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SADC Futures of Digital Geopolitics: Towards African Digital Sovereignty

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African perspectives
Global insights

Abstract

The digitisation of data – spurred on by the Fourth Industrial Revolution (4IR) – presents the Southern African region with very real opportunities for developmental leapfrogging. This could alleviate historically imposed dependencies and fast-track post-COVID-19 economic recovery. However, the digital governance models of the US, China and Europe are likely to shape the parameters of norms and characteristics of the digital domain in the region.

Rising youth populations and democratic instability make Southern Africa (big tech's new frontier) vulnerable to political co-option by emerging digital hegemonies. More worryingly, weak oversight at the regional and national level can embolden authoritarian governments and political elites to abuse regulatory tools that promote digital sovereignty and so entrench control and suppress citizen expression and action – the tenets of democratic governance. Individual states and regional economic mechanisms such as SADC will face critical decisions given the substantial infrastructure investment required to bridge the digital divide between them and major trading partners and create thriving and inclusive digital economies. SADC governments, therefore, should put forth human-rights-led policy responses to build anticipatory digital governance capability, bolster data sovereignty, foster digital innovation ecosystems and deepen the democracy-digital nexus at the country and continental level.

This occasional paper makes a number of recommendations in terms of SADC's ability to assert itself as a digital actor. These relate to the continent's being supported to play a more influential role in international standard-setting forums. Arguably, the future prosperity of states will depend on the extent to which they are able to integrate into this digital world. Marginalised for centuries, Africa, including the SADC region, could leverage this digital revolution to gain more equitable footing in its economic and political relations with the rest of the world. However, it will need to leverage these technologies to ensure that such developments occur on its own terms and in response to its contextual needs.

Introduction

In 2016 Klaus Schwab, founder of the World Economic Forum (WEF), coined the term '4IR' to describe a new economic epoch enabled by the digitisation of data. Within this new economy, data would become the most treasured primary commodity, constituting the raw material from which companies and countries distil information, knowledge, insight and, ultimately, intelligence for competitive advantage and profit.

The sheer growth of data volumes this century has enabled this shift and has largely been driven by the growth in global Internet access. According to the International Telecommunications Union's (ITU) 2021 estimate, around 63% of the world's population (4.9 billion people) are now using the Internet, compared to 16% (1 billion people) in 2005.¹ It is not only the number of users that are significant but also the variety of ways in which they access the world-wide web. It is estimated around half of all people have a social media presence,² where different forms of data with different degrees of sensitivity are shared voluntarily on a daily basis. An even larger source of data harvesting occurs through the so-called Internet of Things. This consists of an ever-growing range of devices, including home appliances, fitness trackers, smart factory machines and biometric scanners, that constantly gather and process data to enhance and customise services to users.

'Data has become a very important commodity, probably more important than oil and more important than precious metals'

The Southern African region has not been exempt from this megatrend towards digitisation. Albeit from a low baseline, the region has experienced rapid digitalisation over the past decade, where functions of business and society are becoming increasingly dependent on data in a variety of forms.³ 'Data has become a very important commodity, probably more important than oil and more important than precious metals.'⁴

It is also widely agreed that the region's digital economy (currently in its infancy) holds significant potential to be a critical driver of economic growth in an untapped and expanding market.⁵ As infrastructure investment expands to cover the continent with the

1 International Telecommunications Union, "Statistics", 2021.

2 Dave Chaffey, "Global Social Media Statistics Research Summary 2022", Smart Insights, August 22, 2022.

3 Gabriella Razzano et al., "The Digital Economy and Society" (SADC PF Discussion Paper, Research ICT Africa, Cape Town, 2021).

4 Advocate Pansy Tlakula, Information Regulator of South Africa, interview by authors, July 20, 2021.

5 World Bank, "The Digital Economy for Africa Initiative", 2021; Alastair Tempest, "The Digital Economy and E-Commerce in Africa: Drivers for the African Free Trade Area?", South African Institute of International Affairs, May 4, 2021.

world's fastest-growing population – it is estimated that 42% of the world's youth in 2030 will be African⁶ – Africa is fast becoming the next frontier for global tech giants.⁷

Like other parts of the world, Southern Africa will have to face the dual challenge of leveraging the economic benefits of digitisation while regulating its emerging societal and political implications. Given the lightning-fast speed at which the digital domain is evolving, it is hard to fully fathom the total impact of this exponential growth in global data volumes and speeds. From a purely economic perspective, it will prompt competition for technological innovation to create ecosystems that allow economic actors in all imaginable sectors to harvest and process big data for profit. This will require investment in software, hardware and algorithmic programming skills. However, these sophisticated ecosystems are of little use without growing pools of human behavioural data. In light of this, competition for access will also increase.

As a result, the normative dimension around the ownership and governance of private data – the bedrock of the digital economy – also makes the management of digitisation a political question that remains far from settled. In recent years, it has thrown up various ethical quandaries around issues such as personal privacy and accountability for the unintended consequences of imperfect autonomous decision-making systems. It has resulted in the blatant abuse and/or exploitation of weak regulatory environments through foreign election interference, the mobilisation of fake news, cybercrime and the online radicalisation of all kinds of groups, especially the marginalised. 'We tend to think of human rights, social equality and digital inclusion as soft issues. But actually, they are vital to developing sustainable digital economies in the region.'⁸

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As digital politics scholar Jamie Susskind notes, we are entering a new 'digital lifeworld' for which the ground rules are not yet clearly defined. As these grey areas emerge, we need to reconceive governance within this realm, otherwise we will 'become increasingly subjugated to digital systems that we can scarcely understand, let alone control. This would place us at the mercy of those who control these digital systems.'⁹ As outlined

6 Population Reference Bureau, "Africa's Future, Youth and the Data Defining Their Lives" (Policy Brief, PRB, Washington DC, 2019).

7 Nicholas Sheard, "Is Africa the New Frontier for Data Centres?", Rider Levett Buckall, June 25, 2021.

8 Anriette Esterhuysen, Chair of the UN's Internet Governance Forum Multistakeholder Advisory Group, interview by authors, June 9, 2021.

9 Jamie Susskind, *Future Politics: Living Together In a World Transformed by Tech* (Oxford: Oxford University Press, 2018), 25.

in subsequent sections, these issues of governance are being dealt with in distinct ways by major role players with divergent worldviews and geopolitical interests in the race for technological dominance. And this has profound implications for the choices that policymakers in Southern Africa make.

While there is a pressing need to fast-track regional digital integration, infrastructure procurement and the values that will underpin regulatory frameworks cannot be divorced from their longer-term democratic and geopolitical implications for the sovereignty of African states. If leveraged appropriately, these technologies could allow sub-Saharan societies and economies to 'leapfrog' developmental challenges often attributed to non-industrialisation. It is necessary, however, that technologies are adopted on African terms and aligned to the continent's development needs. If not, it risks falling victim to a new form of digital colonialism that will, either by design or by default, shape its digital space in the image and to the benefit of the major global tech powers. As such, it is important for Africa and its respective states to be cognisant of the broader geopolitical digital dynamics that will shape economies and societies in years to come. At stake is the agency and, by extension, the sovereignty of African states to leverage the 4IR in ways that make progress more than just a by-product of the prosperity of tech powers.

Who are these powers, and what underpins their global expansion?

The rise of the digital powers

Competitiveness in the global economy will increasingly be determined by the capacity to mine constantly expanding volumes and varieties of data at growing speeds and to translate these into knowledge, insight and intelligence. It follows that successful states will be defined by their ability to seamlessly integrate their industries into this new digital economy. The powerful states will be those that innovate the infrastructure and technologies upon which this new digital economy will run. As such, we should accept that the latter category of states, as well as their interactions with each other, will have a profound impact on the parameters for conduct and normative values in an evolving global digital economy.

This is a reality of which world leaders have been acutely aware for some time. In 2013, Chinese leader Xi Jinping noted: 'The vast ocean of data, just like oil resources during industrialisation, contains immense productive power and opportunities. Whoever controls big data technologies will control the resources for development and have the upper hand.'¹⁰ Similarly, Russia's Vladimir Putin said of artificial intelligence (AI) in 2017 that, 'it is the future, not only for Russia, but for all humankind. It comes with colossal opportunities,

¹⁰ Matt Pottinger and David Feith, "The Most Powerful Data Broker in the World Is Winning the War Against the US", *New York Times*, November 30, 2021.

but also threats that are difficult to predict. Whoever becomes the leader in this sphere will become the ruler of the world.’¹¹

Who, then, are the frontrunners to shape the new digital lifeworld, and what should we expect from the type of influence that they will exert within the digital realm? While digitisation has become a priority area for many countries, there are currently three contenders that are actively vying for supremacy in this sphere. At present, the US leads the pack in terms of the breadth and sophistication of its innovation pipeline, but China, the second contender, is fast catching up, with aspirations to become highly influential, even dominant, within the digital domain. While actively promoting the growth of its tech ecosystem, the third candidate, the EU, is not yet contesting on account of its scale, but seeks to position itself as a global normative power in the domain of digital regulation.

This occasional paper briefly explores the digital technology environments of each of these players before proceeding to focus on the ways in which they hope to shape the geopolitical landscape.¹²

The US model: Move fast and break things

In *Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power*, Shoshana Zuboff meticulously documents the evolution of the surveillance-capitalism business model that today underpins the US digital economy.¹³ Pioneered by Google, which discovered the vast revenue potential of unprocessed behavioural user data when subjected to clever algorithms, the model encourages individuals to surrender personal information, which is then commodified to improve the targeting of consumers. Other tech giants such as Meta (formerly Facebook), Microsoft and Amazon soon emulated the model. This gave rise to massive investment in innovations that, with growing sophistication, enabled the extraction and commodification of human experience. Over the years it has evolved from the mere observation of behavioural data to the profiling of users and, increasingly, to the development of persuasive technologies that provide psychological stimuli to influence behaviour.

This pursuit to capture and shape human conduct is increasingly occurring at the margins of ethical propriety. In the absence of regulatory environments with the capacity to anticipate the societal implications of novel technologies, Meta founder Mark Zuckerberg’s motto to ‘move fast and break things’ has become emblematic of an industry that in practice has evolved to become a law unto itself. Overwhelmed by the speed of innovation and the power of tech lobbies, legislators more often than not fail to contain its oversized influence.

11 James Vincent, “Putin Says the Nation that Leads In AI ‘Will Become the Ruler of the World’”, *The Verge*, September 4, 2017.

12 Jan Hofmeyr, “South African Scenarios for the Impact of Artificial Intelligence on Liberal-Democratic Governance by 2030” (MA dissertation, University of Stellenbosch, 2020).

13 Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for Human Future at the New Frontier of Power* (London: Profile Books, 2019).

Over time, therefore, a strategy of innovation, habituation and the creation of dependency has entrenched several invasive technologies without much resistance from lawmakers.

As such, the US model for digital technology innovation can largely be described as a commercially driven private sector endeavour in which the role of the state is that of regulator in the final instance, curtailing the worst excesses of digital technologies once they become visible. Innovation is driven by market forces, underpinned by public and private sector demand, and not by a larger integrated and centrally designed vision of/for society. Philosophically, this approach is still notionally based on the original, but outdated, worldview that regards the world wide web as an open and equalising free global platform to transact and exchange. In practice, however, power firmly resides in the hands of big tech companies, with smaller players, and individuals in particular, vulnerable to the dictates of these companies. Most contentious has been the extent to which they have been allowed to commodify individuals' data for commercial and political purposes in ways that have disrupted societal cohesion.

The Cambridge Analytica scandal, relating to the abuse of Facebook user data during the 2016 US presidential election campaign, may have represented a turning point in terms of the assertiveness of US legislators. In 2020 this resulted in a range of antitrust hearings into alleged anti-competitive behaviour by companies, such as Alphabet (the parent company of Google), Meta, Amazon, Microsoft and Apple. While these hearings created the momentum to update US antitrust laws in 2021 to enable the break-up of the dominance of these behemoths, their basic business models still have malign social outcomes within the US and outside of its borders.¹⁴ In 2021 Meta whistle-blower Frances Haugen raised concerns with the US Securities and Exchange Commission about the very underpinnings of the surveillance capital model, which exploits personal data without due concern for the broader social ramifications.¹⁵

‘Southern African countries with relatively limited global leverage have to be quite strategic in our relationships with social media platforms to ensure that our voices are heard... it is not unrealistic to think that social media can collapse democracies’

While Haugen in her testimony did point to Meta's growing willingness to play a stronger moderating role in terms of its content in the US, this is not pursued with the same fervour

14 Eliza Mackintosh, "Facebook Knew It Was Being Used to Incite Violence in Ethiopia. It Did Little to Stop the Spread, Documents Show", CNN, October 25, 2021.

15 "Facebook Files: 5 Things Leaked Documents Reveal", BBC, September 24, 2021.

outside of its borders. As such, the weaponisation of platforms such as Twitter, Facebook and WhatsApp in the developing world continues unabatedly, resulting in political and social instability. ‘Southern African countries with relatively limited global leverage have to be quite strategic in our relationships with social media platforms to ensure that our voices are heard... it is not unrealistic to think that social media can collapse democracies.’¹⁶

This, once again, underscores broader concerns about the US model, namely the leeway that has been given to tech giants to capture global market share without sufficient consideration for the broader social and political implications of their endeavours.

The Chinese model: State-controlled centralised tech for shared prosperity

China’s technological ecosystem is distinct from that of the US in that the state plays a central role in ensuring that digital innovation and regulation are aligned to the pursuit of the Chinese Communist Party’s broad vision of ‘shared prosperity’.

Chinese tech companies operate at arm’s length from the state, which has played a central role in creating a nurturing environment for the growth of global tech leaders such as Huawei, Alibaba, Tencent, Meituan and Baidu. At the same time, the state has not hesitated in reining in these companies when their activities were perceived to run counter to the national vision. In 2021, for example, the initial public offering of Ant Group, an Alibaba affiliate, was halted following concerns about its outsized power within Chinese society at the intersection of tech and fintech and critical comments by Alibaba founder Jack Ma about state interference in the domestic economy. After listing on the New York Stock Exchange (NYSE) in 2021, Didi, the ride-hailing company, is currently planning to delist from the NYSE and list on the Hong Kong Stock Exchange following intense scrutiny of data security by the Chinese state.¹⁷ Tencent, a company with strong Southern African ties through the 28.8% shareholding of Prosus, a subsidiary of South African company Naspers, has also been taken to task. In 2021 it was subjected to government scorn for the alleged corrupting impact of its gaming business on young people¹⁸ and in July 2022 it, along with Alibaba, was fined for falling short in declaring certain transactions, in line with anti-monopoly legislation.

Citizens’ online freedom is constrained to the extent that it is perceived to be eroding – or assisting the erosion of – the pursuit of a more materially equitable and just society. In essence, such censorship mirrors the pre-digital character of the Chinese state, giving it the power to override freedoms that are deemed to clash with the greater good of society.

16 Advocate Pansy Tlakula, Information Regulator of South Africa, interview by authors, July 20, 2021.

17 Shiyin Chen and Coco Liu, “Didi’s Move from NYSE to Hong Kong: What to Know”, *The Washington Post*, May 23, 2022.

18 “Chinese Government Summons Gaming Firms, Says It Will Crack Down on Ride-Hailing”, Reuters, September 8, 2021.

This contrasts strongly with the US' 'free and open' approach and, as such, supports the principle of digital sovereignty, which China interprets as the right of countries to shape their own digital domains in the absence of any foreign interference.

It operationalises this approach in a variety of ways:¹⁹

- Through rigorous censorship it blocks unwanted content that undermines the credibility of the state;
- Targeted research and development (R&D) funding is directed at innovation in strategic development areas of the Chinese society;
- State subsidies are provided to make the international bidding of Chinese companies more competitive; and
- Strict control of data flows by Chinese companies, as well as those of Western ones with a presence in China, reduces its vulnerability to external influence.

The state technically has access to all data that originates in China, and while private companies are required to protect the privacy of their users, it can at any time obtain such data from the relevant companies.²⁰ This approach to the access of private data also underpins the country's incrementally expanding social credit system. Here, an elaborate AI-based social surveillance system is used to score ordinary citizens' behaviour. This results in the extension or withholding of their privileges (eg, quickened public service delivery processes such as travel applications, lowered interest rates at banks, or reduced Internet speed).²¹

However, the pursuit of digital sovereignty also implies the pursuit of limited technological dependence. In this regard the Chinese state is going to great lengths to establish itself as a dominant player in the development of new technologies. For example, in 2017 China released its New Generation Artificial Intelligence Development Plan, with the ambition to become the global leader in AI by 2030.²² It is favourably positioned to achieve this objective, with a massive population on which to train algorithms, substantive investments in R&D, and an ever-expanding infrastructure of networks and sensors across the length and breadth of China to capture and process data.²³

In addition, the country's technological aspirations and reach are extending beyond its borders. The parallel digital component of China's Belt and Road Initiative, known as the Digital Silk Road, has been instrumental in driving its global tech agenda.²⁴ By coupling a digital architecture with the Belt and Road Initiative's physical infrastructure,

19 Pottinger and Feith, *The Most Powerful Data Broker*.

20 Tim Culpán, "Nationalization Is Coming to China's Data Centers", *Bloomberg*, September 2, 2021.

21 Nicole Kobie, "The Complicated Truth About China's Social Credit System", *Wired*, June 7, 2019.

22 Michael Laha et al., "Europe's AI Strategy Is No Match for China's Drive for Global Dominance", MERICS, 2018.

23 Hofmeyr, "South African Scenarios".

24 Paul Nantulya, "Implications for Africa from China's One Belt One Road Strategy", Africa Centre for Strategic Studies, March 22, 2019.

it is entrenching its technologies within global trade routes. Not only does this result in a growing market share for Chinese tech companies but it is also making the country's technology ecosystem increasingly ubiquitous, with important implications for dependencies on systems that facilitate trade.

With this advantage of scale and ever-growing market share, China is also making gains in another of its key objective areas, namely technological standard-setting, as articulated in its Standards 2035 Plan.²⁵ Standard-setting, typically the privilege of market leaders, is critical for interoperability of technology systems across manufacturers and different geographical regions. It gives substantial influence over the design and physical dimensions of products, as well as, importantly, the norms and values that underpin the use of such products. In pursuit of this objective, it supplements its market expansion with the filing of patents in emerging technology fields such as AI and quantum computing. It has also been playing an increasingly influential role in the workings of the ITU, a body within the UN system responsible for international communications and technology standard-setting. At present, the secretary-general of this Geneva-based institution, Houlin Zhao, is Chinese and, according to observers, state-sponsored Chinese role players are strongly represented in ITU study groups that influence key policy orientations.

While there is limited evidence of China's seeking to impose its domestic digital governance model on other countries, it does aspire to become the world's leading tech innovator and dominant market player. This has implications for the types of technologies that are being created and the normative considerations that underpin them. In turn, this will have an impact on the values that ultimately inform global governance in the digital domain, in a world that has until recently been dominated by Western technologies.

The European model: Pursuing ethical and trustworthy tech

The EU's technology sector is small in comparison to that of its US and Chinese counterparts. In the absence of tech giants such as Google, Facebook, Baidu or Tencent it has limited influence in directing the course of innovation within the tech industry. It is, nevertheless, acutely aware of the social and political implications of such innovation. Hence it is seeking to position itself strategically as a key player in shaping the normative contours that will guide digital innovation and application. Unlike countries in the Global South, the size of its common market for technology products from the US and China does give the EU the leverage to influence policy.

In recent years, it has strongly pushed this normative agenda under the banner of 'ethical and trustworthy tech', but doing so has not been easy. Unlike China and the US, the EU

25 Laurine Clarke, "Technical Standards-Setting Is Shaping Up to Be the Next China-US Showdown", *Tech Monitor*, June 15, 2021.

consists of a number of national jurisdictions, which makes policy harmonisation and investment sourcing around particular focal areas a challenge.²⁶ In order to address this, the European Commission's new Work Programme in 2020 incorporated a new emphasis on digital transformation. This included commitments to mobilise funding for the creation of new digital industries and to harmonise national strategies to align policy on data flows in ways that ensure commercial benefit without having a detrimental effect on the privacy rights of individuals. It has, furthermore, sought to couch this drive towards self-determination in terms of its technologies and regulation, within a vision for digital sovereignty. It differs from the Chinese state-centred conception of digital sovereignty in that its interpretation focuses on the sovereignty of individuals, emphasising European values such as human dignity, freedom, democracy, equality, the rule of law and respect for human rights.²⁷

Thus far it has made significant strides towards its aspiration of regulatory leadership. In 2019 it laid a solid foundation with the adoption of the General Data Protection Regulation (GDPR), which has harmonised digital privacy laws across Europe.²⁸ The GDPR has since become the gold standard for several other countries in their adoption of data privacy laws. In 2021 it published the world's first ethical framework for the regulation of AI, with a draft AI Act with extra-territorial application that is currently being discussed by the European Commission.²⁹ In 2022 it adopted the Digital Services Act, which aims to protect users in their relationship with digital platforms, and the Digital Markets Act, which seeks to enable digital platform competition beyond the domination of traditional tech giants.³⁰

The growing importance of digital geopolitics for Southern Africa

The digital governance models of the US, China and Europe (summarised in Table 1) will largely shape the parameters of norms and characteristics of the digital domains in sub-Saharan Africa. Individual states, as well as continental and regional-economic mechanisms such as the AU, SADC, ECOWAS and the East African Community, will be faced with critical decisions. These relate to the substantial infrastructure investment required to bridge the digital divide between them and major trading partners and create thriving and inclusive digital economies.

26 Erik Brattberg, Raluca Csernaton and Venesa Rugova, "Europe and AI: Leading, Lagging Behind, or Carving Its Own Way?" (Carnegie Endowment for International Peace, Washington DC, September 9, 2020).

27 Huw Roberts et al., "Safeguarding European Values with Digital Sovereignty: An Analysis of Statements and Policies", *Journal of Internet Regulation* 10, no. 3 (2020).

28 Hofmeyr, "South African Scenarios".

29 European Commission, "Proposal for a Regulation of the European Parliament and of the Council Laying Down Harmonised Rules on Artificial Intelligence and Amending Certain Union Legislative Acts", Brussels, 2021.

30 Aline Blankertz and Julian Jaurisch, "What the European DSA and DMA Proposals Mean for Online Platforms", The Brookings Institution, January 14, 2022.

TABLE 1 DIGITAL GOVERNANCE MODELS OF THE US, CHINA AND EUROPE			
	Approach to digital governance	Role of government	Approach to data privacy
US	A free and open digital domain allowing the free flow of data across borders	A hands-off, ex post-facto regulator of a private sector-driven technology industry	Legislation prioritises protection against government exploitation, but is less stringent in the regulation of private companies
China	A state-centric approach to digital sovereignty in which digital policy prioritises the state's integrity and security over the individual liberties of its citizens	The central driving force in shaping innovation and technology ecosystems aligned to the priorities of the state	Data privacy legislation shields citizens against corporate exploitation, but not against interference from the state
Europe	A human-centric approach to digital sovereignty, compelling authorities to protect and expand the liberties of individual citizens	A creator of an enabling environment for a technology industry that prioritises democratic and human-centred values	An emphasis on the protection of individual rights from interference by governments and private companies

Source: Compiled by authors

Firstly, the digitisation of data spurred by the 4IR presents the region with real opportunities for developmental leapfrogging in several domains that could alleviate historically imposed dependencies. Failure to move rapidly towards digital integration may only further entrench its existing marginalisation within the global economy. Much ground needs to be covered, with only one-third of Africans currently using the Internet and 23% having access to it at home.³¹ While this divide between what exists and what is required to reap the benefits of a digital revolution signals the need for urgent action, it also presents a massive economic opportunity. Big tech companies can flood an underserved market (notably given the continent's burgeoning youth population) and so access vast quantities of untapped behavioural data. As a result, it is, secondly, pivotal for the continent to be mindful of the kinds of digital technologies that it adopts and the regulatory environments that are introduced to govern their applications. Experience in recent years has shown that seemingly benign technologies, if repurposed or simply used in contexts different from those for which they were created, can have vastly destabilising impacts on societies. Some go as far as expressing the fear of a digital recolonisation of the continent under US or Chinese hegemony.³²

As global tensions between Western democracies, led by the US, and authoritarian states, led by China, escalate, so will the battle for dominance in the digital domain. The first salvo was fired in 2019 when the US instituted comprehensive sanctions on Huawei, the Chinese tech giant and largest provider of 5G networks in the world, claiming that its networks

³¹ ITU, "Statistics".

³² Nima Elmi, "Is Big Tech Setting Africa Back?", *Foreign Policy*, November 11, 2020.

presented grave security risks that could result in foreign interference. It also pressured its allies to abandon the company as a preferred service provider in the construction of new 5G networks. One of the first to comply was the UK, when it revoked a decision that allowed telecoms operators to deploy Huawei networks.³³ China retaliated with trade sanctions on the US and a resolve to become less dependent on Western supply chains. Similar geostrategic considerations inform the race to reduce supply chain vulnerabilities in the production of semiconductors that have critical computing and storage functions in almost all digital devices. As these tensions have escalated in recent years, concern has been raised about a looming decoupling in the digital domain, resulting in distinctly Western and Chinese digital ecosystems with technological limitations on interoperability between the two.³⁴

On the global level, this growing divide is starting to materialise as countries align themselves to particular visions for the digital domain. In September 2021 the EU-US Trade and Technology Council (TTC) met for the first time to strengthen transatlantic partnerships and alignment in the digital transformation of the EU and the US. Both parties are explicit about the normative political underpinnings of their collaboration, which include the protection and expansion of digital markets underpinned by human rights and democratic values.³⁵ The importance of such collaboration became particularly apparent in the disruption of technology supply chains during the COVID-19 pandemic, gaining further momentum in 2022 following the Russian invasion of Ukraine and its implications for the polarisation of the global order. After its second meeting in May 2022, both TTC parties signalled their unequivocal support for Ukraine, and noted that³⁶

Russia's war of aggression against Ukraine has further underlined the key importance of our cooperation with the US on economic and technology issues. This cooperation goes beyond our reaction to the war. Together with our transatlantic partners, we can create a positive vision for our economies and for a democratic governance of the internet based on the dignity and integrity of the individual.

Another event signalling geopolitical intent in shaping the digital future in 2022 was the US-initiated 'Declaration for the Future of the Internet'. The declaration, endorsed by 61 states (Niger and Cabo Verde being the only African signatories), notes that its signatories are 'united by a belief in the potential of digital technologies to promote connectivity, democracy, peace, the rule of law, sustainable development, and the enjoyment of human rights and fundamental freedoms'.³⁷ It supports the vision of an open, interoperable Internet and condemns efforts by authoritarian governments to use Internet infrastructure

33 "Huawei Ban: UK to Impose Early End to Use of New 5G Kit", *BBC*, November 30, 2020.

34 Robert Muggah and Rafal Rohozinski, "What's At Stake in the US-China Rivalry? The Very Future of the Internet", *The Globe and Mail*, August 13, 2020.

35 European Commission, "EU-US Trade and Technology Council Inaugural Joint Statement: Strengthening our Partnership in Turbulent Times", September 29, 2021.

36 European Commission, "EU-US Trade and Technology Council".

37 US, White House, "A Declaration for the Future of the Internet", April 2022.

or algorithms to undermine these objectives.³⁸ Notably absent from the list are China and Russia, which released a joint statement earlier in 2022 noting their intent on collaborating in shaping an alternative to the Western approach to global digital governance in international forums.³⁹

This growing divergence in approaches to the governance of the Internet has far-reaching implications for globalisation and multilateral governance forums, potentially resulting in two politically, economically and culturally distinct spheres of global influence. Global cybersecurity risk agency SecDev Group suggests that this new digital dimension of global geopolitics – digital geopolitics – will become an increasingly important feature on the global agenda.⁴⁰ According to one description, this new geopolitical dimension is ‘the power politics of states to pursue their interests, maintain and expand their sovereignty and security, and extend their influence in a territorially (largely) delimited and highly interdependent world networked by digital infrastructures, technologies, platforms, and data streams’.⁴¹

Such digital geopolitical considerations are also critical for the course that Africa will take in its attempt to integrate itself more firmly in the global digital economy. This is particularly the case as an integrated digital economy also constitutes one of the primary pillars of the nascent African Continental Free Trade Area agreement.⁴² The latter presupposes compatibility and interoperability of digital networks across African borders. In addition, it requires shared norms and standards that govern the application of enabling technologies in relation to commerce and the rights of citizens. Should decoupling in the digital domain continue to grow, it may imply far-reaching choices between digital infrastructure and regulatory regimes that have their origins in predominantly democratic or authoritarian digital spheres of influence.⁴³

Considering the significant digital divide between Africa and the rest of the world, China, the US and Europe have stepped up their competition to capture this largely underserved market. Each is also acutely aware of the strategic relevance of the overlapping political consequences of their expansion into the continent.

Thus far, China has been more strategic in its approach and is leading the race to become the dominant provider of digital infrastructure in Africa. Through the Digital Silk Road initiative, which encompasses several African states, China is creating a vast digital

38 US, White House, “A Declaration for the Future”.

39 “Russia and China Call for Internationalisation of Internet Governance: Statement”, TASS, February 4, 2022.

40 SecDev, “Is This How It Ends?”, August 2020.

41 Kerstin Fritzsche and Daniel Spoiala, “Digital for Development: An Analysis from a Geopolitical Perspective” (Institut fuer Zukunftstudien und Technologiebewertung, Bonn, 2021), 5.

42 Adedeji Adeniran and Sone Osakwe, “Why Digitalization and Digital Governance Are Key to Regional Integration in Africa”, Centre for Global Development, Blog Post, May 11, 2021.

43 Ulrike Franke and Jose Ignacio Torreblanca, “Geo-Tech Politics: Why Technology Shapes European Power” (Policy Brief, European Council on Foreign Relations, Berlin, July 15, 2021).

ecosystem that primarily relies on interoperable Chinese technologies and is backed up by technical training and support for infrastructure development, such as smart cities.

This approach has borne fruit. Its competitive pricing and favourable financing terms have made the country the largest single investor in African digital infrastructure projects.⁴⁴ Its investments include undersea cables, data centres, smart cities and network infrastructure. In terms of the latter, the country's dominance is close to complete. Huawei, for example, accounts for 50% of all Africa's 3G networks and 70% of its 4G networks.⁴⁵ Although nascent, this trend towards network dominance is set to continue as China has also taken the lead in the development of 5G networks.

In addition to providing finance and infrastructure, China has made significant investments in technical training and capacity building for governments, which includes assistance in the drafting of digital strategies.⁴⁶ In 2021 this was formalised by the announcement of the China-Africa Partnership on Digital Innovation. The plan envisages the development of African digital capacity to improve governance capability in key developmental areas, such as health, transport and education, through the creation of e-governance platforms and digital payment systems.⁴⁷ China's growing influence in the region has not gone without concern. A 2019 report by Carnegie Endowment for International Peace notes that China's continued relationship with sub-Saharan Africa will likely signal the increased adoption of surveillance technology by regional governments.⁴⁸ The report makes a clear link between autocratic rule and a government's capacity for surveillance, stating that the Chinese state is strategically exporting 'authoritarian tech' to like-minded governments globally, with the aim to spread influence and promote an alternative (non-Western) governance model.⁴⁹ Zimbabwe's government, which frequently faces allegations of human rights violations, is cited as a key beneficiary of Chinese technology exports.

The US, in comparison, has been slow in responding to the geopolitical dimensions of digitisation in Africa. Trailing China in the development of a coherent and comprehensive geopolitical digital strategy, the US' foreign policy forays in the digital domain have largely been shaped by the commercial interests of its global tech giants. For this reason, Africa has until recently received scant attention from successive administrations. This is changing.

Africa's demography, characterised by the world's most youthful and most rapidly urbanising population, has made it difficult for US tech companies to ignore the potential of future markets, particularly in light of the first-mover advantage of their Chinese competitors. As a result, they have now gone beyond the establishment of regional

44 Fritzsche and Spoiala, "Digital for Development".

45 Aubrey Hruby, "The Digital Infrastructure Imperative in African Markets", Atlantic Council, AfricaSource Blog Post, April 8, 2021.

46 Fritzsche and Spoiala, "Digital for Development".

47 Osidipe Adekunle, "Perspectives on China-Africa Digital Innovation Partnership for Post-Pandemic Recovery and Inclusive Development in Africa", *The Guardian* (Nigeria), September 9, 2021.

48 Steven Feldstein, "The Global Expansion of AI Surveillance" (Working Paper, Carnegie Endowment for International Peace, Washington DC, September 2019).

49 Feldstein, "The Global Expansion".

innovation hubs to ramp up their digital infrastructure investments. Two of the most notable recent investments include Google's Equiano subsea cable, which runs from South Africa to Portugal via Nigeria, and Facebook's 2Africa subsea cable, which, when completed, will loop around the African continent.⁵⁰ Such investments will in all likelihood be followed by investments in other parts of the continent's digital ecosystem.

But China's early gains go beyond economic significance. From a geopolitical perspective, the prospect of growing dependence in the Global South on Chinese digital infrastructure has also become cause for concern within US government circles.⁵¹ Such concerns provide broader context for the announcement of USAID's first Digital Strategy in 2020. This guides the agency's use of digital tools to achieve its objectives, but also seeks to help 'strengthen the openness, inclusiveness, and security of country-level digital ecosystems' in ways that are aligned with the US' national cyber, security and counterterrorism strategies.⁵²

Some have praised the strategy for its sober assessment of the challenges involved in creating national digital infrastructure that balances the priorities of privacy and national security. However, others claim that its impact may be hampered by what some still perceive as the US' laissez faire approach to data protection. This critique ties in with some of the broader credibility challenges that the US model faces in terms of the regulation of its tech behemoths. As a result, the country will remain under pressure to review its absolutist stance on the creation of a 'free and open' digital sphere. This has served Silicon Valley well up to now but, as some would argue, to the detriment of cohesion in other parts of the world.

This is where the European approach to digital politics seeks to distinguish itself from the US model. While also espousing democratic values, the European pursuit of digital sovereignty is unequivocal about the need for more control over data flows that cross the EU's borders. This emphasis stems from commercial concerns regarding the regulation of digital trade and the taxation of multinational tech companies; privacy concerns relating to the protection of personal data; and security threats amid a growing danger of cyberattacks. Its emphasis on sound digital governance addresses concerns about overbearing power and influence, both by governments and corporate interests, in shaping the digital sphere. It is in this domain that Europe is seeking to carve out a niche as a global leader and an important player. In relation to AI,⁵³

Many EU policymakers believe that the EU's insistence on ethical and trustworthy AI will eventually become a location advantage for Europe (much like data privacy): as more people become concerned about unethical AI and data security, they will prefer to use or buy AI 'made in Europe' rather than elsewhere.

50 Hruby, "The Digital Infrastructure Imperative".

51 Fritzsche and Spoiala, "Digital for Development".

52 USAID, "Digital Strategy 2020-2024", 2020, 7.

53 Ulrike Franke, "Artificial Divide: How Europe and America Could Clash Over AI" (Policy Brief, European Council on Foreign Relations, Berlin, January 20, 2021), 9.

While it may, therefore, not yet be a market leader, it is establishing a brand as a normative power. The successful introduction of the GDPR, which has since its inception set a global benchmark for the adoption of data privacy frameworks, is an important signalling device in this regard.⁵⁴ The adoption of the groundbreaking digital market and digital services acts will, similarly, have extraterritorial implications. While they technically only apply to EU member states, all international entities seeking to trade within its large market will have to comply with their determinations.

The EU's prospects for digital geopolitical influence in Africa, therefore, rest less on the size of its technology industry than on its reputation as a leader in the field of digital governance. Africa faces similar challenges to that of Europe in terms of the formulation of integrated digital strategies that cut across sovereign borders. Hence Africa can benefit from its experience in the harmonisation of measures to facilitate trade and cooperation. Moreover, there is also alignment, at least on continental level, in terms of the EU and AU's embrace of the digital sovereignty principle. As a result, Africa constitutes the EU's major geographical focus area in digital development support, following the creation of the EU-AU Digital Economy Task Force in 2018 and the subsequent release of its *New Africa-Europe Digital Economy Partnership Report* containing key recommendations for cooperation.⁵⁵ Some of these have been incorporated in recent European Commission initiatives, such as the Digital for Development Hub, the EU-AU Flagship, and the Innovation Bridge.⁵⁶

For these initiatives to gain traction, in terms of both material outcomes for Africa and longer-term geopolitical influence for the EU, they need to be backed up with substantial funding support. The European Commission's sizable investment commitment of €150 billion (roughly \$143 billion) to Africa in terms of its Global Gateway Strategy, if materialised, will provide a significant boost. Announced at the end of 2021, the compact outlines its intention 'to support Africa for a strong, inclusive, green and digital recovery and transformation'.⁵⁷ In terms of its commitment to digital development, it aims to bridge the continent's digital divide by supporting infrastructure projects and regulatory environments that place people at the centre of development.

Digital governance: The Southern African digital–democracy nexus

Three distinct approaches to digital governance have emerged, covering the spectrum from human centred and democratic to state centred and authoritarian. The European model is aspirational and puts the democratic rights of individuals at the core of its quest to develop its own digital ecosystem. While also pursuing democratic ends, the US model does in

⁵⁴ Hofmeyr, "South African Scenarios".

⁵⁵ Neema Iyer, "Europe's Digital Strategy in Africa: What's Really on Offer?", Africa Policy Research Institute, November 22, 2021.

⁵⁶ Fritzsche & Spoiala, "Digital for Development".

⁵⁷ European Commission, "EU-Africa: Global Gateway Investment Package", 2021.

practice show a bias to the interests of large tech companies, which have shaped global tech innovation. The Chinese model is state-led and geared towards the particular ends of the state, even if it means the subjugation of individual rights. Each of these has emerged from value systems that correspond to their respective domestic contexts. Arguably, it therefore makes sense to assume that digital development and transformation should ideally be aligned to the context from which it emerges.

Within Southern Africa, policymakers continue to grapple with finding the right balance on the spectrum between leveraging the developmental potential of the digital revolution and protecting the digital rights of its citizens in pursuit of these objectives. While the one does not necessarily exclude the other, contextual needs and expectations require the development of regional and continental frameworks that are both inclusive and responsive to domestic contexts. To date, individual state-level policies that improve access have been easier to achieve. The advancement of frameworks for digital rights has been less successful, despite an observable rise in the number of local and regional digital rights groups since 2014. Broad consensus does, however, exist on the need to craft policy environments that will unleash Africa's economic potential without compromising its discretion to determine the way in which its digital transformation will impact national economies and individual livelihoods.

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58 Bulanda Nkhowani, Paradigm Initiative, interview by authors, May 17, 2021.

In response to concerns around the creation of digital dependencies, the AU adopted the Digital Transformation Strategy for Africa (2020–2030) in 2020. Pursuing the objective of digital sovereignty, it seeks to⁵⁹

harness digital technologies and innovation to transform African societies and economies to promote Africa's integration, generate inclusive economic growth, stimulate job creation, break the digital divide, and eradicate poverty for the continent's socio-economic development and ensure Africa's ownership of modern tools of digital management.

A key objective of this strategy is the creation of a Digital Single Market (DSM) by 2030, which should allow the seamless flow of digital transactions across African borders. Another important achievement at the continental level has been the publication of the AU Data Policy Framework in July 2022. The framework covers important ground in clarifying the guiding principles for the treatment of data, which is a critical requirement for the implementation of the DSM.⁶⁰ These two policy documents and others such as the AU Commission on Human and Peoples' Rights' Declaration of Principles of Freedom of Expression and Access to Information in Africa signify growing agreement on the broad principles around digital governance in Africa. However, some experts underscore that one of the continent's critical endeavours in this regard would be the integration and alignment of different regional agendas towards these principles.⁶¹ In SADC, for example, the relevant frameworks in this regard are the 2020–2030 Regional Indicative Strategic Development Plan and the 2001 Declaration on Information and Communication Technologies.

In addition to continental and regional initiatives, there are also individual state-level digital governance legal frameworks, but these are disparate.⁶² Existing legislative provision for regulating digital spaces in many Southern African countries often constitute perfunctory and vague constitutional provisions such as citizens' right to privacy. This creates loopholes that can place more power in the hands of state bodies; potentially explaining the stalling on more comprehensive digital and privacy legislation by some national governments, particularly in one-party dominant states.⁶³ However, it is an illusion that the mere existence of cybersecurity, data protection, digitalisation strategies and national development plans are sufficient for the continent's digital transformation.⁶⁴ African policymakers' fervour in policymaking has not yet been matched by their enthusiasm for implementation, thereby delaying potential advantages for progress.⁶⁵

59 AU, "Digital Transformation Strategy for Africa", 2020, 2.

60 AU, *Data Policy Framework: An integrated, Prosperous, and Peaceful Africa* (Addis Ababa: AU, 2022).

61 Olumide Abimbola, Faten Aggad and Bhasho Ndzendze, "What Is Africa's Digital Agenda?" (Brief, Africa Policy Research Institute, Berlin, 2021).

62 Abimbola, Aggad and Ndzendze, "What Is Africa's Digital?".

63 Frederico Links, "Tackling Cybersecurity/Crime in Namibia", (*Democracy Report* 20, Institute for Public Policy Research, Namibia, 2018).

64 Iyer, "Europe's Digital Strategy".

65 Iyer, "Europe's Digital Strategy".

More worryingly, weak oversight of national policies at the regional level can embolden authoritarian governments and political elites to abuse regulatory tools that promote digital sovereignty to entrench control and suppress citizen expression and action.⁶⁶

This should be viewed against the backdrop of what some in recent years have referred to as a ‘democratic recession’ in Africa, marked by an increase in civil conflicts, growing terrorist insurgencies and the return of coups as a means to unseat elected governments. Several of these conflicts coincided with Internet shutdowns, which not only came at a substantial cost to national economies but also aided mass human rights abuses that occurred out of the public eye. This democratic recession can take the form of the imposition of social media and digital taxes on citizens, the curtailment of freedom of speech, censorship, restrictions on cross-border payments and banking and, in some instances, full-blown Internet shutdowns.⁶⁷

The convergence of the imperative for digital transformation with harsh global economic conditions could have further adverse implications for the development of Africa’s digital landscape.⁶⁸ With no reprieve in sight, it is conceivable that digital tools could increasingly be used to suppress growing public discontent and desperation, as opposed to leveraging them for improvements in livelihoods. In line with the AU Agenda 2063’s commitment to democratic values and human rights, it may therefore be important for key guiding documents to become more explicit about what the pursuit of these objectives would look like in the digital domain. As has been alluded to in previous sections, a principle such as ‘digital sovereignty’ can, for example, be interpreted as a virtue in both democratic and authoritarian contexts. ‘Lawmakers often are not fully equipped to engage with the technical aspects which require regulation, which in turn allows lobbyists to carve out loopholes. As a result, lawmakers often do not draft appropriate, up-to-date or purpose-specific legislation.’⁶⁹

In the absence of such clarity, grey areas arise where legislative frameworks could intentionally or unintentionally legalise technologies or usages of technologies that run counter to the foundational principles and values of a state. One such example is the rise of ‘soft surveillance’ technologies. Particularly evident in large South African urban centres, these technologies tend to profile poor and Black people in particular. Some studies⁷⁰ point out, for example, how AI’s advanced ability to ‘detect characteristics such as skin tone and clothing ... and even flag “unusual” behaviour’ undermines civil rights and liberties.⁷¹ The implication of this is the further marginalisation of non-white, low-income South African citizens, driving an AI-powered apartheid.⁷²

66 Michael Kwet, “The City Surveillance State: Inside Johannesburg’s Safe City Initiative” (Policy Briefing 231, SAIIA, Johannesburg, 2021).

67 Iyer, “Europe’s Digital Strategy”.

68 Iyer, “Europe’s Digital Strategy”.

69 Michael Power, ALT Advisory, interview by authors (April 21, 2021).

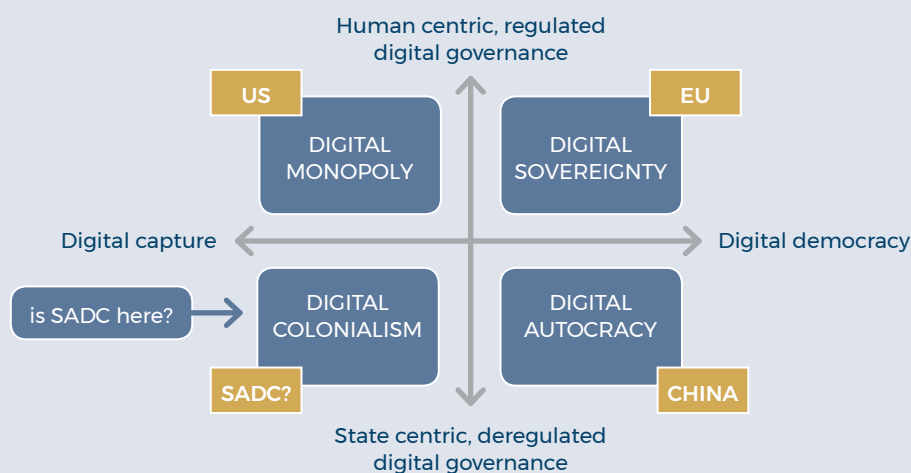
70 Kwet, “The City Surveillance State”.

71 Kwet, “The City Surveillance State”.

72 Michael Kwet, “Smart CCTV Networks Are Driving an AI-Powered Apartheid in South Africa”, *VICE News*, November 22, 2019.

Issues such as the above point to the critical importance of African participation in the setting of norms and standards for new technologies. As suggested earlier, these are typically determined by dominant players, who get the opportunity to further entrench and create dependencies on their products and patents in global markets. As a result, standard-setting has become a critical domain for digital geo-economic and geopolitical contestation. Based purely on the size of Africa's technology industry, the continent's prospects for influence are limited, positing a situation where foreign innovation shapes markets and societies in the image of the markets and societies from which they originate. This raises the prospect of what some have termed the neo-colonisation of Africa, whereby the continent will, once again, be prevented from growing on its own terms. It also underscores the contention that the question of digital sovereignty turns on the control of data within the territories where it is generated, and, critically, the nature of the infrastructure that captures and processes the data within these territories. See Figure 1 below for digital governance approaches globally and in SADC.

Figure 1 Digital governance approaches at play in the US, China, Europe and SADC



Source: Compiled by authors

One form of leverage, however, will be the growing importance of Africa's potential as a market for tech companies. With the fastest population growth rate and most youthful population, the continent will become an increasingly important consumer market. Infrastructure procurement to address the existing digital divide could thus be leveraged to afford it greater influence in bodies such as the ITU and other standard-setting institutions. This will require strong transparency and accountability measures to ensure that governments procure technologies that are aligned to the developmental needs of their societies, instead of being swayed by distorting incentives from service providers.

In the longer term, however, the most secure avenue towards greater digital sovereignty will be nurturing home-grown digital ecosystems in Southern Africa and across the rest of the continent. This, in turn, will require substantial investment and the creation of enabling environments for training, innovation and the scaling of existing start-ups with potential. Unfortunately, most states are still lagging in this regard. A 2022 report by the WEF notes that, although investment in African tech start-ups has increased six-fold over the past five years to \$1.2 billion, this amount constitutes less than 1% of the comparative figure for the US.⁷³ The report urges governments to focus their attention on improving their legislative frameworks to remove red tape, to create greater incentives through measures such as tax breaks and, importantly, to make more substantial investments in training a new generation of innovators. See Table 2 below for the current state of digital governance in SADC.

TABLE 2 CURRENT STATE-OF-PLAY FOR DIGITAL GOVERNANCE IN THE SADC REGION			
	Approach to digital governance	Role of government	Approach to data privacy
SADC	A regionally integrated, digital sovereignty approach that harnesses technologies and innovation to promote inclusive economic growth and transform societies.	A hands-off, ex post-facto regulator of a private sector-driven technology industry	Legislation prioritises protection against government exploitation, but is less stringent in the regulation of private companies

Source: Compiled by authors

Policy recommendations

Considering our assessment of the emerging digital geopolitical landscape in Africa, and Southern Africa in particular, we make a number of recommendations for shaping this environment in ways that will allow the continent to respond to its unique contextual demands. We do so in recognition of the need to balance the imperative for economic integration across national borders with the imperative to ensure sufficient latitude for national governments to be sensitive to their own needs within a broader continental framework of protocols, standards and underpinning values.

Develop continental and regional data sovereignty frameworks

The AU and SADC Secretariat should develop frameworks and harmonised country-level strategies to accelerate regional integration, effectively leverage the 4IR and ensure data sovereignty of member state governments. This should include the design of investment

⁷³ Deloitte and World Economic Forum, "White Paper: Attracting Investment and Accelerating Fourth Industrial Revolution Adoption in Africa", Regional Action Group for Africa, January 22, 2022.

platforms and incentives to support technological innovation using open-access data. It is also important to leverage the demographic dividend (ie, the burgeoning youth population) by developing local, regional and continental post-school education and training capabilities to meet the skills demands of digital economies. This includes higher education and technical vocational education and training. There are, however, risks in developing data sovereignty frameworks for the region, as this may merely transfer the value gained from the exploitation of personal data from international to local elites. To safeguard against this, individual country-level regulations for ethical and rights-oriented digital governance, protection and use by governments are critical. The recently published AU Data Policy Framework could play an important synthesising role in this regard.

Strengthen country-level rights-centred digital policies and implementation

AU and SADC member-state governments should prioritise privacy-by-design and human rights in digital governance policies and strengthen regulation/implementation capabilities. This is to ensure the de facto protection of citizen privacy and safeguard against the abuse of biometric data and spyware, the suppression of growing public discontent, and the further marginalisation of historically vulnerable groups. Compliance incentives for public and private bodies and increased funding mechanisms should be established to support local data protection authorities such as South Africa's Information Regulator and Ghana's Data Protection Commission.

Promote data as a collective resource for good

Country-level and regional policymakers should promote the fact that data can be leveraged as a public good and spur development. This will require a collective ownership approach to data protection, as opposed to the individual and business interests that are prioritised in various data protection and sovereignty frameworks at present. Emerging digital platforms should be additive to citizens and their environment and not merely extractive.

Foster Southern African digital collective intelligence at the global scale

International organisations and development partners should support African states, including those in the SADC region, to gain influence at international standard-setting regulating and market-shaping forums such as the ITU. The AU and SADC directorate for ICT should create a working group on foresight-informed digital governance for anticipatory policy to make better decisions and take actions in navigating the fast-moving digital frontiers.

Boost investment in digital infrastructure

Working in partnership with relevant government departments, civil society organisations, the private sector and development agencies, finance institutions such as the African Development Bank and the Development Bank of Southern Africa should help to strengthen and expand an integrated continental digital infrastructure that improves access, speed, costs and competition levels. An alternative may be to leverage initiatives such as the Chinese Digital Silk Road and broader Belt and Road Initiative to support the shift to 5G technologies in the region.

Foster digital innovation ecosystems

AU and regional economic community member states (and their respective business councils) should strengthen the digital innovation and incubator ecosystem to allow local innovators to incubate ideas and have them funded to scale up. Innovation systems should also be incentivised to search and scale up innovations. This will require sensitising the ecosystem (and policymakers) to the three horizons and other foresight frameworks. Stronger links between industry, research/academia and policy actors – or so-called triple-helix platforms – can further strengthen the innovation system.

Conclusion: Towards African digital sovereignty

The megatrend towards digitalisation has altered and will continue to alter almost every aspect of the ways in which humans operate and conduct business, and through which societies are organised and governed. Arguably, the future prosperity of states will depend on the extent to which they are able to integrate themselves into this digital world. Marginalised for centuries, Africa, including the SADC region, could leverage this digital revolution to reposition and introduce itself as an influential actor. This, in turn, could facilitate a more equitable footing in its economic and political relations with the rest of the world. However, it will need to leverage these technologies to ensure that developments occur on its own terms and in response to its contextual needs.

This can only be done with due consideration of the geopolitical dynamics that shape digital development globally, but particularly in Africa. The values and norms that underpin the technologies enabling this transition are not normatively neutral. Hence it is important that states and regions on the continent take cognisance of them in their pursuit to obtain the digital sovereignty required to set their own digital transformation agendas. In this occasional paper, we have sought to provide a high-level outline of the most significant players and the influence that they are exerting on the digital development agenda in Africa. While investment in the continent's digital infrastructure should be welcomed, this should occur on African terms and be aligned both with broad continental needs and with the more contextual dynamics of specific regions, such as Southern Africa.

In light of the above, it is important that the AU and its respective regions develop a harmonised approach in terms of regulatory frameworks and their oversight and implementation. We have pointed to developments in this regard and noted that, while progress is being made at the continental level, much still needs to be done in terms of harmonisation at the regional level to ensure consistent application.

We have, finally, made various recommendations regarding the continent's ability to assert itself as a digital actor. These relate to its being supported to play a more influential role in international standard-setting forums. While Africa does not have a large tech industry, its growing consumer market may give it such leverage. Longer-term capacity to assert its sovereignty must also, however, be driven by domestic action. In this regard, more needs to be done in terms of legislative reforms that remove red tape for fledgling tech businesses, the provision of greater incentives via tax rebates and, importantly, improvements in the training of a new generation of technology-savvy entrepreneurs.

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