaard, Thomas Elkjaer, and Niels Johannesen What Is Real and What Is Not in the Global FDI Network? IMF Working Paper <https://www.imf.org/en/Publications/WP/Issues/2019/12/11/what-is-real-and-what-is-not-in-the-global-fdi-network>
- 57 See, e.g., <https://www.cits.ucsb.edu/fake-news/brief-history> and <https://www.vox.com/policy-and-politics/2020/12/22/22195488/fake-news-social-media-2020>
- 58 See the herostratically famous Facebook experiment Adam D. I. Kramer, Jamie E. Guillory, and Jeffrey T. Hancock Experimental evidence of massive-scale emotional contagion through social networks, <https://www.pnas.org/content/111/24/8788.abstract?tab=author-info> which raised a host of questions about ethics, manipulation and lack of a regulatory framework, see i.a. Editorial Expression of Concern: Experimental evidence of massive scale emotional contagion through social networks <https://www.pnas.org/content/111/29/10779.1>.

Digital fissures threatening the global commons

26. The Internet and digital services have become highly political issues affecting established power balances, economic structures and national security. The digital companies have been the big winners of globalisation due to very low transaction costs, scalability and tax arbitrage. The frictions created by this process are now intensifying.

The digital divide

27. There is a risk that the digital divide will grow between countries, between urban and rural communities, between rich and poor, between groups (gender, ethnicity, minorities etc.).⁵⁹

28. There are great expectations riding on the continued expansion of the digital economy in the Global South. In emerging markets, the digital economy is growing at 12-55 per cent per year, and this has far-reaching social, political and economic implications.⁶⁰ Across the world, it is an increasingly important source of growth and, frequently, jobs. However, the number of internet users continues to be unequally distributed across the world. In many countries in sub-Saharan Africa, less than 30 per cent of the population have used the internet within the past three months (2016),⁶¹ and so there remains a digital divide between the global North and global South, which needs bridging for digitisation to reach its full development potential.

BOX 3: SUB-SAHARAN AFRICA – DIGITAL INFRASTRUCTURE AND ECOSYSTEMS

At the end of 2019, 477 million people in Sub-Saharan Africa subscribed to mobile services, accounting for 45 per cent of the population. The mobile market in the region is projected to grow significantly over the coming years: half a billion mobile subscribers in 2021, 1 billion mobile connections in 2024, and 50 per cent subscriber penetration by 2025. GSMA estimates that mobile technologies and services generated 9 per cent of GDP in Sub-Saharan Africa in 2019 with an estimated USD 155 billion of economic value added. The mobile ecosystem also —

59 See International Telecommunications Union's (ITU) Measuring Digital Development – Facts and Figures 2019 <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/FactsFigures2019.pdf> and John Roeser COVID-19 exposed the digital divide. Here's how we can close it <https://www.weforum.org/agenda/2021/01/covid-digital-divide-learning-education/>

60 See https://reports.weforum.org/delivering-digital-infrastructure/introduction-the-digital-infrastructure-imperative/?doing_wp_cron=1620025401.0439109802246093750000.

61 See <https://ourworldindata.org/internet>. The global average in 2016 was 46 per cent.

supported almost 3.8 million jobs (directly and indirectly) and made a substantial contribution to the funding of the public sector, with USD 17 billion raised through taxation.⁶² IMF notes that the region's "dynamism and potential are striking" and that "Africa is rapidly becoming a global epicentre for mobile-money applications". Capitalizing on the digital revolution would enhance the region's resilience and efficiency, expand access to global markets, improve public service delivery, boost transparency and accountability, and foster the creation of new jobs.⁶³ Digital ecosystems are expanding across the African continent, and there are now more than 600 tech 'hubs'. Among the countries with the highest number of hubs are South Africa (Johannesburg) and Kenya (Nairobi) with respectively 78 and 50 individual tech hubs (2019). Nigeria (Lagos) is a top innovative city by number of hubs.⁶⁴ The definition of 'hubs' is broad with descriptions including 'accelerators', 'incubators', 'start-up support' and even co-working spaces, but their common purpose remain clear: to help tech entrepreneurs launching viable companies and expand the existing ecosystems. Certain tech hubs identify as social innovation centres that more specifically address issues of critical socio-economic relevance by bringing people from different sectors together in order to find innovative solutions. One Kenyan example is the IHub, which is a fast-growing incubators space for Kenyan start-ups, investors and technologies with more than 3,600 members.⁶⁵ Understanding the local context is key to success.⁶⁶ The emergence of Kenya as a prominent hub for Africa's tech —

62 See the mobile industry GSM Association's (GSMA) report The Mobile Economy Sub-Saharan Africa 2020 https://www.gsma.com/mobileeconomy/wp-content/uploads/2020/09/GSMA_MobileEconomy2020_SSA_Eng.pdf and <https://www.gsmaintelligence.com/>.

63 IMF Regional Economic Outlook for Sub-Saharan Africa (April 2021) which also highlights that in connectivity, some countries in the region are global leaders in their income group (Cabo Verde, Ghana, Rwanda, Seychelles) <https://www.imf.org/en/Publications/REO/SSA/Issues/2021/04/15/regional-economic-outlook-for-sub-saharan-africa-april-2021>, p. 15.

64 Situation in 2019, see <https://www.forbes.com/sites/tobyshapshak/2019/07/11/africas-booming-tech-hubs-are-backbone-of-tech-eco-system-having-grown-40-this-year/>. With regard to the situation in 2020, see Nicholas Norbrook, Marième Soumaré, Quentin Velluet, Mathier Galtier <https://www.theafricareport.com/23434/tech-hubs-across-africa-to-incubate-the-next-generation/>

65 See <https://thenextweb.com/news/why-nairobi-is-exploding-as-the-tech-hub-of-east-africa-interview-with-erik-hersman/amp>.

66 The US company Audiomack Inc. has become the 'African' Spotify by cultivating breakthrough African musicians and by allowing those without a premium subscription to download songs and listen offline while using minimal wireless data, see <https://www.bloomberg.com/news/articles/2021-05-08/how-spotify-s-competition-in-africa-won-the-hearts-of-listeners>.

innovations can be attributed to the expansion of an ecosystem favourable to start-up activities (e.g., access to a large market and widespread use of the internet), where talents can support each other in developing new technologies.⁶⁷ Multinational companies such as Google, Cisco, Nokia, Siemens and Airtel have all recognized the potential of this tech ecosystem and built their African headquarters in Nairobi. Furthermore, some of the innovative technologies developed in Kenya or South Africa are built for local usage, unlike technologies that are traditionally created in the US and Europe. The M-Pesa mobile service for transferring money, for instance, was not created in the West because the local needs were different at the time. This may mean that the African ecosystems will often be better suited to develop technologies that addresses Africa's socio-economic problems head on. Development of technological sectors in Africa is supported by both governments and major companies that form partnerships with start-ups as both investors and stakeholders.⁶⁸ However, the key challenge is still how to raise sufficient capital as many tech hubs are still unable to help start-up companies reach investors and secure platforms to launch their products from.

67 Norbrook et al., op.cit.

68 Norbrook et al., op.cit.

29. Fragmentation of the Internet as a global commons⁶⁹ is on the rise. The legal vacuum created – and sometimes condoned – by inaction of national and international legislatures and lack of enforcement mechanisms have led to a ‘digital Jurassic Park’, where might is right. The ‘social contract’ for the digital commons is broken.⁷⁰ China and Russia have built national firewalls (in essence gigantic ‘walled gardens’ or digital enclosures) that can take them and their populations off the global internet⁷¹ and thus isolate their populations from the rest of the world. India may be about to do the same.⁷² China is exporting its all-pervasive autocratic security model to developing countries often as part of wider economic cooperation,⁷³ sometimes with assistance from Western companies.⁷⁴ Government control of basic IT infrastructure may now have become the most essential tool for population control and oppression.

69 Freedom House produces an annual report on internet freedom, Freedom on the Net, see the 2020-report, <https://freedomhouse.org/report/freedom-net/2020/pandemics-digital-shadow>, which detects three overall trends: 1) political leaders used the pandemic as a pretext to limit access to information, disseminate false and misleading information, shut off connectivity for marginalized groups, extending and deepening existing digital divides; 2) COVID-19 has been used to justify expanded surveillance powers and the deployment of new technologies that were once seen as too intrusive. The public health crisis has created an opening for the digitization, collection, and analysis of people’s most intimate data without adequate protections against abuses. Governments and private entities are ramping up their use of artificial intelligence (AI), biometric surveillance, and big-data tools to make decisions that affect individuals’ economic, social, and political rights. Crucially, the processes involved have often lacked transparency, independent oversight, and avenues for redress. These practices raise the prospect of a dystopian future in which private companies, security agencies, and cybercriminals enjoy easy access not only to sensitive information about the places we visit and the items we purchase, but also to our medical histories, facial and voice patterns, and even our genetic codes; 3) the transformation of a slow-motion “splintering” of the internet into an all-out race toward “cyber sovereignty,” with each government imposing its own internet regulations in a manner that restricts the flow of information across national borders.

70 It is as if we find ourselves in a Hobbesian ‘state of nature’ as described in Leviathan (1651).

71 See on Russia, e.g., <https://www.hrw.org/news/2020/06/18/russia-growing-internet-isolation-control-censorship>, https://www.lumendatabase.org/blog_entries/russias-broken-web-of-internet-laws-a-deep-dive-into-the-top-five, and on China, e.g., <https://medium.com/@chewweichun/how-it-works-great-firewall-of-china-c0ef16454475>.

72 <https://www.bloomberg.com/opinion/articles/2021-05-31/whatsapp-confronts-india-s-great-firewall-other-companies-may-help-build-it>.

73 See, e.g., [https://www.uscc.gov/sites/default/files/testimonies/USCCTestimony3-13-20%20\(Elizabeth%20Economy\)_justified.pdf](https://www.uscc.gov/sites/default/files/testimonies/USCCTestimony3-13-20%20(Elizabeth%20Economy)_justified.pdf).

74 <https://www.nytimes.com/2019/02/21/business/china-xinjiang-uighur-dna-thermo-fisher.html>

30. Tech has acquired special urgency during the Covid-19 crisis,⁷⁵ not least because digital tech has provided the flexible basis for remote work and communications, but also due to imposition of executive power grabs, disproportionate or abusive restrictions on citizens and civil society in a large number of states, both in the developed and developing world.⁷⁶ Tech has been important when addressing humanitarian needs.⁷⁷ Before the Covid-19 crisis set in, abuse of anti-terror legislation to suppress legitimate political and other forms of digital expression was rampant.
31. Recent unilateral Facebook action⁷⁸ demonstrated the political and economic power of social platforms and the degree to which even key public authorities and services (hospitals, fire services, police, etc.) in wealthy countries, not to speak of poor countries, have made themselves dangerously dependent on the platforms, and thus highly vulnerable to unilateral decisions taken by the platforms. Should social platforms be regulated as utilities or as media corporations?

75 The Covid-19 crisis made the internet and digital services even more indispensable than ever before. The heavy reliance on tech solutions in the developed countries made the crisis much more manageable than it otherwise would have been. It also demonstrates that access to the internet and digital infrastructure is a crucial issue for development and to manage the consequences of marginalisation and fragility, e.g., when it comes to political participation, delivery of education and health services and for business development. However, the collection of data related to Covid-19 infections may present significant opportunities for government and corporate abuse and irreversible power grabs of dubious legality, see, e.g., <https://www.wired.com/story/internet-freedom-covid-19-2020/>; <https://www.bloomberg.com/opinion/articles/2020-05-10/coronavirus-contact-tracing-apps-mean-spying-end-to-data-privacy> and in the case of tracing in India, see, e.g., <https://internetfreedom.in/45-organizations-and-105-prominent-individuals-push-back-against-the-coercion-of-aarogya-setu/>.

76 See https://freedomhouse.org/sites/default/files/2020-10/10122020_FOTN2020_Complete_Report_FINAL.pdf, <https://democracy-reporting.org/wp-content/uploads/2021/05/Covid19-and-ROL-in-EU-May-21-web-final-updated.pdf> and e.g., <https://www.zdnet.com/article/modi-government-chokes-dissent-on-indias-covid-apocalypse-with-social-media-blocks/>.

77 See Adam Moe Fejerskov and Dane Fetterer Innovative Responses to Covid-19 – Future Pathways for ‘Techvelopment’ and Innovation https://pure.diis.dk/ws/files/3869715/Innovative_responses_to_Covid_19_DIIS_Report_2020_07.pdf, pp. 9ff.

78 Facebook made an announcement on 17 February 2021 to “restrict publishers and people in Australia from sharing or viewing Australian and international news content” as part of a dispute with the Government of Australia, see <https://about.fb.com/news/2021/02/changes-to-sharing-and-viewing-news-on-facebook-in-australia/>. The Facebook-imposed ban led to closure of public information accounts for a wide range of government organisations, companies and NGOs/CSOs, including public fire and emergency services, domestic violence charities and state health agencies whose pages were blocked, see <https://edition.cnn.com/2021/02/18/tech/facebook-australia-news-ban-chaos-intl-hnk/index.html> and <https://www.theguardian.com/technology/2021/feb/20/australia-v-facebook-pm-claims-tech-giant-back-at-the-table-after-executives-apology>.

32. Moreover, politicians worldwide, not least in Western democracies, have taken to the unregulated social media platforms to a degree where they are less available for national media, governed by media laws and editorial responsibility, and thus indirectly may contribute to the polarisation of their societies and undermining of national media, social cohesion and real political debate.⁷⁹ The social media allow politicians to speak directly to their selected audiences (essentially monologues in 'echo chambers') and less likely to be confronted with questions that they are not prepared for.⁸⁰
33. In addition to the issues of regulating net neutrality and utility status, this development poses the question whether states should provide reliable alternatives to social platforms which citizens could freely opt into and out of, either through state-sponsored platforms and/or regulatory frameworks? This is not a novel situation, although somehow forgotten in an age of diminished attention spans. The establishment of state broadcasting corporations (radio/TV and now Internet streaming) and non-profit public service broadcasting in general served to provide the public with high-quality news, information and a neutral space for national debate.⁸¹ We need to update our understanding of 'public service media' to fit the modern age.

79 Former US president Trump used Twitter as his preferred one-way platform and denounced traditional media as 'fake news' media, see https://en.wikipedia.org/wiki/Social_media_use_by_Donald_Trump.

80 See, e.g., Cass R. Sunstein #Republic: Divided Democracy in the Age of Social Media (2017) and <https://today.law.harvard.edu/danger-internet-echo-chamber/>. See also Matteo Cinelli et al. The echo chamber effect on social media <https://www.pnas.org/content/118/9/e2023301118> and <https://www.technologyreview.com/2019/03/07/65984/deepmind-is-asking-how-google-helped-turn-the-internet-into-an-echo-chamber/>.

81 See Monroe Price and Marc Raboy Public Service Broadcasting in Transition: A Documentary Reader (2011) http://repository.upenn.edu/cgcs_publications/1 and https://repository.upenn.edu/cgi/viewcontent.cgi?article=1020&context=cgcs_publications. Universality, diversity and independence are key principles underpinning public service broadcasting.

2. CITIZEN AGENCY – OPPORTUNITIES AND CONSTRAINTS

This chapter presents the theory of change and some aspects of the legal paradigm underpinning approaches to internet governance. A key question is whether basic digital services should be treated as a utility on a par with water and electricity. Asymmetric power relationships may need corrective action.

Conceptual and policy considerations, legal paradigm

34. The basic theory of change underpinning development is that increased access to digital services, which are relevant to the local context, will lead to enhanced citizen agency in an open society (more freedom and participation) and increased quality of public and corporate services⁸² and market functioning (in terms of speed, accessibility, transparency, accountability, less corruption, lower transaction costs, more competitiveness, etc.). Trust is a key issue for real take-up of digitisation. Digital trust is established by delivering positive results for people. Many people distrust their government.⁸³

82 The global Open Government Partnership (OGP) “vision is that more governments become sustainably more transparent, more accountable, and more responsive to their own citizens, with the ultimate goal of improving the quality of public policies and services. This will require a shift in norms and culture to ensure open, inclusive and honest dialogue between governments, civil society and citizens”, see OGP’s three-year implementation plan <https://www.opengovpartnership.org/wp-content/uploads/2020/03/OGPs-Implementation-Plan-2020-2022-FINAL.pdf>. In the wake of the Covid-19 pandemic, OGP is promoting the following Open Renewal focus areas: 1) Advance Transparency and Accountability; Open budgets, open contracts, and beneficial ownership transparency are vital to ensure stimulus and safety net funding reaches those most in need. Post-pandemic these activities should be global norms. 2) Tackle Systemic Inequalities. Policies should be adopted to ensure the inclusion of historically marginalized groups, expose gender and other pay gaps, fight corruption that steals resources, root out biases in law enforcement, and expand access to justice. 3) Protect Democracy and Civic Space. More resilient democracies can be built by combating disinformation, illicit money in politics and big tech impunity, strengthening the media environment, and safeguarding the rights of citizens and civil society. 4) Enhance Citizen Participation. Governments can build trust and a more citizen-centered democracy through participatory budgeting, social audits, citizen assemblies, and other deliberative democracy efforts.

83 See Saki Kumagai and Federica Iorio Building Trust in Government through Citizen Engagement <https://openknowledge.worldbank.org/bitstream/handle/10986/33346/Building-Trust-in-Government-through-Citizen-Engagement.pdf?sequence=5> and Kirk Hamilton, John Helliwell and Michael Woolcock Social Capital, Trust, and Well-being in the Evaluation of Wealth Policy Research Working Paper 7707 <https://documents1.worldbank.org/curated/en/249031468195550873/pdf/WPS7707.pdf>.

However, if the theory of change does not take into consideration the structural drivers, vested international and domestic interests, culture, lack of checks-and-balances and regulatory obstacles, expected and desired outcomes may not be delivered. The theory of change also needs to reflect whether one sets out to strengthen an existing structure; work on shifting the paradigms, the directionality of existing structures; and/or work on shaping new structures.

35. Despite the structural challenges and the basic operational assumption described in para. 8 above, donors are likely to have some leverage if they develop the right mix of policy tools. This will need to include concerted international advocacy, including most particularly advocacy vis-à-vis the corporate sector, and proactive international standard-setting allowing for fair and inclusive outcomes. It will have to be backed up with design of appropriate engagements and programmes.

However, depending on the context and results of digital political economy analysis in each case (state of the enabling environment, and, where relevant, level of government repression and corporate dominance over democratic political processes), donors may need to focus more on protection and development of citizen agency than on general framework conditions.

36. Citizen 'agency' implies capability and opportunity to act. The administrative and criminal law principle of legality which is a fundamental feature of the rule of law⁸⁴ implies that citizens are, as a point of departure, empowered to act, including when exercising their human rights and freedoms, while the state is impaired from acting, unless duly (constitutionally) authorised to do so.

The relationship between citizens (as users, consumers, data producers etc.) and private corporations is generally seen as a matter of private (contractual) law, although public law is playing an increasingly important role (regulation of markets, etc.). This is why consumers are supposed to give their 'consent' to the numerous 'terms of use'. In practice there is no real choice, which means that the importance of genuine, meaningful consent is diminished (due to 'asymmetric power dynamics'). The severity of this lack of a balanced legal relationship is heightened by the fact that digital services have become essential services like access to water and electricity. In this context it should be emphasized that individual consent does

84 See, e.g., https://www.venice.coe.int/WebForms/pages/?p=02_Rule_of_law&lang=IT and <https://www.uscourts.gov/educational-resources/educational-activities/overview-rule-law>. See also https://www.coe.int/t/dc/files/ministerial_conferences/2009_justice/CM%20170_en.pdf paras. 43ff.

not necessarily tackle the aggregate use of data to make decisions about groups of people. There is at present no ‘collective consent’ mechanism for this kind of data use.

37. Crucial aspects of the legal status of the internet, social platforms and other, arguably basic digital services have been heavily contested in several national jurisdictions, not least in the US. It is a debate with enormous practical and economic consequences for citizens and corporations and strikes at the core of finding the right balance between citizen access and corporate economic interests. This debate has been framed in terms of ‘net neutrality’ (equal access to services of equal quality)⁸⁵ and whether the basic digital infrastructure, internet and social platforms can be seen as ‘utilities’ (regulated like basic services such as electricity and water) or as basic infrastructure such as public roads and the railroad system.⁸⁶
38. It is curious how basic digital infrastructure has ‘escaped’ the regulatory frameworks that are traditionally applied to other basic or essential infrastructure of national importance.⁸⁷ Part of the explanation is the technological speed of change, part of it asymmetric knowledge, both of which favour first movers (i.e. the tech industry). The debate is relevant to countries all over the world, and the outcomes on national level will have a direct impact on access and agency, not least in the Global South.⁸⁸

85 See Tim Wu’s seminal analysis in *Network Neutrality, Broadband Discrimination* (2003) http://www.jthtl.org/content/articles/V2I1/JTHTLv2i1_Wu.PDF; the very comprehensive Wikipedia entry https://en.wikipedia.org/wiki/Net_neutrality and <https://www.ncsl.org/research/telecommunications-and-information-technology/net-neutrality-2021-legislation.aspx>. The Covid-19 crisis has demonstrated the importance of net neutrality, see, e.g. <https://www.wired.com/story/covid-19-pandemic-shows-virtues-net-neutrality/>.

86 See https://en.wikipedia.org/wiki/Public_utility and, e.g., US Court of Appeals’ Opinion in *Mozilla Corporation v. Federal Communications Commission et al.* [https://www.cadc.uscourts.gov/internet/opinions.nsf/FA43C305E2B9A35485258486004F6D0F/\\$file/18-1051-1808766.pdf](https://www.cadc.uscourts.gov/internet/opinions.nsf/FA43C305E2B9A35485258486004F6D0F/$file/18-1051-1808766.pdf)

87 The Independent Communications Authority of South Africa (ICASA) is a Chapter 9 institution (an institution that supports democracy) in terms of the South African Constitution and aims at ensuring that all people in South Africa have access to basic communication services at affordable prices. In terms of licence agreements, operators have to roll out services in under-served areas and contribute to the Universal Service and Access Fund. ICASA has proposed new rules on equity ownership by historically disadvantaged groups and the application of the ICT Sector Code, see <https://www.icasa.org.za/legislation-and-regulations/regulations-underway?mainLevel=159&firstLevel=12331>

88 See <https://www.itu.int/en/myitu/News/2021/04/26/07/04/GSR-21-effective-digital-regulation>. According to the ITU, the regulatory market in Africa is evolving more than in any other region of the world. Today, nearly two thirds of African countries have either a national overarching policy or an ICT master plan – up from just over one third five years ago, according to ITU’s latest *Digital Trends in Africa* report https://www.itu.int/dms_pub/itu-d/opb/ind/D-IND-DIG_TRENDS_AFR.01-2021-PDF-E.pdf.

3. DEMOCRATIC GOVERNANCE

This chapter deals with the enabling environment promoting digitally participatory, open, inclusive, non-discriminatory and responsive public systems and institutions and adequate regulatory framework governing corporate behaviour, thus facilitating citizen agency.

Democratic governance and citizen agency

39. Long-term digital governance reform of public institutions and regulatory frameworks for (large) corporations are important structural preconditions for meaningful citizen agency and functioning of civil society. As regards democratic governance it is important to identify areas where digital tools can make a difference for enabling participation and inclusion. In this sense there is a close connection between the rights perspective, mentioned below, and the exercise of these rights as part of democratic governance.⁸⁹

For instance, when it comes to the crucial issue of proving one's (legal) identity,⁹⁰ which may be a precondition for exercising rights (voting, interacting with public authorities, etc.) and participate in transactions, including opening of bank accounts, acquiring loans and credit, buying and proving ownership of real estate, digital solutions may leapfrog many financial and bureaucratic hurdles. Likewise, digitized real estate registers/cadaster/land tenure systems may be of paramount importance for economic livelihood and

89 Democratic governance adds a (crucial) qualitative aspect to the GovTech agenda which may tend to focus on more technical aspects, such as emphasizing aspects of "public sector modernization: citizen-centric public services that are universally accessible, a whole-of-government approach to digital government transformation, and simple, efficient and transparent government systems". "CivicTech tools including citizen feedback and complaint handling mechanisms can be done in high and low connectivity countries, using simple technology and free open source applications. Activities focus on accountability tools such as service charters and service standards with enforcement and monitoring mechanisms, and the use of technology to advance government's efforts at greater transparency", see, e.g. <https://www.worldbank.org/en/programs/govtech>.

90 See the International Covenant on Civil and Political Rights (ICCPR, 1966) art. 16 "Everyone shall have the right to recognition everywhere as a person before the law" <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CCPR.aspx>.

releasing locked-up value (credit).⁹¹ Digitized voter systems could bring real access to democratic participation closer to ordinary people, but may also increase risks of manipulation.

40. The digital revolution has also created new power configurations which may directly affect governance reform. Previously, when dealing with reform of public institutions, markets, etc., one would need to deal with the immediate stakeholders, which would already be very complex and difficult to manage. When it comes to tech-development one will have to factor in a constant 'third party', i.e., the software (and to some extent the hardware) investors, producers and vendors who are often very powerful, not seldom physically distant, in-transparent and working in a regulatory vacuum (asymmetric power relations).⁹² It is of fundamental importance to internalize that digitisation changes power balances, first and foremost a change of power between those running the systems and those being run by the systems, which goes far beyond the 'quis custodiet

91 The World Bank is engaged in a major ID drive for development, see <https://id4d.worldbank.org/about-us>. The goal of ID4D "is for all people to be able to access services and exercise their rights, enabled by digital identification. This will be achieved by supporting countries to build inclusive and trusted identification systems, including civil registration, using multi-sectoral approaches and appropriately leveraging innovative digital and other solutions". The UN defines legal identity as "the basic characteristics of an individual's identity, e.g., name, sex, place and date of birth conferred through registration and the issuance of a certificate by an authorized civil registration authority following the occurrence of birth. In the absence of birth registration, legal identity may be conferred by a legally-recognized identification authority. This system should be linked to the civil registration system to ensure a holistic approach to legal identity from birth to death. Legal identity is retired by the issuance of a death certificate by the civil registration authority upon registration of death. In the case of refugees, Member States are primarily responsible for issuing proof of legal identity. The issuance of proof of legal identity to refugees may also be administered by an internationally recognized and mandated authority", see <https://unstats.un.org/legal-identity-agenda/>. Digital ID systems entail significant risks when it comes to government abuse, thus human rights impact assessments and strict safeguards are needed already at the design stage.

92 In *Rule by Data: The End of Markets?* (2020) Katharina Pistor points out that "Big Tech has found a way to retain ownership over data even as it sells the data again and again, and on terms that Big Tech controls. Money changes hands, yet only access to data and their predictive power is granted in return"; and "Big Tech surveils individuals (the data producers) who use its services or have become objects of its data surveillance schemes. It harvests the data, and it turns the data into governance tools capable of predicting and shaping the behavior of individuals and groups (the data targets) in the interests of Big Tech's own clients, who purchase predictive power from it. Big Tech is not fostering efficient markets by collecting and sharing information with its customers or its clients; rather, it is inserting itself into the exchange by extracting information from consumers and selling processed information to various clients. These clients then possess sufficient predictive power to make the behavior of their customers highly predictable. Big Tech and its clients gain from this asymmetry of predictive power at the expense of the consumers", see <https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=4953&context=lcp>. Data has become a governance tool.

ipsos custodes?'. It has to do with 'definitional power', the power to define and conceptualise systems; 'behavioural power', the fact that digitisation may in itself change institutional and personal behaviour; 'bias', the fact that digital systems import and amplify the biases of the creators of the systems, etc.

41. Sustainable techvelopment requires that the internet and related services are kept open, accessible and inclusive at country level and internationally. But is also requires a much stronger international and national regulatory framework.

BOX 4: DANISH-ARAB PARTNERSHIP PROGRAMME (DAPP)

When moving online in connection with COVID-19 virtually all partners working with civil society have been exposed to the problem of internet access, which cements existing inequalities and makes vulnerable groups even more vulnerable when it comes to participation. Several have tried to remedy this by subscribing to ISPs. Also, in connection with COVID-19, government partners have been less inclined to hold meetings and conduct activities digitally. Human rights organisations still maintain the importance of physical attendance, but COVID-19 has opened their eyes to the fact that it is possible to reach a larger number of people. One concrete example is the "MAJALAT online platform" for exchange on the EU – Neighbourhood South structured dialogue, which Euromed Rights has helped to start in 2018. The platform has had 400 per cent greater adoption and gained even greater relevance during the pandemic. In Tunisia IMS local media partners have scaled up their in-depth online coverage of the Tunisian authorities' handling of the COVID crisis, which is in contrast to the traditional Tunisian media scene, where much information is published in print or in the form of shorter online articles. The establishment of solid and independent digital platforms has created an 'alternative' channel for critical assessments of the authorities' official communication. According to LGBT.DK local partners have also managed to move workshops on sensitive topics, such as LGBTIQ+ rights and identity, from physical to online formats. While it has been possible to reach even more people in the LGBT community, it has been a significant limitation during the COVID lockdown that participants have not been able to find the necessary privacy to participate when living in family structures where it is not possible to talk openly about sexual orientation etc. In Jordan, during COVID-19, IMS's local partner ARIJ reorganised their annual forum into a complete digital format, reaching three times as many participants as in 2019. The digital podcast Sowl in Jordan seeks to develop a pluralistic, —

democratic and independent media space in the Arab world through creative audio narration and podcasts that tackle difficult, sensitive and taboo topics. Sowt has witnessed significant growth and has made headlines in local and international media. In 2020 alone, 13 different media outlets reported on Sowt, including the Economist and in 2021 the Guardian. Sowt is also highlighted in a Deutsche Welle Academie handbook on the viability of digital media start-ups. In 2020, DAPP partners KVINFO and Oxfam Ibis organised webinars on 'digital violence' where they brought in experts and partners from MENA and Denmark, including local DAPP partners Mootoon and Jordanians Women Union (JWU), to share their expertise, experiences and recommendations about this increasingly widespread and systemic form of gender-based violence.

42. Some of these and other relevant areas of intervention will depend on genuine and active government support, since they will require implementation of reform plans that may most likely touch upon vested institutional, group and personal interests. If one adds a digitized layer to a bloated bureaucracy, it is unlikely that the digitization in itself can solve the underlying problems and obstacles, but it may put it under pressure, especially if it involves mechanisms for end-user real-time monitoring and feedback.

Digital tech as critical basic infrastructure

43. In any case, use of interconnected and networked tech solutions require critical basic infrastructure in order to enable wireless and wired communications.⁹³ Global satellite-delivered 5G connectivity may soon be a reality.⁹⁴ In this sense, digital development will be affected by and raise many of the same issues 'traditional' infra-

93 Faced with US and Chinese big-tech companies, Europe needs to develop its own technical framework for a sovereign data infrastructure and to build links to the open-source software community, see <https://gaia-x.eu/> and <https://www.data-infrastructure.eu/GAIAX/Navigation/EN/Home/home.html>.

94 See Elon Musk's Starlink project <https://www.starlink.com/>; <https://www.digitaltrends.com/news/elon-musk-reveals-when-starlink-internet-will-likely-exit-beta/>. New South African regulations may require all telecoms licensees in the country, including ISPs, to have black owners. "An Individual Licensee must have a minimum of 30% of its ownership equity held by black people, determined using the flow through principle," the regulations stated. In addition, individual licensees must have a minimum of 30% of its ownership equity held by historically disadvantaged groups, which include black people, women, people with disabilities, and youth, see <https://my-broadband.co.za/news/broadband/394257-elon-musks-spacex-must-have-black-ownership-to-launch-starlink-in-south-africa-icasa.html>.

structure projects encounter.⁹⁵ It triggers many issues and questions, including financing; sustainable growth; enabling environment including government and corporate commitment and policies, level playing field,⁹⁶ regulatory frameworks, independent oversight, data protection; and a host of other issues.

44. Likewise, a number of human rights dilemmas are immediately triggered. Any expansion of data collection, processing and centralization of data entail significant risks,⁹⁷ especially if effective checks-and-balances, including most crucially an independent judiciary, are absent. An example of a such dilemma is the introduction of a national ID card in Kenya⁹⁸ and India, which has been an important step towards recognizing agency of poor people in the economic and possibly political life of the nation, but it has also enable increased government control and risk of abuse.⁹⁹ Another example is the introduction of a national Afghan ID listing ethnicity, which raises

95 See Elon Musk's Starlink project <https://www.starlink.com/>; <https://www.digitaltrends.com/news/elon-musk-reveals-when-starlink-internet-will-likely-exit-beta/>. New South African regulations may require all telecoms licensees in the country, including ISPs, to have black owners. "An Individual Licensee must have a minimum of 30% of its ownership equity held by black people, determined using the flow through principle," the regulations stated. In addition, individual licensees must have a minimum of 30% of its ownership equity held by historically disadvantaged groups, which include black people, women, people with disabilities, and youth, see <https://mybroadband.co.za/news/broadband/394257-elon-musks-spacex-must-have-black-ownership-to-launch-starlink-in-south-africa-icasa.html>.

96 USAID's Digital Strategy (p. 4) highlights the crucial importance of (lack of) political commitment and underlines that "investments in country-level digital infrastructure and systems must lead to sustainable ownership and management by local governments, citizens, and the private sector. Where capacity is lacking, we can build our partners' technical capabilities to oversee these systems and responsibly leverage the data they produce to inform their own decisions. Where commitment is low, USAID can empower and equip civil society and the private sector to navigate complex and rapidly evolving digital ecosystems and hold governments accountable. For communities to achieve self-reliance in the digital age, open, inclusive, and secure digital ecosystems that preserve and protect the rights and agency of individuals are critical".

97 See, e.g., Harry Surden Structural Rights in Privacy, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1004675, arguing convincingly that "much of society's privacy is protected implicitly by transaction costs. This renders a significant portion of societal privacy vulnerable when transaction-cost-reducing technologies become widely used". This is also why distributed systems, where the citizen is the central gathering agent ('owner' of the data), may be the best way to prevent abuse.

98 See, e.g., <https://restofworld.org/2021/kenya-digital-id/>.

99 In 2018, the Indian Supreme Court allowed the national biometric ID to go forward provided that safeguards were introduced, see, e.g., <https://www.privacyinternational.org/long-read/2299/initial-analysis-indian-supreme-court-decision-aadhaar>.

the risk of discrimination on the basis of ethnic origin in a highly polarised country with a history of persecution of minorities.¹⁰⁰

45. Major investments and long-term implementation horizons will often be necessary when dealing with the preservation and expansion of the digital commons at country level and systems reform of public administrations and as already pointed out, they risk running up against the same obstacles and impediments seen in other large-scale reform and infrastructure projects.

BOX 5: BURKINA FASO

Technology can contribute to the development agenda in Burkina Faso, including public and private governance, democratisation and civil society, and security. It should be noted that not all the initiatives described below have been implemented. Digitisation can be seen as a tool for general capacity development of the public sector in Burkina Faso in terms of providing services, establishing national databases and registers, organising national planning etc. ‘Burkina Faso Data Portal’ is an open data base mapping parameters and development tendencies on national as well as at decentralised level.¹⁰¹ It is intended as a common, open resource that creates a point of reference for the involved actors, including government, civil society, international NGO’s, thus enabling a common understanding of the challenges as well as planning. There has been similar experiments in relation to water and land mappings. The agenda can potentially also enhance public awareness and securing of digital rights as well facilitate citizens’ demands towards the public sector, e.g., through a “Digital Rights Charter”. It is important to understand the current needs and coordinate with the already present actors in order to avoid duplicating existing initiatives. In regard to democratisation, digitisation can further social mobilisation as it was seen during the Arab Spring in 2011. In a Burkina Faso context, one example could be the role played by the so-called “Balai Citoyen” in the rebellion of 2014/2015, where social media played a central part in the popular mobilisation.¹⁰² The security sector in Burkina Faso has developed tech-based access to decentralised information for generating security risk analyses. —

100 See <https://www.reuters.com/article/us-afghanistan-politics-idUSKBN1FS1Y0> and <http://www.aopnews.com/ethnic-issues/54-new-ethnic-options-on-afghan-id-cards-spark-debate/>.

101 <https://burkinafaso.opendataforafrica.org/tmalkke/evolution-du-taux-d-acc%C3%A8s-%C3%A0-l-eau-potable-en-milieu-rural-par-r%C3%A9gion>.

102 <https://www.facebook.com/CitoyenBalayeur> and https://en.wikipedia.org/wiki/Le_Balai_Citoyen.

In this relation there is potentially a risk of abuse. The Danish embassy in Ouagadougou has been working with the local security ministry to strengthen the relationship between the security forces and the citizens in order to improve the current situation. In relation to the security forces, digital platforms can also further the public's ability to report abuses committed by the security forces to the CNDH (human rights agency), media etc. There may also be conflict-preventing perspective in monitoring and counteracting different types of stigmatisation on social media. Social media platforms are used for stigmatisation of the Fulani/Peuhl communities by misinformation about alleged alliances between the Fulani/Peuhl and jihadists, and social media may thus be used to prevent conflict between communities internally.¹⁰³

46. The digital economy did not appear out of nothing. Multiple parties have invested trillions of dollars in capital, expenditures and research in order to construct and maintain the infrastructure that supports the ecosystems that makes the digital economy possible. These parties include communications service providers, digital service and content providers and hardware and software manufacturers.
47. Governments are also significant players, as they regulate the spectrum for mobile networks and physical infrastructure. NGOs, industry associations and UN agencies are key players too. Together, all of these participants are responsible for the fixed and mobile networks, exchange points, data centres, devices and network equipment, and platforms and protocols that make the internet work.¹⁰⁴
48. Partly contrary to more 'classic' infrastructure projects such as roads, energy and water supply, digital infrastructure is primarily owned by private actors, which can be attributed to the speed at which the digitisation process has happened over the past 30 years. This means that both hardware and software development is being led by large multinational companies, who have stockholders as their main immediate stakeholders.¹⁰⁵ Any development agency involved in digital infrastructure projects, should be aware of the potential conflict of interest between the providers of digital infrastructure and

103 <https://www.facebook.com/conflicts.manager/>

104 See https://reports.weforum.org/delivering-digital-infrastructure/introduction-the-digital-infrastructure-imperative/?doing_wp_cron=1620025401.0439109802246093750000

105 See <https://www.nber.org/system/files/chapters/c14360/c14360.pdf>.

the governments and communities who use it. Equally important is how the digital infrastructure put in place is regulated, not least in a fragile state context.

49. It should be considered, how development agencies can ensure equal access to digital infrastructure among marginalised groups, e.g., women or indigenous peoples. Women in the global South continues to have a significantly lower technological participation than men, which according to some studies can be attributed to socio-cultural attitudes of women's role in society.¹⁰⁶

Open-source and crowdsourcing

50. Presumptively, support for open-source software development is likely to facilitate citizens' agency, including access to economic opportunity, and stimulate a diverse digital ecosystem.¹⁰⁷ Collaborative crowdsourcing combined with a community-centric contribution approach, where users can simply edit, add, or submit changes, have proven to be very powerful, Wikipedia¹⁰⁸ and Open Street Map¹⁰⁹ are well-known examples. A global, inclusive and easy-to-use regulatory framework for open source software development and crowdsourcing may perhaps free up creativity and innovation.¹¹⁰

Democratic governance and social media

51. Another aspect of democratic governance is the use of (often privately owned and often foreign owned) social media to provide information and educational services to poor and disenfranchised groups, to monitor behaviour of public institutions and agencies, e.g., the police service, and to provide an independent space for

106 See https://www.mdpi.com/1999-5903/6/4/673/htm?utm_content=bufferd7352&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer.

107 The open source movement has been key in creating vibrant digital ecosystems <https://opensource.org/about> and <https://creativecommons.org/>. Open-source software, in which the source code is freely available for anyone to inspect and alter, is inclusive and cost-free, it thrives on the creativity of the community, it stimulates commercial spin-offs and creates trust through full disclosure. This study was written on open source software (<https://www.libreoffice.org/>). As an example, ecosystem support is provided the GSMA Ecosystem Accelerator, supported by UK and Australian aid, which works to bridge the gap between operators and innovators <https://www.gsma.com/mobilefordevelopment/ecosystem-accelerator/>.

108 https://en.wikipedia.org/wiki/Main_Page.

109 <https://www.openstreetmap.org/>, Open Street Map provides data for areas of the world where map data may not be serviced by companies such as Google. It may also have a positive effect on maintaining openness and transparency, see <https://www.gislounge.com/openstreetmap-one-of-the-worlds-largest-collaborative-geospatial-projects/>.

110 See as a source of inspiration creative commons licenses, such as https://en.wikipedia.org/wiki/Wikipedia:Text_of_Creative_Commons_Attribution-ShareAlike_3.0_Unported_License.

civic discourse. The fact that privately owned and 'self-regulating' social platforms in many countries have become the most important space for public discourse and interaction has changed power balances determining the dynamics of political processes. The fact that this crucial aspect of democratic governance has been allowed to develop in a regulatory vacuum is in many ways astonishing and dangerous. It seems that the power to determine democratic governance framework conditions has shifted decisively away from elected politicians with a democratic mandate towards opaque corporate decision-making.

52. The structure of ownership and economic interests of social media corporations are key factors in private sector impact on democratic governance in a wider sense.¹¹¹ Addressing market failure through competition policy and media regulation is essential. In essence, this is not different from the traditional print media and TV, but the reach of digital social media platforms may be much greater, the political influence bigger and the risk of 'fake news', radicalisation, polarisation and manipulation exponentially more significant.¹¹² Again, India may serve as an example. When Facebook tried to launch its

111 See, e.g., on Google's journalism funding Alexander Fanta and Ingo Dachwitz Google, the media patron – How the digital giant ensnares journalism https://www.otto-brenner-stiftung.de/fileadmin/user_data/stiftung/02_Wissenschaftsportal/03_Publikationen/AH103_Google_EN.pdf. Imposition of editorial responsibility on platform owners and requirement to pay for content produced by traditional media will go a long way towards establishing a minimum degree of order, openness, diversity and a more level playing field among competitors, see, e.g., <https://news.microsoft.com/en-au/2021/02/03/microsoft-supports-australian-government-proposal-addressing-news-media-and-digital-platforms/>. The World Intermediary Liability Map (WILMap) at The Center for Internet and Society at Stanford Law School is an online resource covering evolving internet regulation shaping intermediary liability and internet users' rights worldwide <https://wilmap.law.stanford.edu/>.

112 See, e.g., <https://www.theguardian.com/technology/2021/apr/12/facebook-loop-hole-state-backed-manipulation> which seems to imply that Facebook knowingly condones political abuse of the platform in poor countries despite pledges made in the wake of the Cambridge Analytica scandal, see also <https://www.theguardian.com/technology/2019/nov/22/sacha-baron-cohen-facebook-propaganda>. Facebook's business model thrives on user engagement, and user engagement thrives on polarizing statements whether true or false, see <https://www.technologyreview.com/2021/03/11/1020600/facebook-responsible-ai-misinformation/>. Facebook has taken some steps to address aspects of the issue, see e.g. <https://about.fb.com/news/tag/coordinated-inauthentic-behavior/>. Synthetic media, including deepfakes, will make it very difficult to detect manipulated photo, audio, and video content, see Lucas Whittaker et al. "All Around Me Are Synthetic Faces": The Mad World of AI-Generated Media https://ieeecs-media.computer.org/media/marketing/cedge_digital/ce-may21-final.pdf pp. 24ff. See also https://www.theguardian.com/media/2021/may/27/thousands-of-youtube-comments-on-sky-news-australia-video-celebrate-blm-activist-being-shot-in-head?CMP=Share_AndroidApp_Other and <https://www.theguardian.com/australia-news/2021/feb/10/kevin-rudd-says-sky-news-is-using-fox-model-to-radicalise-politics-in-australia>.

initiative to provide Facebook-curated ‘free’ access to the internet, it was turned down by Indian grassroots organisations and later on, perhaps for other reasons, by the Government of India.¹¹³ Another example is the role played by Facebook (including WhatsApp) in the persecution of ethnic minorities in Myanmar.¹¹⁴ In a reversal of roles, Facebook (WhatsApp) is now involved in litigation against the Government of India regarding access to encrypted communications.¹¹⁵

53. Given the trends, opportunities and challenges described above, it is proposed that the overall development objective of democratic governance in the context of digitisation is to

- support and enhance an enabling environment which guarantees and promotes the digital commons as a collective social good facilitating participation, inclusion, transparency and democratic values;
- promote and support basic digital space as a public utility and precondition for democratic governance and citizen agency.¹¹⁶

113 See <https://www.cnet.com/news/why-india-doesnt-want-free-basics/>. Public interest litigation is on-going in India regarding alleged WhatsApp privacy violations, see <https://inc42.com/buzz/delhi-hc-seeks-facebook-centres-response-in-another-pil-against-whatsapp-privacy-policy/>.

114 See <https://www.theguardian.com/technology/2018/mar/13/myanmar-un-blames-facebook-for-spreading-hatred-of-rohingya> and <https://www.bbc.com/news/world-asia-46105934>. See also Mark Latonero and Aaina Agarwal, Human Rights Impact Assessments for AI: Learning from Facebook’s Failure in Myanmar <https://carrcenter.hks.harvard.edu/files/cchr/files/210318-facebook-failure-in-myanmar.pdf>.

115 WhatsApp maintains that new Indian internet legislation, which have been described as oppressive and draconian, will severely undermine the privacy of its users, see <https://www.medianama.com/wp-content/uploads/2021/05/WhatsApp-v.-Union-of-India-Filing-Version.pdf>. The new IT legislation give the Indian government greater power to monitor online activity, including on encrypted apps such as WhatsApp and Signal. <https://www.theguardian.com/world/2021/may/26/whatsapp-sues-indian-government-over-mass-surveillance-internet-laws>.

116 For comparison The UK Digital Strategy 2018-2020: Doing Development in a Digital World states that “above all, we will champion a view of digital, data and technology as enablers rather than an end goal: the goal is in the material benefits delivered to people, particularly those who are most vulnerable and marginalised”, <https://www.gov.uk/government/publications/dfid-digital-strategy-2018-to-2020-doing-development-in-a-digital-world/dfid-digital-strategy-2018-to-2020-doing-development-in-a-digital-world>, p. 5.

4. CITIZENS' RIGHTS

This chapter deals with the fact that ordinary citizens are becoming more and more asymmetrically dependent on digital services, thus more and more vulnerable to arbitrary government restrictions and corporate abuse. Enforcement and protection of citizens' digital human and democratic rights become a crucial issue. Promotion of digital awareness and digital 'self-defence tools' to maintain and protect civic space are key issues.

Exercise of rights and freedoms

54. The other side of democratic governance is the capability of citizens to act individually and in common in the digital space. One aspect of this is the issue of what can be done to protect and empower citizens and civil society in a world of increased digital surveillance and repression.

The perspective is primarily a rights-based perspective.¹¹⁷ A number of traditional human rights and freedoms (legally protected under regional and global public international law) are affected by the present state of affairs, including the following:¹¹⁸

- right to privacy and family life
- 'right to participate', including freedom of expression, the right to receive, seek and impart information and ideas, the right of freedom of association and peaceful assembly
- right to freely move (personal liberty)
- right not to be discriminated against on the basis of political affiliation, gender, sexual orientation, social status, religion, ethnicity etc. This right has become crucial in the age of facial recognition, algorithmic profiling, decision-making and case management.

A number of potential (not fully legally protected) rights are implicated:

117 One of the first NGOs to use digital technology (satellites) in defence of human rights was the Sentinel, which was triggered by human rights violations in Darfur, see <http://satsentinel.org/our-story>.

118 See, e.g., the key ICCPR articles 9, 11, 17, 18, 19, 20 (para. 2), 21, 22, 25, 26 and 27 <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CCPR.aspx>.

- right of non-discriminatory access to digital services
 - right to digital literacy as part of access to education
 - right to own one's own data,¹¹⁹ including digital and biometric data, protection against identity theft
 - right not to have your own data manipulated, including 'deep fakes'
 - right to be 'forgotten' and to have existing data deleted as part of wider privacy rights
 - right to digital protection when it comes to digital identity and digital access.
55. Collection of bulk, meta and more granular, data ('mass surveillance') may effectively nullify privacy and intimidate citizens.¹²⁰ Monitoring of mobile phones and use of facial recognition technologies¹²¹ may, among many other effects, lead to diminishing of privacy in public spaces and may de facto intrude on freedom of movement ('virtual digital detention') and the subjective willingness to use freedom of expression rights (self-censorship).¹²² Use of AI and algorithms may lead to automated and scaled-up forms of bias and

119 Tim Berners-Lee has suggested that 'pods', personal online data stores, are a key technical ingredient for each person to control his or her own data in an individual data safe <https://www.nytimes.com/2021/01/10/technology/tim-berners-lee-privacy-internet.html>.

120 The argument is that 'in order to find the needle in the haystack, you need the haystack', which risks undermining presumption of innocence principles and protection of privacy, see, e.g., <https://reason.com/2013/07/19/why-spy-on-everybody-because-you-need-th/>, and raises the old question of *Quis custodiet ipsos custodes?* Recent European history is littered with examples of the lethal risks of mass surveillance and the enormous extent of mass surveillance in this century has been partially exposed, cf. Edward Snowden Permanent Record (2019). China has implemented a massive system of surveillance, see, e.g., <https://www.hrw.org/tag/mass-surveillance-china>. The European Court of Human Rights has accepted bulk interception of communications under certain conditions, see para. 424 of Judgment of 25 May 2021 in Case of Big Brother Watch and Others v. the United Kingdom <https://hudoc.echr.coe.int/eng#%7B%22documentcollectionid%22:%5B%22GRANDCHAMBER%22,%22CHAMBER%22%5D,%22itemid%22:%5B%22001-210077%22%5D%7D>.

121 See, e.g., <https://www.nytimes.com/interactive/2021/03/18/magazine/facial-recognition-clearview-ai.html>.

122 See preambular para. (18) of EU Commission Proposal for a Regulation on AI, 21.4.2021 COM(2021) 206 final 2021/0106 (COD) <https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-laying-down-harmonised-rules-artificial-intelligence>.

discrimination¹²³ which can be very difficult to detect and prevent.¹²⁴ Data 'toxicity' may become a relevant concept.

56. This also means that 'digital self-defence' becomes an urgent topic.¹²⁵ In the context of this study it will imply focus on

- how to identify, support and promote easily available digital self-defence technologies and solutions;
- how to foster an enabling environment and stimulate open-source software production and knowledge in collaboration between Denmark, EU, Denmark's OECD/DAC partners and other multilateral institutions, Danish NGOs, Danish public and private entities and partners in developing countries and other countries where (exercise and protection of) human rights are supported;
- how to implement do-no-harm policies (screening of and safeguards against development investments having a potential detrimental effect on citizens' digital rights);
- how to promote trust through participatory regulation, data cooperatives, work towards real personal ownership of own data;
- how to promote programming principles mitigating 'dystopian futures';¹²⁶ design of systems resilient to autocratic abuse
- how to mobilize the international community, including most particularly the EU. The EU is a key partner in leveraging influence and potential impact, also outside the EU, not least due to the EU's role as a 'first conceptualizer' and 'first mover'¹²⁷ and possible de jure

123 Since AI systems are created by humans, human biases will be imported into and magnified by AI systems. This had led to numerous problems, such as discrimination based on race, ethnicity, skin colour, gender, etc., see, e.g., <https://sitn.hms.harvard.edu/flash/2020/racial-discrimination-in-face-recognition-technology/>. The tech sector is male-dominated when it comes to employment and careers and gender-specific (male) values may be prevalent, see, e.g., <https://www.theatlantic.com/business/archive/2017/03/melinda-gates-tech/519762/>. This will have implications when designing gender-sensitive, etc., techvelopment programmes.

124 The OECD Principles on Artificial Intelligence specify that "AI systems should be designed in a way that respects the rule of law, human rights, democratic values and diversity, and they should include appropriate safeguards – for example, enabling human intervention where necessary – to ensure a fair and just society", see <https://www.oecd.org/going-digital/ai/principles/>. A recent report (2021) from the Department of Computer Science at the University of Copenhagen (DIKU) in collaboration with the Association of Nordic Engineers (ANE), the Data Ethics ThinkDoTank (DataEthics.eu) and the Institute of Electrical and Electronics Engineers (IEEE) identifies governance as a key issue, see <https://nordicengineers.org/wp-content/uploads/2021/01/addressing-ethical-dilemmas-in-ai-listening-to-the-engineers.pdf>.

125 See https://en.wikipedia.org/wiki/Digital_self-defense.

126 Gratias agimus Ben Kumpf.

127 Gratias agimus Ben Kumpf.

and de facto extraterritorial effects of EU legislation as a result of EU market power. The UN is a key forum when it comes to international human rights regulations and other regulatory frameworks.

Digital tools

57. Digital research tools have been shown to be very powerful in establishing patterns that would otherwise be hidden ('big data')¹²⁸ and can be used to enhance human rights and other forms of accountability vis-a-vis corporations and public authorities.¹²⁹ Investigative journalism has profited from analysis of large data sets and has demonstrated how efficient it can be when it comes to uncovering crime,¹³⁰ tax evasion and corruption.¹³¹

128 The EU has been the key regional and international actor when it comes to reigning in some of the excesses of the prevailing situation. The adoption of the General Data Protection Regulation (GDPR) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02016R0679-20160504> was a milestone and a source of inspiration for other jurisdictions, including the US State of California. The EU Court of Justice has found that the EU Charter of Fundamental Rights and subsidiary rules preclude national legislation enabling a State authority to require providers of electronic communications services to carry out the general and indiscriminate transmission of traffic data and location data to the security and intelligence agencies for the purpose of safeguarding national security rules (bulk collection of data), see <https://curia.europa.eu/juris/document/document.jsf?jsessionid=53FBA996B4AFBA A2A974CB62068ABB55?text=&docid=235500&pageIndex=0&doclang=EN&m ode=req&dir=&occ=first&part=1&cid=7213813>. The EU Commission recently presented a Proposal for a Regulation on a European approach for Artificial Intelligence, see <https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-european-approach-artificial-intelligence>. The proposal was criticised as insufficient from a human rights point of view, see <https://www.accessnow.org/eu-minimal-steps-to-regulate-harmful-ai-systems/>.

129 See, e.g., on the trade-offs regarding use of big data for purposes of human rights protection Mark Latonero Big Data Analytics and Human Rights – Privacy Considerations in Context https://www.cambridge.org/core/services/aop-cambridge-core/content/view/AEFCC6D0B090A725742698E968E39431/9781107179639c7_149-161.pdf/big_data_analytics_and_human_rights.pdf. See also Francis Kuriakose and Deepa Kylasam Iyer Human Rights in the Big Data World https://www.researchgate.net/publication/327534457_Human_Rights_in_the_Big_Data_World

130 See, e.g., <https://humanrights.berkeley.edu/news/nuremberg-75-launching-berkeley-protocol-digital-open-source-investigations> and https://www.ohchr.org/Documents/Publications/OHCHR_BerkeleyProtocol.pdf.

131 Bellingcat pioneered new digital methods of investigative journalism, <https://www.bellingcat.com/>.

BOX 6: EUROPEAN UNION ANTI-CORRUPTION INITIATIVE UKRAINE (EUACI)

EUACI is designed with the aim of supporting the Government of Ukraine implementing anti-corruption reforms. EUACI is relevant when it comes to the promotion of some of the generally accepted good governance principles, including in particular:

- Participation,
- Accountability,
- Transparency,
- Effectiveness and efficiency,
- Responsiveness, and
- Rule of law.

EUACI aims to improve the quality of governance and public service delivery through its support to initiatives that strengthen the above principles. The following examples focus on instances where modern ICT has been an integrated part of the EUACI strategy for the promotion of one or more of the above good governance principles: (1) "ProZorro.Sale", efficiency in public procurement; sale and lease of public property. "ProZorro.Sale" is a hybrid electronic open source government e-procurement system that is the result of a broad partnership between Ukraine's business community, government and civil society. The system helps reduce corruption in public procurement processes by using modern ICT to ensure equal access to data, public control and an increase in the number of potential buyers and/or bidders, thus increasing transparency and accountability; with participation, effectiveness and efficiency as very close and associated areas of impact. The purchase and sale of goods and services through tenders amounts to more than EUR 20 billion per year. Due to the increased transparency and competition, it has been estimated that the PoZorro platform may be responsible for about 10 per cent of overall public savings. (2) The EUACI is working with the National Anti-Corruption Bureau of Ukraine (NABU) on the development of an e-Case Management System (e-CMS) for criminal case files. The e-CMS is designed with a view to increase the effectiveness and efficiency of Ukraine's criminal investigation and prosecution processes in the field of anti-corruption; and specifically the exchange of information and documents between the NABU detectives, the prosecutors and the judges working with corruption cases. Hence, it is an administrative and management tool for the digitization and handling of the electronic version of criminal-case files that allows online access to the case documents and information, with each involved party being granted a different level of access and editing rights. —

The contribution of the e-Case Management System primarily will be towards the principle of efficiency and effectiveness, with associated contributions to the principles on accountability and the rule of law. (3) EUACI is working with five partner cities to establish municipal geoportals that will allow people to monitor the city's growth and the authorities to plan further urban development on a more informed basis. A geoportal provides vivid information about the problems existing in certain neighbourhoods and helps officials make optimal urban planning decisions. By monitoring and analysing problems on a geoportal, local municipalities can approach them systematically and find more appropriate and holistic solutions, making the city more comfortable to live in.

58. Virtual reality can be used to demonstrate the impact of human rights violations in a powerful way and thus mobilize public opinion.¹³²
59. Digital self-defence tools is an area of growing importance among human rights defenders.¹³³ Encrypted communications tools have become a sine-qua-non to re-establish a modicum of privacy and to provide some safety for human rights defenders.¹³⁴ For documentation purposes one of the first practical tools was an app to automatically document and report on alleged police violence in New York.¹³⁵ Off-line communication between mobile smart-phones

132 See <https://ff.hrw.org/film/emerging-world-virtual-reality-and-human-rights>.

133 The Electronic Frontier Foundation (EFF) has played a key role in advancing human rights in the digital realm and has contributed important tools, see <https://www.eff.org/pages/tools> and <https://ssd.eff.org/>.

134 The open-source Signal app, <https://signal.org/>, has become the go-to communications tool after disclosures of mass surveillance and the integration of WhatsApp with Facebook, see <https://www.theguardian.com/commentis-free/2021/may/14/you-should-be-worried-about-how-much-info-whatsapp-shares-with-facebook>. In some parts of the world the open-source Telegram, <https://telegram.org/> is prevalent. Security services have demanded 'back doors' to be able to penetrate the encryption, which has been opposed by the tech industry and human rights organisations, see, e.g., <https://thehill.com/policy/technology/263884-apple-ceo-opposes-government-back-door-to-encryption>. It seems security services have found other ways to penetrate encrypted communication, see, e.g. on NSO group software, the research done by Citizens Lab at the University of Toronto <https://citizenlab.ca/>.

135 See New York Civil Liberties Union's Stop and Frisk Watch app <https://www.nyclu.org/en/stop-and-frisk-watch-app> which is now replaced by the American Civil Liberties Union's Mobile Justice app <https://www.aclu.org/issues/criminal-law-reform/reforming-police/mobile-justice?redirect=issues/criminal-law-reform/reforming-police/aclu-apps-record-police-conduct>. The app in itself is not sufficient, it requires follow-up work from volunteers to process the data into actionable information, but the volunteers could work from far away.

is important for local communications when the government shuts down the internet and impedes access to mobile services.¹³⁶ Virtual private networks (VPN) can be used to enhance anonymity and to some extent circumvent censorship on the internet.¹³⁷ Regional cooperation among civil society groups may offer mutual technical support.¹³⁸

The impact of walled gardens: app stores and social platforms

60. The euphemistically termed 'walled gardens' of the big tech companies, such as owners of the app stores, e.g., Apple, Alphabet (Google), Microsoft, and social platforms (Facebook and others) and many more, play an increasing role. It is essentially a commercially driven 'cutting up' of parts of the internet but may also increase protection against viruses and other forms of interference with user security (screening of apps before they are accepted into the app-store, etc.). The effect is to create 'captive audiences' by forcing consumers/users to only access certain apps through the app-stores and/or force consumers/users to become members of the closed social club (social platforms).
61. The walled gardens are thriving in the legal limbo created by lack of regulatory frameworks. The main focus from legislatures and executive agencies have generally been on anti-competitive effects, although these issues have never been solved satisfactorily. 'Policing' of the walled gardens has been left to the tech companies themselves,¹³⁹ possibly primarily because they have been viewed as the private property of the companies. The tension between the interests of a global commons of internet access and exchange of information, on the one hand, and the walled gardens, on the other is constantly growing.
62. The tension manifests itself in several different ways. One issue is whether app-stores can require the download of apps facilitating

136 The app Bridgefy was downloaded more than a million times after the military coup in Myanmar, see <https://indianexpress.com/article/technology/tech-news-technology/what-is-bridgefy-the-offline-messaging-app-with-over-1-million-installs-in-48-hours-7172736/>

137 <https://www.dw.com/en/bypassing-censorship-with-vpns-is-that-really-safe/a-56836645>

138 <https://www.csis.org/blogs/new-perspectives-asia/milkteaalliance-south-east-asia-digital-revolution-and-repression-myanmar>.

139 Responding to (and perhaps in order to deflect) many years of persistent criticism Facebook established a so-called oversight board with limited powers, <https://oversightboard.com/> and <https://www.nytimes.com/2020/05/06/opinion/facebook-oversight-board.html?smid=tw-nytopinion&smtyp=cur>. The review board has been met with significant skepticism, see, e.g. <https://www.wired.com/story/facebook-and-the-folly-of-self-regulation/> and <https://www.reuters.com/article/us-facebook-ads-boycott-germany-idUSKBN2491IO>

government control, censorship and mass surveillance,¹⁴⁰ offer apps that facilitate human rights violations,¹⁴¹ another is whether apps that allow for exchange of information can/should be pulled from app-stores because governments and/or private parties request it.¹⁴²

Similar tensions may be identified with regard to the 'self-policing', or the absence thereof, of contents in the walled gardens of the social platforms. Government and private demands/requests to close accounts and/or take down statements have often been heeded according to opaque rules decided by the companies themselves.¹⁴³ There is a difficult, but historically well-known balance to be struck between freedom of expression and access to information, on the one hand, and legitimate concerns (such as protection of privacy), on the other. This key balance should be decided by democratically elected legislatures in conformity with applicable international human rights conventions. The basic issue is whether walled gardens, including most particularly social platforms, should be subjected to framework regulations in some shape or form.¹⁴⁴ One of the related

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- 140 See, e.g., <https://www.wired.com/story/apple-russia-iphone-apps-law/>. In 2019 Russia started requiring that all computers, smartphones, smart TVs, etc., must come preloaded with a selection of state-approved apps that include browsers, messenger platforms, and even antivirus services.
- 141 One example is the Saudi government app Absher, which allows men to update or withdraw permissions for female relatives to travel abroad and to get SMS updates if their passports are used, see <https://www.theguardian.com/world/2019/apr/25/runaway-saudi-sisters-call-for-inhuman-woman-monitoring-app-absher-to-be-pulled-google-apple>. This app was offered for download in Apple and Google app-stores.
- 142 China is probably the most prolific remover of apps and other censorship restrictions, India is on the rise and even the US is on a downward slope. Freedom House assesses that only 20 per cent of the world's internet user population is free, China ranked last in Freedom on the Net's (2020) analysis for the sixth consecutive year. https://freedomhouse.org/sites/default/files/2020-10/10122020_FOTN2020_Complete_Report_FINAL.pdf. The Lumen Database registers take-down request, see <https://www.lumendatabase.org/>. On India and Twitter, see https://www.lumendatabase.org/blog_entries/indian-farmers-protest-blocking-orders-to-twitter-and-the-fragile-balancing-of-free-speech-amid-abysmal-regulation. On Nigeria and Twitter, see <https://www.bloomberg.com/opinion/articles/2021-06-23/facebook-twitter-critics-in-u-s-are-giving-ammunition-to-authoritarian-leaders> and <https://restofworld.org/2021/koo-is-selling-itself-as-a-twitter-substitute-in-nigeria/>.
- 143 See, e.g., <https://edition.cnn.com/2021/04/26/tech/twitter-covid-india-modi-facebook/index.html>.
- 144 The 'walled garden' of today has links back to the early 2000s, where Microsoft software (Internet Explorer, Media Player) was 'bundled' with the dominant Windows operating system, see, e.g., Judgment of the EU Court of First Instance of 17 September 2007 in Case T-201/04 <https://curia.europa.eu/juris/document/document.jsf?text=&docid=62940&pageIndex=0&doclang=en&mode=lst&dir=&occ=first&part=1&cid=3663180>. Based on this precedent, it seems that regulating walled gardens is feasible.

issues is whether traditional editorial responsibility should apply to the platforms.¹⁴⁵

63. In other words, one group of private corporations, app-store and social platform owners, have become some of the most important non-state actors when it comes to defining, supporting, restricting and 'policing' basic human rights in the digital realm.¹⁴⁶
64. Reputational risk concerns seem to play a certain role when it comes to corporate owners of app stores. However, corporate social responsibility (CSR)¹⁴⁷ seems to have a rather poor uptake among social platforms when it concerns the conduct and business model of the platforms themselves, dominated by the 'move fast and break things' business 'ethic', where privacy violations and fake news are seen as a cost of doing business.¹⁴⁸ The apparent lack of commitment to CSR among social platforms may be due to the business model which requires high levels of persistent user interaction. Since one way of generating user interaction is to stimulate controversy, fake news, rumours etc. are tolerated and perhaps even actively facilitated. This is in contrast to many companies that use the platforms for advertising, they are often very well aware of their corporate social responsibilities and care about reputational risks. Other players in the digital industry are also proactively dealing with CSR.¹⁴⁹
65. Given the trends, opportunities and challenges described above it is proposed that the overall development objective of empowerment of citizens and civil society in the context of digitisation is to
- support and enhance citizens' independent and free digital agency in order to access, use, develop and disseminate digital tools and services in the exercise of their human rights and freedoms.

145 In the US Section 230 of the 1996 Communications Decency Act largely protects companies that host 'user-created content' from lawsuits over posts on their services. It covers not only internet service providers but also social media platforms.

146 The UN Guiding Principles on Business and Human Rights establishes a framework for increased accountability of states and private corporations, which provide overall clear guidance with regard to corporate social responsibility https://www.ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf. See also The UN Guiding Principles in the Age of Technology <https://www.ohchr.org/Documents/Issues/Business/B-Tech/introduction-ungp-age-technology.pdf>

147 See, e.g., https://ec.europa.eu/growth/industry/sustainability/corporate-social-responsibility_en; and

148 See <https://hbr.org/2019/01/the-era-of-move-fast-and-break-things-is-over>.

149 See, e.g., one of the major producers of 5G equipment (Ericsson) <https://www.ericsson.com/en/blog/2021/3/5g-human-rights> and <https://www.ericsson.com/49295a/assets/local/about-ericsson/sustainability-and-corporate-responsibility/documents/2021/5g-human-rights-assessment---final.pdf>. See as another example the CSR reports of cBrain <https://cbrain.com/csr-reports>.

5. TRENDS AND DILEMMAS

Building on the previous chapters, this chapter seeks to distil some overall patterns and dilemmas impacting analyses and choices going forward.

Inclusion v. reach

66. Digital technologies can be effectively used to include large numbers of previously disenfranchised people in democratic governance processes. Many organisations are capitalizing on the inclusion potential of digital technologies by increasing the reach of consultations, voting and dialogues and by mobilising and organising in new, and sometimes more informal, ways. While this is a positive trend, it also has a potentially negative side: organisations may conflate reach with inclusion, assuming that having access to a consultation platform or voting mechanism is sufficient to guarantee inclusion, leading to a certain complacency about the work needed for inclusion to be meaningful. Furthermore, malicious actors wishing to limit inclusion can ‘whitewash’ their initiatives by including a digital technology that on the surface offers access but in fact does not offer meaningful opportunities for engagement.

Speed and efficiency v. depth and impact

67. Donors and organisations alike have turned to digital technologies to increase the speed and efficiency of initiatives and to help overcome the digital divide. It can be quicker and cheaper to gather data and it may provide better data in terms of depth, discerning patterns, detecting correlations and thus provide documentation for informing and tailoring development programming.¹⁵⁰

Digital technology may obviously also provide new ways and means of convening people and reach out to much larger audiences.¹⁵¹

150 See, e.g., the Inter-agency Expert Group on SDG Indicators (IAEG-SDGs) which has identified 23 global indicators for SDG16’s 12 targets, <https://www.sdg16.org/data/>. The UN World Data Forum brings together data and statistical experts and users from governments, civil society, the private sector, donor and philanthropic bodies, international and regional agencies, the geospatial community, the media, academia and professional bodies to spur data innovation, mobilize high-level political and financial support for data, and build a pathway to better data for sustainable development, see <https://unstats.un.org/unsd/undataforum/about/>.

151 See TED talks on the pros and cons of digital life https://www.ted.com/playlists/26/our_digital_lives.

While this can increase the impact of initiatives, it is important to keep in mind that at times digital processes require time and resources to really achieve the depth of engagement required for impact to be significant. Not all digital initiatives are cheaper and faster than an offline process, they may just offer new or different ways of engaging people. Knowledge of cultural and political sensitivities and what is appropriate locally will be key to ensure that digitally assisted processes have real impact. Democratic processes may require time and extensive consultation.

Reputational risk v transparency

68. Processes enabled by digital technologies can offer greater transparency, with data being made more accessible, communication channels more available, and more opportunities to hold people and institutions to account. This greater transparency can be quite challenging to both public institutions and private corporations, who may worry about the reputational risk associated with losing control on the flow of information about their work.

The framework for managing reputational risk as a public institution vis-à-vis a private corporation is of course quite different. A public institution serves the public and is publicly funded, while a corporation serves its customers and shareholders. However, from public mediation institutions dealing with resolution of disputes to extractive industries, many organisations, public and private, seem to struggle with the radical transparency that digital technologies can enable and can sometimes be tempted to restrict transparency in the name of protecting reputational risk.

What corporates and states can do

69. Digital ethics is slowly gaining ground, not least due to a large number of scandals exposing inadequate handling of highly sensitive data in the corporate and public sector.¹⁵² A growing number of

152 The Association for Computing Machinery (ACM) has adopted an extensive Code of Ethics and Professional Conduct (2018), which sets out a number of important principles on ethics and professional responsibility, see <https://ethics.acm.org/>. The code is backed up by guides, see <https://ethics.acm.org/code-of-ethics/using-the-code/>, and <https://ethics.acm.org/wp-content/uploads/2021/03/Proactive-CARE-for-Computing-Professionals.pdf> and enforcement mechanism, see <https://ethics.acm.org/enforcement/>. Historically, ethics discussions among 'computing professionals' may, i.a., have been hampered by the 'culture' of software developers and the 'move fast and break things' ethos, and facilitated by the traditional lax product guarantee standards (the 'as is' clause). See with regard to the public sector OECD's Good Practice Principles for Data Ethics in the Public Sector <https://www.oecd.org/gov/digital-government/good-practice-principles-for-data-ethics-in-the-public-sector.pdf>.

technology companies, especially platform companies (Facebook, Twitter, Google, etc) have started to pay initial attention to the social impact of the use of their technologies. Critical to this conversation is a focus on the ethics of the use of data and AI to influence individual behaviours and societal norms. The focus of many corporates has to date been on better content moderation, stricter terms of use and digital literacy to inform individual behaviours/uses of their technologies. Only a few are having the deeper necessary conversations about how technology design decisions impact society. For example, calls have been made proposing the redesign of social media platform algorithms, to counter the divisions fostered by algorithmic profiling.¹⁵³

BOX 7: NORDIC ENGINEERS

Why is the Association of Nordic Engineers (ANE) engaged in AI and ethics? If not, engineers will take the responsibility and lead the way in the responsible AI, who will? The major responsibility of engineers is to promote positive outcomes for society and to limit harm, but as our world rapidly changes, what constitutes a positive outcome and what could potentially cause harm becomes harder to recognize. The problems that engineers face and the responsibilities they must take on in working with AI are not fully addressed in current guidelines and standards. As anxieties about how technological decisions might play out in society increase, engineers are expected to take into account broader societal contexts, thus going beyond the traditions of requirement specifications and technical development. Therefore, ANE engages in this work to:

- address the ethics of engineering in practice more directly and ensure a mindset shift for engineers;
- empower engineers so that they can become ambassadors for the responsible development of AI and new technology;
- protect engineers' rights by advocating for distributed responsibility in AI. The responsibility cannot solely lay only on the engineers' shoulders, as engineering solutions are developed —

153 The Christchurchcall asks online service providers to “review the operation of algorithms and other processes that may drive users towards and/or amplify terrorist and violent extremist content to better understand possible intervention points and to implement changes where this occurs. This may include using algorithms and other processes to redirect users from such content or the promotion of credible, positive alternatives or counter-narratives....”, see <https://www.christchurchcall.com/call.html>. The New Zealand prime minister has called for “the ethical use of algorithms”, see <https://www.theguardian.com/world/2021/may/15/jacinda-ardern-calls-for-ethical-algorithms-to-help-stop-online-radicalisation>.

- within the context of business models and are dependent on regulatory and governance frameworks;
- provide spaces for engineers to voice their expertise and sustain a dialogue on ethical considerations in AI;
- raise awareness and inform general public on AI and ethics.

70. The idea of ‘diversity-sensitive design’ has gained interest and it has been explore what it would look like when applied to algorithms, a redesign of algorithms that would actively encourage diverse exposure to information, breaking down filter bubbles.¹⁵⁴ A distinction between ‘connection-promoting’ versus ‘non-connection promoting’ social media use may help the possibility of designing social media platforms in a way that could model less polarizing interactions on social media.¹⁵⁵ Another approach is to retrain social media algorithms to refine the concept of ‘meaningful content’ and exclude content that is categorised as ‘outraged, toxic and regrettable’ from algorithms’ definition of what is to be considered ‘meaningful’.¹⁵⁶
71. Digital philanthropy is still in a very nascent phase. Some technology corporates have set up philanthropic ventures that aim to fund organisations tackling some of societies’ most pressing issues.¹⁵⁷ This is in part a recognition that tech corporates themselves may not be best placed to lead initiatives that address some of the challenges they may be contributing to.

Advocacy goals

72. International and national regulation of data collection and use, including processing, aggregation and exchange is of paramount importance. Ethics cannot substitute or replace regulation.¹⁵⁸ Some policy makers advocate for individual data ownership to ensure that the rights of individuals are not violated as a result of their data being used to make automated decisions about them. However, others have argued that individual data ownership still leaves people

154 See Natali Helberger, Kari Karppinen and Lucia D’Acunto Exposure diversity as a design principle for recommender systems, *Information, Communication & Society*, 2018 vol. 21, no. 2, 191–207 <https://www.tandfonline.com/doi/pdf/10.1080/1369118X.2016.1271900?needAccess=true>.

155 Lydia Laurenson Polarisation and Peacebuilding Strategy on Digital Media Platforms: The Current Research https://toda.org/assets/files/resources/policy-briefs/t-pb-44_laurenson-lydia_part-1_polarisation-and-peacebuilding-strategy.pdf.

156 Tobias Rose-Stockwell How to Design Better Social Media – On designing social tools for society <https://medium.com/s/story/how-to-fix-what-social-media-has-broken-cb0b2737128>.

157 See, e.g., <https://omidyar.com/responsible-technology-2/>

158 See Vivek Wadhwa and Tarun Wadhwa <https://foreignpolicy.com/2021/03/01/technology-ethics-regulation-dangers-global-consensus-cooperation/>.

vulnerable to rights violations, both because the choice not to share data may not be a practical/operable choice for them or because models using data from other people may still be used to make decisions about them even if they do not share their data. There are several possible alternative and/or parallel advocacy goals one might consider: One is to regulate the use of aggregated data to make automated decisions.¹⁵⁹ Another is to dismantle some of the 'surveillance-capitalist' business models that many digital technologies rest upon by taxing companies on the amount of data they hold. A third may be public awareness-raising educating citizens and users about use and abuse of data.

73. International standard-setting and international standard-setting organisations (ISSOs) within the digital realm are crucial issues and fora to follow, not only from an economic and commercial point of view, but also from digital commons, democratic governance and human rights points of view. Standard-setting is concerned with setting ground rules, ground rules determine key framework conditions and affect power relationships and are as such intensely political.¹⁶⁰ What appears as highly technical issues may have significant direct and practical impact on democratic governance and human rights, such as international regulation of digital space, including spectrum rights (e.g. affecting availability of digital space for public service institutions thus affecting framework conditions for democratic debate, etc.), internet addresses and public order of the internet (such as ICANN),¹⁶¹ GPS-systems (e.g. surveillance), communications and other satellite-delivered/enabled services (e.g. surveillance). It goes down to standard-setting for digital equipment and software to, as far as at all possible, prevent abuse such as 'baked-in backdoors'.¹⁶² Thus, attention to, i.e., WTO,¹⁶³ ITU and ISO (International Standards Organisation) standard-setting should be stepped up. OECD may perhaps play a bigger role in future standard-setting.¹⁶⁴

159 See Martin Tisne It's time for a Bill of Data Rights <https://www.technologyreview.com/2018/12/14/138615/its-time-for-a-bill-of-data-rights/>.

160 See, e.g., https://www.uschina.org/sites/default/files/china_in_international_standards_setting.pdf.

161 <https://www.icann.org/>. ICANN has launched an Africa Engagement Forum, see <https://www.icann.org/en/announcements/details/icann-launches-the-africa-engagement-forum-supporting-communitys-work-in-the-region-30-4-2021-en>.

162 https://en.wikipedia.org/wiki/Hardware_backdoor.

163 See in general Erik Wijkström and Devin McDaniels International Standards and the WTO TBT agreement: Improving governance for regulatory alignment https://www.wto.org/english/res_e/reser_e/ersd201306_e.pdf

164 OECD manages a broad digital agenda ranging from analyses to international standards and agreements, see <https://www.oecd.org/digital/>.

The same applies to key international non-governmental standard-setting bodies of professional and corporate and associations. Standard-setting for software development and use needs to be stepped up.

BOX 8: DANISH UN MISSION GENEVA

In connection with Denmark's membership of the Human Rights Council 2019-2021, Denmark finances a project with the Danish Institute for Human Rights (DIHR) that aims to promote responsible business conduct in Sub-Saharan Africa. Among the outputs has been a scoping paper on the human rights implications of the digital transition in Sub-Saharan Africa, which includes recommendations for both states and companies. On that basis, DIHR is now engaging with stakeholders to identify areas of collaboration, including capacity building, policy dialogue and awareness raising. In the UN Human Rights Council, Denmark is part of a cross regional core group (together with Austria, Brazil, Morocco, Singapore and South Korea) presenting a bi-annual resolution on Human Rights and New and Emerging Digital Technologies. The resolution underscores the importance of including human rights considerations in the development and deployment of new digital technologies. It was last adopted in July 2019 where it was particularly focused at breaking silos between States, technology companies and the human rights community.¹⁶⁵

74. Local movements can play a crucial role in promoting accountability: Some of the most effective ways to hold technology companies to account for their impact in society have been led at the local or national level, rather than at the international or global level. For example, in 2018 a coalition of six Myanmar NGOs wrote an open letter detailing Facebook's role in fuelling a genocide in Myanmar, putting pressure on the company to respond to calls for greater transparency and consistency in its content moderation policies.¹⁶⁶ Support to civic space seeks to enhance the role of CSOs.

¹⁶⁵ https://ap.ohchr.org/documents/dpage_e.aspx?si=A/HRC/41/L.14.

¹⁶⁶ <https://www.buzzfeednews.com/article/meghara/zuckerberg-open-letter-hate-speech-myanmar>.

6. TOWARDS PROPOSED PRINCIPLES FOR DONOR FUNDING

This chapter aims at operationalising, in a forward-looking fashion, some of the lessons learnt and anticipated challenges ahead by proposing a number of principles guiding donor funding decisions.

Support digital systems that directly or indirectly promote and strengthen human rights and democratic governance

75. Assess human rights impact of digital activities.¹⁶⁷ Ensure do-no-harm policies to ensure that negative side-effects are identified and mitigated.¹⁶⁸

167 See, e.g., primarily with regard to private businesses Danish Institute of Human Rights' guidance on Human Rights Impact Assessment of Digital Activities <https://www.humanrights.dk/publications/human-rights-impact-assessment-digital-activities>.

168 See, e.g., USAID's Digital Strategy 2020-2024 highlights when not to go digital: "While technology can improve many development and humanitarian projects, it is not a panacea. For example, in some cases (such as relief for natural disasters), damage to digital infrastructure can disrupt connectivity and make low-tech tools more reliable. Data about some extremely vulnerable populations could be too sensitive to store digitally, or even to collect, regardless of the security measures employed. Deployment of some digital tools also might be unwise in countries with repressive and digitally sophisticated governments that can subvert or disrupt systems more easily than our partners can protect them. These and other "non-permissive digital environments" require careful consideration of when, and whether, to use digital methods" https://www.usaid.gov/sites/default/files/documents/15396/USAID_Digital_Strategy.pdf, p. 23.

Protect privacy¹⁶⁹ and data integrity. Require 'privacy by design'. A number of digital protection issues are best dealt with already at the design stage, so that it does not become a mere afterthought to be remedied in more or less effective ways. It may also be a more cost-efficient approach.

Do not silo tech projects, make them a possibility in all program areas

76. Some donors have had a tendency to put out calls for proposal for digital technology for development programs separate from other program areas. It may be more effective to make the appropriate use of digital technology a cross-cutting priority for all program areas, since integrated approaches are likely to deliver the most impactful technology designs, with the right mix of on- and off-line approaches. 'Mission-Oriented Innovation' may be an interesting approach that goes beyond programming in a development organisation and essentially suggests to put societal and environmental challenges in the focus on industrial and innovation policies, not

169 The Association for Computing Machinery's (ACM) Code of Ethics and Professional Conduct (2018) provides in para 1.6 "Respect privacy. The responsibility of respecting privacy applies to computing professionals in a particularly profound way. Technology enables the collection, monitoring, and exchange of personal information quickly, inexpensively, and often without the knowledge of the people affected. Therefore, a computing professional should become conversant in the various definitions and forms of privacy and should understand the rights and responsibilities associated with the collection and use of personal information. Computing professionals should only use personal information for legitimate ends and without violating the rights of individuals and groups. This requires taking precautions to prevent re-identification of anonymized data or unauthorized data collection, ensuring the accuracy of data, understanding the provenance of the data, and protecting it from unauthorized access and accidental disclosure. Computing professionals should establish transparent policies and procedures that allow individuals to understand what data is being collected and how it is being used, to give informed consent for automatic data collection, and to review, obtain, correct inaccuracies in, and delete their personal data. Only the minimum amount of personal information necessary should be collected in a system. The retention and disposal periods for that information should be clearly defined, enforced, and communicated to data subjects. Personal information gathered for a specific purpose should not be used for other purposes without the person's consent. Merged data collections can compromise privacy features present in the original collections. Therefore, computing professionals should take special care for privacy when merging data collections", see <https://ethics.acm.org/>.

specific technologies.¹⁷⁰ This requires rethinking the role of the state, our established notions of risks and cross-sectoral collaboration.¹⁷¹

77. In many countries in the South, basic enabling factors, including mobile phone coverage, are already partly in place, often as a result of private sector investments. What is needed is digitisation for more efficient public resource management and software promoting positive outcomes for citizens. Development of flexible, standard digital platforms for public administrations and agencies capable of handling different digital hardware and digital work processes, including standardised decision-making processes, is likely to cut costs and time.

Building trust needs to be 'baked into' the digitisation strategy. As an example, full front- and back-end digitisation of payments of fees, submission of requests for permissions, licenses, etc., is likely to create an increased level of transparency, equality and accountability and thus ideally make corruption more difficult. Back-end digitisation is the difficult part.

Require all programs to consider the local tech ecosystem

78. Donors could go a step further by requiring all programs to consider the technology context in the same way as they are required to consider the political, economic and social context. A digital contextual analysis in order to understand the opportunities and challenges that result to their programming from the prevalence of and access to technologies, including inherent or resulting inequalities.¹⁷²

Ensure donor coordination and alignment in order to prevent building of parallel systems and support inter-operability

79. Coordination in the area of digitization is just as important as in other areas of institutional development and infrastructure funding.

170 See the EU's mission-oriented approach for Horizon Europe https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/missions-horizon-europe/mission-oriented-policy-studies-and-reports_en. See also <https://developmentreimagined.com/>.

171 In essence, the do-not-silo principle challenges the framing of 'techvelopment' to a certain degree. The content of a techvelopment strategy may be very relevant, but the branding suggests a focus on tech, which should not necessarily be the entry point, neither for programming, nor policy, see also <https://horizon-magazine.eu/article/missions-will-require-revolution-european-governments-prof-mariana-mazzucato.html>.

172 In a Danish context this analytical framework should be reflected in an update of the Aid Management Guidelines (AMG), see <https://amg.um.dk/>.

Adopt and promote principles of digital development

80. Critical to digital technology solutions delivering impact is local-led, human centred design. The Principles of Digital Development offer a useful framework for considering ethical design choices.¹⁷³

173 <https://digitalprinciples.org/>. The Principles state: Design With the User – User-centered design starts with getting to know the people you are designing for through conversation, observation and co-creation. Understand the Existing Ecosystem – Well-designed initiatives and digital tools consider the particular structures and needs that exist in each country, region and community. Design for Scale – Achieving scale requires adoption beyond an initiatives pilot population and often necessitates securing funding or partners that take the initiative to new communities or regions. Build for Sustainability – Building sustainable programs, platforms and digital tools is essential to maintain user and stakeholder support, as well as to maximize long-term impact. Be Data Driven – When an initiative is data driven, quality information is available to the right people when they need it, and they are using those data to take action. Use Open Standards, Open Data, Open Source, and Open Innovation – An open approach to digital development can help to increase collaboration in the digital development community and avoid duplicating work that has already been done. Reuse and Improve – Reusing and improving is about taking the work of the global development community further than any organisation or program can do alone. Address Privacy & Security – Addressing privacy and security in digital development involves careful consideration of which data are collected and how data are acquired, used, stored and shared. Be Collaborative – Being collaborative means sharing information, insights, strategies and resources across projects, organisations and sectors, leading to increased efficiency and impact. See on implementation Adele Waugaman From Principle to Practice. Implementing the Principles for Digital Development https://digitalprinciples.org/wp-content/uploads/From_Principle_to_Practice_v5.pdf

Support a 'Hippocratic Oath' for software developers

81. Support adoption and dissemination of international code of ethics for software developers and computing professionals.¹⁷⁴ Codes of ethics cannot substitute international and national regulatory frameworks. However, they may promote awareness and stimulate thinking within the professions and influence corporate policies within a sector of rapid technological development.¹⁷⁵

Support international standard-setting and paradigm development

82. On software, hardware and processing of data. Support governments in the Global South in giving voice to their needs and concerns (advocacy) in the international standard-setting process.

Support imagination of altered or new systems for low or middle-income countries, including new forms of data governance and new uses of the internet, seeking like-minded partners and doers in the Global South.

174 See for an early input the Engineering Ethics and Professional Practices Code of the Institute of Electrical and Electronics Engineers (IEEE) developed by the IEEE-CS/ACM Joint Task Force on Software Engineering Ethics and Professional Practices <https://www.computer.org/education/code-of-ethics>. Principle 1.03. states "Approve software only if they have a well-founded belief that it is safe, meets specifications, passes appropriate tests, and does not diminish quality of life, diminish privacy or harm the environment. The ultimate effect of the work should be to the public good" and Principle 1.04. states "Disclose to appropriate persons or authorities any actual or potential danger to the user, the public, or the environment, that they reasonably believe to be associated with software or related documents". The Association for Computing Machinery's (ACM) Code of Ethics and Professional Conduct (2018) states in para. 1.1 that a "computing professional should contribute to society and to human well-being, acknowledging that all people are stakeholders in computing. This principle, which concerns the quality of life of all people, affirms an obligation of computing professionals, both individually and collectively, to use their skills for the benefit of society, its members, and the environment surrounding them. This obligation includes promoting fundamental human rights and protecting each individual's right to autonomy. An essential aim of computing professionals is to minimize negative consequences of computing, including threats to health, safety, personal security, and privacy. When the interests of multiple groups conflict, the needs of those less advantaged should be given increased attention and priority", see <https://ethics.acm.org/>.

175 See Title IX on codes of conduct for AI in EU Commission Proposal for a Regulation on AI, 21.4.2021 COM(2021) 206 final 2021/0106 (COD) <https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-laying-down-harmonised-rules-artificial-intelligence>.

Support sustainable and self-reliant digital solutions

83. Wherever possible, seek to apply a holistic approach when investing in digital infrastructure solutions. As part of the goals of sustainability and re-use, allow for interoperability and customization of these platforms in a way that reduces waste and vendor lock-in.¹⁷⁶

Consider new actors

84. Local actors working on local technology solutions may not be traditional development actors but could be best placed to spearhead digital development. For example, in the peace building field, digital peace building is probably most effective when it is led by digital activists who have access to peace building practices, rather than when traditional peace building actors with limited experience of or presence in digital space attempt to move their programming online.¹⁷⁷

Commit to scale

85. Over the past decade, there has been a plethora of funding opportunities for digital development pilots. Most of these suggest that if a pilot demonstrates the potential to scale, then follow on funding would be made available. However, often donors have not followed through with scale up funding. When scale up funding is available, the evidence required to prove the impact of a pilot is often high and the speed of scale is assumed to be fast, neglecting that gradual, incremental scale up may be most beneficial in the long run.

176 USAID has identified a number of 'self-reliance metrics' (indicators) to assess level of the ability of a country to plan, finance, and implement solutions to solve its own development challenges, see https://selfreliance.usaid.gov/docs/Self-Reliance_Metrics_Overview.pdf, including WEF's Global Competitiveness Report, see, e.g., <https://www.weforum.org/press/2020/12/few-economies-are-ready-for-long-term-prosperity-through-improved-public-services-green-investments-and-digitization-study-finds-c9047943d2>, and the Varieties of Democracy (V-Dem) project conceptualizing and measuring democracy. The V-Dem project distinguishes between five high-level principles of democracy: electoral, liberal, participatory, deliberative, and egalitarian, and collects data to measure these principles, see <https://www.v-dem.net/en/>. See also USAID Digital Strategy 2020-2024 https://www.usaid.gov/sites/default/files/documents/15396/USAID_Digital_Strategy.pdf, p. 34.

177 See also Adam Moe Fejerskov and Dane Fetterer Innovative Responses to Covid-19 – Future Pathways for 'Techvelopment' and Innovation (2020) https://pure.diiis.dk/ws/files/3869715/Innovative_responses_to_Covid_19_DIIS_Report_2020_07.pdf, p. 38.

Promote pro-bono public service software development

86. Apply venture capital principles¹⁷⁸ to innovative human rights and democratic governance investments. Support local innovation ecosystems providing a line of sight for local software developers and other innovators to bring their solutions to scale. This includes the availability of different forms of financing at different stages of the scaling journey.¹⁷⁹
87. Support the development of locally relevant digital content and the foundation for this.¹⁸⁰ Work with governments, civil society and local digital ecosystems¹⁸¹ on imagination of digital systems that enable citizens to hold governments to account, engage in public policy processes, participate in civic engagement, access easily public services and have their data protected.¹⁸²
88. Computer science researchers in Denmark and elsewhere point out that public funding schemes, including EU research grant facilities and tenders, do not fully appreciate the nature of software development. In general, there is resistance or reluctance to fund development of software, it is seen as an area which should primarily

178 https://en.wikipedia.org/wiki/Venture_capital.

179 There is a proliferation of donor-supported funding for early stages in some contexts, such as Kenya. These can have detrimental effects, see Endeavor Insight Fostering Productive Entrepreneurship Communities: Key Lessons on Generating Jobs, Economic Growth, and Innovation (2019) <https://endeavor.org/wp-content/uploads/2015/06/Fostering-Productive-Entrepreneurship-Communities.pdf>. Moreover, often there simply is not a scaling pathway as local ecosystems are not mature enough.

180 See, e.g., Mozilla Common Voice supporting software development to democratize and diversify voice tech in East Africa <https://foundation.mozilla.org/en/blog/mozilla-common-voice-receives-34-million-investment-to-democratize-and-diversify-voice-tech-in-east-africa/>.

181 This may include Denmark working with governments and CSOs of LICs and MICs on questions that Denmark is also working on related to tech, governance and human rights. This might further foster a transition from a solution provider to a partnership mental mode and modus operandi.

182 See, e.g., with regard to children's' data <https://www.unicef.org/globalinsight/media/1771/file/UNICEF%20Global%20Insight%20Data%20Governance%20Summary.pdf>

be left to the corporate sector.¹⁸³ This results in a lack of funding for what might be called 'public service' software. It may require public 'venture capital', since success cannot be guaranteed, but if scalability is achieved, the impact may be much bigger than other types of interventions. Scholarships and student exchanges are important tools to bridge gaps and promote understanding.

89. Commercial SMEs/start-ups with a mission to produce sustainable tech solutions tailored to local needs in the Global South voice similar concerns.¹⁸⁴ An agile public fund with capacity to grant and manage smaller allocations is needed. Innovation funds have been given to Danish NGOs,¹⁸⁵ but not to those who can create the solutions.

183 See, e.g., Zwölf Thesen zur deutschen Softwareindustrie (2021), These V: "Deutschlands Software-Wahrnehmung ist nicht zeitgemäß. Softwaretechnische Themen werden in Deutschland typischerweise nicht als Domäne wissenschaftsbasierter Wertschöpfung gesehen, sondern als handwerkliches Nebenwerk («Schnittstellenbastelei») betrachtet. Dabei wird Softwareentwicklung vorwiegend als Kostenfaktor und nicht als Wertschöpfungs- oder Innovationsfaktor angesehen. Gleichzeitig kann aber ein Wahrnehmungssparadoxon festgestellt werden, zwischen einerseits der allgemeineren Wahrnehmung des Themas als trivial und andererseits der punktuellen Wahrnehmungen des Themas als allzu fortgeschritten für deutsche Verhältnisse (Wer in Deutschland könnte ein Google bauen? Wer in Deutschland hätte AlphaGo machen können? Wer in Deutschland könnte ein AWS-Stack bauen? Wer in Deutschland könnte die Software für Tesla entwickeln?)" and These VI: "Fehlende Förderung von softwarebasierten Innovationen. Forschung zu Software-Entwicklungsmethodik und Software – Entwicklung werden bei vielen FuE-Projekten nicht systematisch oder nicht hinreichend gefördert. Dies ist ein strukturelles Problem bei der Finanzierung von softwareintensiven Innovationsprojekten in Deutschland. Relevante Förderprogramme beinhalten typischerweise keine Leistungsparameter (KPIs) für Innovationen in Software Engineering und Softwaretechnik. https://www.iuk.fraunhofer.de/content/dam/iuk/de/documents/positionspapier_wertsch%C3%B6pfung-durch-software_de.pdf

184 TechVelopment Denmark, an association of Danish startups and SMEs that aims to improve the visibility of innovative, technology-based approaches to creating impact in the global South (see <https://www.techvelopmentdenmark.com/>), has expressed a need to discuss new financing modalities.

185 See Adam Moe Fejerskov and Dane Fetterer Maturing 'techvelopment' – Danish Civil-Society Organisations Need to Sharpen Their Innovation Focus (2020) https://pure.diis.dk/ws/files/3452730/Techvelopment_web.pdf

7. RECOMMENDATIONS

Based on Chapters 5 and 6, this chapter seeks to formulate some concrete goals and action points on three levels (structural, agency and institutional). Some of the suggested structural and agency goals and actions are short-term (indicated with 's'), others medium-term ('m-t') or for the long haul /long-term ('l-t'), some of them are combinations of short-, medium- and long-term goals and actions depending on the substance and processes involved.

90. As mentioned earlier (para. 8 above) the study is based on a broad distinction between structure and agency, where structure refers to the societal context (political, social, economic, technological) and agency to citizen-focused space for action. The recommendations below follow this distinction.

The structural and agency related recommendations are generalized pointers that may be of interest to donors and others promoting, participating and partnering in international development.

The organisational recommendations seek to identify some areas for possible further discussion within the Danish development and humanitarian aid administration but may have broader interest as well.

Structural

The overall development objective is to:

- support and enhance an enabling environment which guarantees and promotes the digital commons as a collective social good facilitating participation, inclusion, transparency and democratic values;
- promote and support 'basic digital space' as a public utility and pre-condition for democratic governance and citizen agency.

Digital sovereignty and self-reliance

- Support national 'digital sovereignty' to the extent possible. Full national digital self-determination may not be possible for most states at the present moment. Nevertheless, as an overall aim, critical digital infrastructure should as far as possible be under meaningful national control while seeking to guarantee that it is not being abused to limit human rights and freedoms of citizens. (l/t)

RECOMMENDATIONS

- Support to digital self-reliance and sustainable digital infrastructure may be a more realistic goal in the medium term, in the sense that states should have the capabilities and capacity to manage and maintain national critical digital infrastructure. (m/t)
- Support for digital sovereignty and digital self-reliance will require a mixture of international advocacy pushing for equitable international regulatory (soft and hard law) framework and financial and technical support. (l/t)
- Support national and regional analyses and assessments of the impact of tech giants investing increasingly in tech infrastructure across Africa and in influencing tech regulatory infrastructure. (s/t)
- Prioritise research funding for public service software and support open source movement. Prioritise concessional private sector funding for local software innovation hubs and ecosystems. Wherever relevant and feasible, support distributed systems to increase resilience and prevent centralised abuse,¹⁸⁶ including internet lockdowns.¹⁸⁷ (s/t-m/t)

Basic digital infrastructure

- Needs-based: Treat digital infrastructure as a utility (like water and electricity).¹⁸⁸ Tech solutions should be designed on the basis of local context analysis, not on basis of tech product solutions. Support lower entry/threshold transaction costs and non-discriminatory and inclusive coverage (equal access to basic digital services). (s/t-m/t)

Basic regulatory infrastructure

- Strengthen/tilting level playing field (competition law and enforcement, access to finance, spectrum access, equitable broad band auctions, legally commit private investors and providers to pursue inclusive policies and pricing, etc. 'Civic space' may be seen as a constituent part of a level playing field). This market-shaping approach is not only concerned with a top-down implementation of governments' or international organisations' attempts to solely de-risk investments and level the playing field, but rather about tilting the playing field in the direction of desired social outcomes. (m/t-l/t)

186 This was the original design of the ARPANET, <https://www.britannica.com/topic/ARPANET/A-packet-of-data>, which became the foundation for the World Wide Net.

187 See, e.g., Access Now Internet shutdowns and elections handbook <https://www.accessnow.org/internet-shutdowns-and-elections-handbook/>.

188 The #KeepItOn coalition opposes internet shutdowns <https://www.accessnow.org/keepiton/>.

- Support data protection legislation and supervision and enforcement by independent data protection commissioners. Strengthen consumer protection legislation and enforcement. (m/t)
- Support public authorities' capacity to analyse digital needs and trends, to establish specifications, manage procurement and tenders, negotiate and enforce contracts with private sector (mitigate asymmetric power balance between tech investors, digital vendors and governments).¹⁸⁹ (s/t-m/t)
- Consider development aid engagement with the International Telecommunications Union as a key standard-setting forum (and other multilateral organisations with a tech- and development-mandate) to focus on embedding democratic values in techvelopment conceptual thinking and programming. (s/t-m/t)
- Support positive business incentives, such as 'green listing'/'digital human rights index' and benchmarking, as a precondition for investments from pension funds and other institutional and private investors. Include 'privacy pressure'/'data toxicity' as a relevant indicator when assessing corporate business models and performance. (m/t)

Strengthening democratic governance

- Support broad-based digital literacy (training, education, etc.). (m/t)
- Support digital platforms committed to public service (open, independent and inclusive communication and social discourse). Support equal and safe access to public digitised rights and information systems (register of deeds, entitlements, public services, etc.). (s/t-m/t)
- Support efficient digital taxation and create rights-promoting incentives. Tax multinational digital companies and platforms based on i) turn-over or other appropriate metric and ii) commercial privacy pressure exercised (degree and intrusiveness of commercial digital surveillance/'data toxicity') to ensure fair contribution to state finances and to disincentivize corporate misbehaviour. Ensure that local media content is remunerated when used by social platforms

189 The World Bank Independent Evaluation Group's (IEG) report on Mobilizing Technology for Development (2021), assessing World Bank Group preparedness regarding disruptive and transformative technologies (DTT) <https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/MobilizingTechnologyforDevelopment.pdf>, finds that with regard to World Bank procurement there is "currently only fragmented guidance for complex technology projects, specifically on their associated risks (such as vendor lock-in, lack of interoperability of systems, potential loss of data ownership and lack of data privacy, limitations in technology-specific legislation and regulation, and mismatch between business processes and the requirements of the particular technology)" (p. xv).

in order to maintain a vibrant and diversified local media scene and ecosystem. (m/t-l/t)

- Support national media legislation, promote editorial responsibility for platforms (at a minimum seeking to establish level playing field with other often local media). (s/t-m/t)

International advocacy and standard-setting

- Push for regulatory reform and binding regulations, including anticipatory regulation,¹⁹⁰ globally and regionally regarding data protection, privacy, AI and prohibition of discriminatory uses of data. Until now the EU has proven to be the critical global actor taking the lead on identifying, analysing, conceptualising and enacting regulatory models and solutions. The EU should be given maximum support to continue and expand this vital role s regulatory first-mover. (s/t-l/t)
- Promote further implementation at the national level of the UN Guiding Principles on Business and Human Rights, as the consensual global basis for strengthening business respect for human rights and access to remedy for victims also as concerns new technologies, and on the basis of the work already that regard by OHCHR under the B-Tech project. Promote proactive EU engagement in discussions in the UN on a possible international legally binding instrument for business and human rights. (s/t-m/t)
- Push for regulating digital do-no-harm aspects of international trade policy and concessional investments, push for introduction of digital safeguards when reviewing international trade, export licensing, investment and labour policies. (m/t)
- Push for human rights screening of international standard-setting in key international public and professional regulatory and technical fora having an impact on basic digital infrastructure and services, including WTO, ITU, ISO, GSMA, etc. (m/t)
- Push for elaboration and adoption of professional codes of ethics, including do-no-harm principles, for engineers and software developers and other professions having a direct impact on digital development in order to stimulate proactive thinking among the professions. Counteract the 'move fast and break things' ethos prevalent in some corporations. (m/t)

¹⁹⁰ <https://www.nesta.org.uk/feature/innovation-methods/anticipatory-regulation/#:-:text=Traditional%20ways%20of%20regulating%20are,and%20responds%20to%20evolving%20markets.>

- Seek to develop OECD/DAC digital agenda, including formats for digital maturity assessments, and include appropriate digitisation marker in OECD/DAC reporting.¹⁹¹ (s/t-m/t)
- Address risk of duplication of funding for software for development and humanitarian aid. Coordination is needed between big public tech actors/platform owners, e.g. World Bank, UNHCR, WFP, and dialogue with critical private actors, e.g., payment and cryptocurrency platforms. (s/t-l/t)

Agency

The overall development objective is to support and enhance citizens' independent and free digital agency in order to access, use, develop and disseminate digital tools and services in the exercise of their human rights and freedoms.

Strengthening citizen agency

- Continue, expand and, where relevant, scale up existing 'digital civic space' initiatives. (s/t-m/t)
- Support free and secure digital tools to enhance exercise of human rights and freedoms, including interference-free encrypted communication, privacy protection and defence against corporate and state digital abuse. (s/t-m/t)
- Support software programming to mitigate 'dystopian futures'. The overall power balance between states and corporations, on the one hand, and citizens, on the other, is trending towards the former in the digital space. Systemic abuses, corporate and state surveillance and authoritarian restrictions are on the rise while citizens become more and more dependent on digital services, thus more vulnerable. Software (and hardware) design needs to consider abuse and possible mitigation already at the design phase. (s/t-m/t)
- Promote pro-bono software strengthening citizen participation, inclusion and mobilisation. Support development of locally relevant digital content and the foundation for this. Work with governments and civil society on imagination of digital systems that enable citizens to hold governments to account, engage in public policy processes, participate in civic engagement, access easily public services and have their data protected. (s/t-m/t)

¹⁹¹ The 2021 OECD Development Co-operation Report (DCR 2021) is on digitalization and digital realities. The DCR is the OECD's annual flagship report on development co-operation. Each year the report tackles a topic that is critical to making progress on the SDGs, providing analysis and insights for the Development Assistance Committee (DAC) and the International Development community, see https://www.oecd-ilibrary.org/development/development-co-operation-report_20747721.

Danish development and humanitarian policy, programming and management

The overall development objective of a digitised aid administration is to fully conceptualize and internalize the opportunities and implications of digitisation in Danish development and humanitarian aid policy as well as harnessing digital services in the management, programming and implementation of Danish development and humanitarian aid.

Comprehensive digital approach

- Develop a how-to-note or other appropriate format describing the overall and cross-cutting implications of digitisation for development programming, fully realising the potential of digital development as a basic need in line with provision of other basic infrastructure (electricity, water and roads).

It does not necessarily mean that Denmark should be funding basic digital infrastructure, much of which can be left to private capital, provided that the appropriate regulatory framework is in place, but Danish development policy and operational implementation plans need to have an explicit (stated) approach to inclusive and equitable digital infrastructure. The operational digital approach needs to identify key digital partnerships, including the EU. It also needs to make explicit whether initiatives set out to a) strengthen an existing structure; b) work on shifting the paradigms, the directionality of existing structures; and/or c) work on shaping new structures. As pointed out, the differentiation between engaging in existing structures and attempting to influence the shape of new ones is especially important in the fast-moving area of digital technology where time is of the essence and proactive interventions may be more cost-effective.

- Develop a how-to-note or other appropriate format describing the internal institutional digital approach, specifying digital human resource skills needed and digital tools to be developed and implemented, possibly in collaboration with like-minded aid administrations.

Programming

As obligatory part of partner/priority country programme preparation (scoping and appraisal)

- Conduct holistic maturity assessment of national digital infrastructure, including digital media and e-government systems, and ecosystems¹⁹² to determine reach, inclusion, quality and provide data risk analyses.¹⁹³ In the medium term, such assessments should perhaps be conducted by consortia of donors and partners in order to achieve standardised approaches, comprehensive assessments, build consensus, coordination, scale, efficiency and inter-operability.¹⁹⁴
- Consider whether to include a cross-cutting or specialized digital programme component in each country programme, including possible collaboration between relevant Danish agencies, such as the Danish Agency for Digitisation and the Danish Data Protection Agency, and national partner agencies.
- Expand and scale up existing digital ‘civic space’ initiatives.¹⁹⁵
- Elaborate a ‘how-to’ note on digital scoping and screening of country programmes and a ‘how-to’ note on promotion of digital democratic participation and citizen agency.

Holistic advocacy

- For Denmark, the EU is the key international first-mover actor when it comes to identifying, conceptualising and enacting comprehensive actions plans and regulation. Due to the size of the internal market the EU carries considerable weight also outside the EU, which, combined with EU intellectual leadership, may promote de facto/ de jure extra-territorial effects benefitting countries wanting to raise standards and protect democratic participation and human rights.
- At MFA embassies, in light of tech as a cross-cutting issue, dedicate officers to follow tech across all fora, especially in Brussels, Geneva and New York and possibly OECD/Paris. Highly technical fora, such

192 The concept of ‘digital maturity’ was developed for the use of private sector assessments, see, e.g., for inspiration Siemens African Digitalization Maturity Report 2017 <https://assets.new.siemens.com/siemens/assets/api/uuid:342ebb4f8c3596edb6ead62987e60ae6bea10e0d/version:1543065528/siemens-african-digitalization-report.pdf>, and Deloitte’s <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Technology-Media-Telecommunications/deloitte-digital-maturity-model.pdf>. UNDP is using maturity assessments when planning interventions.

193 See, e.g., USAID’s illustrative opportunities and risk analysis in Digital Strategy 2020-2024 https://www.usaid.gov/sites/default/files/documents/15396/USAID_Digital_Strategy.pdf pp. 18-19. See also UNDP’s Digital Strategy <https://digitalstrategy.undp.org/introduction.html>.

194 As part of the Digital Economy for Africa initiative (DE4A) the World Bank undertakes country diagnostics (partly supported by Denmark) of the ‘digital economy’, see, e.g., Country Diagnostic of Senegal <https://documents1.worldbank.org/curated/en/814111559645179494/pdf/Country-Diagnostic-of-Senegal.pdf>. This diagnostic

195 The existing HCE-run digital civic space initiative is clearly relevant and should be continued and expanded based on lessons learnt.

as international standard-setting organisations (ISSOs) should be actively monitored to prevent creeping regulation of human rights under the guise of technical standards. Consider stronger Danish/ MFA presence in technical and standard setting organs such as the ITU, who are not working with human rights and democracy at a normative level but where the standards agreed upon have vast implications of the day-to-day use of for instance AI and facial recognition.

- At MFA HQ, consider dedicating an internal cross-cutting co-ordinating function to support holistic work on technology. This function should promote sharing of knowledge across different fields, EU and UN-agencies (such as HRC, ITU, WIPO and WTO) and give Denmark the ability to engage proactively together with the – unfortunately still rather select – group of Western countries with resources allocated to active tech presence – and in turn contribute to ensure consistency and efficiency in Danish policy making.

Staff skills and IT infrastructure

- Implementing an overall and cross-cutting institutional digital approach will likely need to include a reconsideration of internal organisation and silos.
- Staff configuration, continuity and knowledge will as always be important factors.¹⁹⁶

196 See as a source of inspiration Recommendation 2 of the World Bank Independent Evaluation Group's report on Mobilizing Technology for Development (2021), assessing World Bank Group preparedness regarding disruptive and transformative technologies (DTT) <https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/MobilizingTechnologyforDevelopment.pdf> and USAID's IT Strategic Plan 2016-2021 https://www.usaid.gov/sites/default/files/documents/USAID_IT_Strategic_Plan_2016-21.pdf para. 19.

Concessional financing facilities

- Support to software development cannot necessarily be measured in the same way as other investments. The margin for failure has to be wide, iteration is constantly needed, as the potential and scalability are the goals of the financial investments/allocations; the power of proof of concepts is important.¹⁹⁷ Consider whether the fund contemplated in connection with Tech for Democracy¹⁹⁸ and/or IFU might be the right vehicle(s) for management of a technology fund/facility for software development funding, including applied research, and collaboration between research institutions and SMEs in Denmark and the Global South. Consider whether EKF can further facilitate relevant credits for African countries.
- Consider a software ‘accelerator’ facility with pre-qualification of secure solutions in collaboration with partners in the Global South.
- Consider whether a ‘SKI-like’ (public procurement)¹⁹⁹ model for standard software that can be easily modified is relevant within the area of development assistance.

197 See also Chapter 5 Institutional Culture and Incentives for Risk Taking and Innovation and Annex F Creating a Culture of Risk Taking and Innovation, World Bank Independent Evaluation Group’s (IEG) report on Mobilizing Technology for Development (2021), assessing World Bank Group preparedness regarding disruptive and transformative technologies (DTT) <https://ieg.worldbankgroup.org/sites/default/files/Data/Evaluation/files/Mobilizing-TechnologyforDevelopment.pdf>

198 <https://um.dk/da/nyheder-fra-udenrigsministeriet/newsdisplaypage/?newsID=9B78CC0F-47B7-4D66-A048-97A6F0599855>.

199 <https://www.ski.dk/>.

**MINISTRY OF FOREIGN AFFAIRS
OF DENMARK**

2 Asiatisk Plads
DK-1448 Copenhagen K
Denmark

Tel +45 33 92 00 00
Fax +45 32 54 05 33
um@um.dk
www.um.dk

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