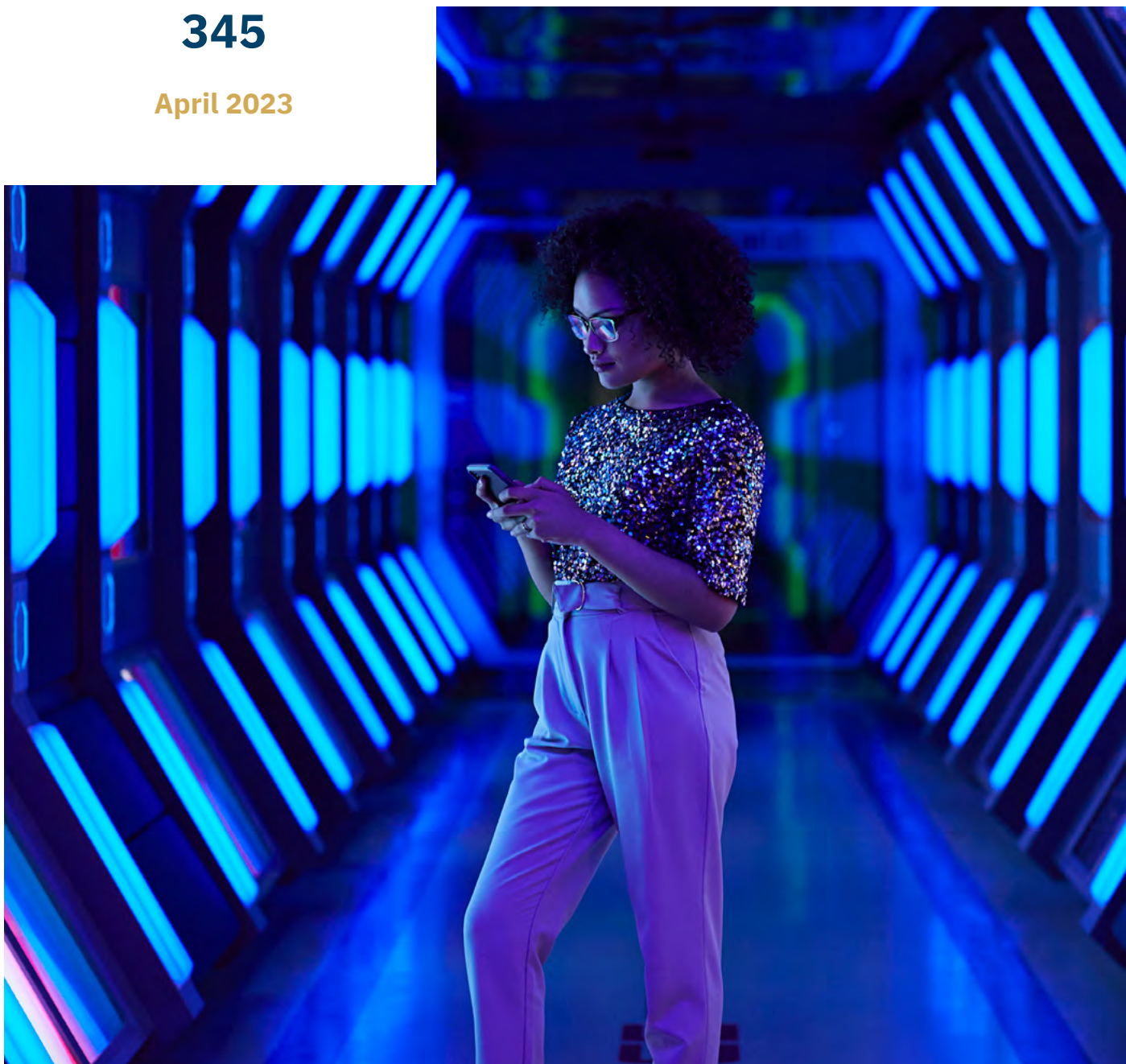


Occasional Paper

345

April 2023



Civic Tech in Southern Africa: Alternative Democracy and Governance Futures?

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African perspectives
Global insights

Abstract

This paper examines the emerging roles of civic technology ('civic tech') in the southern African democracy and governance landscape, including possible futures and policy implications in the run-up to 2030. The study employed a combination of qualitative futures methods, an analysis of the Civic Tech Innovation Network's databases and an extensive literature review. The futures methods comprised Futures Literacy Lab and Three-Horizons exercises and a strengths, weaknesses, opportunities, threats analysis conducted with a participatory foresight focus group.

Among the key findings were that civic tech is growing strongly (albeit unevenly) across the southern Africa region, with a strong focus on democracy and governance – notably web-based applications. While the study revealed numerous visions, potentials and examples of strong, civic tech-enabled futures that were increasingly 'organic, shared and positive', it also identified numerous disablers and challenges to the effective embedding of civic tech in the region. A lack of access, the (sometimes difficult) interface between politics and government, and inadequate funding are among the biggest obstacles. An emerging question is which of two pathways for civic tech will become dominant: civic tech as an extension of or accompaniment to the role of government, or civic tech as a more independent, community-driven, emancipatory development approach? The study leaves this question open but recommends two different approaches: an innovation-focused approach aimed at deepening democratic engagement and securing more sustainable funding models, and a government-focused approach aimed at better understanding and leveraging civic technologies, while also supporting healthy digital ecosystems in which civic tech can thrive and expand.

The findings from the study have implications for governments, which are broadly looking to deliver on promises of participatory democracy, and therefore need to remain abreast of emerging civic tech trends and opportunities. There are also practical implications for innovators who, through their engagements with the budding civic tech community, could use digital applications in various modes to support the public good. There is scope for further research to explore more deeply the roles of other, non-state actors in determining the prospects for civic tech and its new roles in democracy and governance.

Introduction

Over the last decade, there have been encouraging signs of improved governance in African countries, as longstanding conflicts have been successfully mediated and democracy has by and large prevailed over dictatorships. However, there have also been disappointments, with some new conflicts emerging, characterised by protests, violence and a ‘shrinking civic space’.¹ ‘The continent’s weakest performance [continues to be] in the areas of democracy and political governance’.² Many countries on the continent therefore need to transform their systems of governance to make them responsive, innovative, inclusive and participatory.

The AU’s Agenda 2063 envisages an Africa characterised by good governance, democracy, respect for human rights, justice and the rule of law, with democracy and good governance being key priority areas. Civic technology (‘civic tech’) can play a role in driving such transformation. By leveraging digital tools and platforms as well as new forms of engagement, civic tech can support democratic processes, amplify citizens’ voices and encourage greater civic participation. ‘Democratic principles are under threat around the world. Yet, democratic innovations and digital participation tools hold the potential to rejuvenate democracy and drive citizen-led decision-making in public institutions.’³

By leveraging digital tools and platforms as well as new forms of engagement, civic tech can support democratic processes, amplify citizens’ voices and encourage greater civic participation

Civic tech has appeared in the past decade as a significant development at the intersection between public governance and technological development. Digital technologies in particular have come to underpin both the public services offered by governments and the bottom-up initiatives driven by citizens.⁴ This trend has mobilised a growing focus globally on civic tech platforms, smart city infrastructures and automated decision-making systems that mediate interactions between various publics and their governments – ostensibly to increase both efficiency and trust in governance and public service delivery.⁵

1 Andrew Songa and Aisha Dabo, ‘The role of civic tech in consolidating democracy in Africa’ (European Partnership for Democracy, 2021), <https://epd.eu/2021/12/09/the-role-of-civic-tech-in-consolidating-democracy-in-africa/>.

2 Songa and Dabo, ‘The role of civic tech in consolidating democracy in Africa.’

3 Oli Whittington, ‘Democratic innovation and digital participation’ (Nesta, London, 2022), 4.

4 Weiyu Zhang, Gionnieve Lim, Simon Perrault and Chuyao Wang, ‘A review of research on civic technology: Definitions, theories, history and insights,’ ArXiv, abs/2204.11461 (2022).

5 Eric Corbett and Christopher Le Dantec, ‘Designing civic technology with trust’ (in Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems 2021), 1-17.

Civic tech has appeared in the past decade as a significant development at the intersection between public governance and technological development

In the absence of an enabling government response to this potential, especially in the face of failing governance, there is a risk of bifurcation which would put civic tech on a parallel or divergent path. This is a potential future framed in the [European Commission's Future of Government 2030 scenarios report](#). The report presented a Do-It-Yourself/DIY Democracy scenario which inspired the Civic Tech Innovation Network (CTIN) 2021 Africa-wide conference, themed #DIYAfrica – alluding to a potential future characterised by independent, civic-led governance.⁶

This paper explores potential futures and implications of civic tech trends in the southern African region. The work is intended to contribute to the South African Institute of International Affairs' (SAIIA) work on 'African governance in the digital era', which seeks to reimagine and strengthen democracy. The paper begins by establishing the meaning and significance of civic tech in Africa and its relationship with governance. It then looks to the future – reformulating the visions of democracy and governance in the region in the years ahead and the roles that civic tech may play in these scenarios. It also considers the pathways and obstacles that civic tech is navigating and offers recommendations on how to confront issues in the present that could negatively impact the future.

The paper reports on a policy research study that was framed around two key questions:

- What are the emerging roles of civic tech in Africa's democracy and governance landscape?
- What futures and associated policy implications seem likely by 2030?

The study was conducted by deploying qualitative futures methods, combined with desktop database analysis and a literature review. The futuring approach involved a participatory foresight exercise performed with a focus group of civic tech and governance champions to explore the status and futures of civic tech in the region. Specifically, the exercise made use of simplified tools derived from Futures Literacy Lab, Three-Horizons and SWOT (strengths, weaknesses, opportunities, threats) methods. In addition, an in-depth

6 European Commission, *The future of government 2030+: A citizen centric perspective on new government models* (European Union, 2019), <https://eufordigital.eu/library/the-future-of-government-2030-a-citizen-centric-perspective-on-new-government-models/>; Lucia Vesnic-Alujevic et al, 'The future of government 2030+: A citizen-centric perspective on new government models' (Publications Office of the European Union, Luxembourg, 2019); '#DIY Africa 2021' (Conference Summary Report, September 13-17, 2021), <https://civictech.africa/wp-content/uploads/2022/06/DIYAFRICA-REPORT.pdf>.

analysis of civic tech initiatives in southern Africa was conducted by mining the CTIN's civic tech database with a view to better understand the profile of civic tech in the region, including the main application sectors, objectives and technologies of choice.⁷ Finally, academic and grey literature were surveyed to help frame, inform and explain the study and its findings.

Defining 'civic tech'

A question that is frequently asked is, 'what is civic tech?' – and legitimately so, as there is no singular answer to such a question, which prompts a wide range of proposed definitions. It was therefore useful to begin the study by confronting the question head on, which also helped to locate the concept in relation to democracy and governance.

Some fairly direct and illustrative definitions of civic tech can be found in the literature. For instance, civic tech has been described as:⁸

... a term that refers to the diverse ways in which people are using technology to influence change in society. The breadth of civic technologies is wide and comprises a large pool of technologies for i) **governance** (eg, MySociety, SeeClickFix), ii) **collaborative consumption** (eg, Airbnb, TaskRabbit), iii) **community action** (eg, citizen investor, GeekCorps), iv) **civic media** (eg, Wikipedia, Global Voices) and v) **community organising** (eg, WhatsApp groups). (added emphasis by author)

The term has also been used to refer to '**civic products** – such as web applications, civic portals, and open data repositories, among other tools – that leverage smart city and governmental data and make such data available for public consumption'⁹ and 'the use of digital technologies and social media for **service provision, civic engagement, and data analysis**'.¹⁰ (added emphasis by author)

One of the earliest mentions of civic tech was in a [Knight Foundation report](#), which defined it as technology 'promoting civic outcomes', which seems to encompass the

7 Riel Miller, *Transforming the Future: Anticipation in the 21st Century* (Routledge, 1st edition, 2018), <https://doi.org/10.4324/9781351048002>; Liisa Luoto and Annika Lonkila, 'The use of SWOT analysis for future scenarios: A case study of privacy and emerging technologies,' in *Envisioning Uncertain Futures*, eds. Roman Peperhove, Karlheinz Steinmüller and Hans-Liudger Dienel (Springer VS, Wiesbaden, 2018), 105-131; ITCILO, 'Three Horizons Framework' (Foresight Toolkit, International Training Centre of the ILO, 2016), <https://training.itcilo.org/delta/Foresight/3-Horizons.pdf>; 'African Civic Tech Atlas (Database, Civic Tech Innovation Network), <https://civictech.africa/databases/>.

8 Antii Knutas, Victoria Palacin, Giovanni Maccani and Markus Helfert, 'Software engineering in Civic Tech: A case study about code for Ireland' (in *Proceedings of International Conference on Software Engineering*, 2019), 41-50.

9 Vasillis Vlachokyriakos et al, 'Digital civics: Citizen empowerment with and through technology' (in *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems*, 2016), 1096-1099.

10 John G. McNutt and Lauri Goldkind, 'Civic technology and data for good: Evolutionary developments or disruptive change in e-participation?' in *Research Anthology on Citizen Engagement and Activism for Social Change* (Hershey, PA: IGI Global, 2022), 1330-1345.

aforementioned interpretations.¹¹ However, beyond these seemingly compatible definitions are complicated, clarifying questions about what is or is not included in the frame of civic tech. Some important ones appear below.

Who is the ‘civic’ in civic tech?

There are various interpretations of ‘civic’, reflecting increasing levels of stringency in terms of democratisation.¹²

- **Tech for citizens:** a consumptive mode that ‘treats citizens as beneficiaries, or customers who receive benefits from using these digital services, although with complaints’;
- **Tech by citizens:** the building of cooperative intelligence that ‘treats citizens as one category of civic actors, alongside or relatively independent of other actors, such as the government and the market forces’; and
- **Democratic engagement:** which ‘treats citizens as participants who have to be engaged in democratic manners’. In this regard, democratic engagement rests on three ideals: *representative democracy* which focuses on voting for delegates; *referendum democracy* which focuses on voting for decisions; and *assembly or deliberative democracy* which focuses on engaging in discussions before reaching decisions.

The different forms of civic engagement may therefore range from a simple transaction to intense co-production. Furthermore, ‘citizens’ in this context are understood to be actors who are neither part of the state nor involved in generating profits – thus they exclude governments and commercial entities. Also excluded would be other forms of socially oriented, profit-making ventures that are broadly found in the space of start-ups, SMMEs and social enterprises. However, these boundaries can be difficult to determine, as even non-profit organisations must be financially sustainable and can adopt or become a partner in a range of modes, which may result in blurred lines.

What is the ‘tech’ in civic tech?

The 2013 Knight Foundation report identified a range of information and communication technology types that overlapped civic tech manifestations at the time. These include crowdfunding, P2P sharing, open data, data utility, data visualisation and mapping, community platforms, feedback tools, public decision-making and voting tools.

However, tech-centric approaches have also been criticised for limiting civic tech to the use of open data and free/libre/open-source software as a way of leveraging collective

¹¹ Knight Foundation, ‘Emergence of civic tech: Investments in a growing field’ (2013), <http://knightfoundation.org/features/civictech>.

¹² Weiyu Zhang, Gionnieve Lim, Simon Perrault and Chuyao Wang, ‘A review of research on civic technology,’ [arXiv:2204.11461v1](https://arxiv.org/abs/2204.11461v1), (2022), 8.

intelligence when faced with big, complex problems.¹³ There is a growing propensity towards learning hard lessons from failed efforts that have focused only on inventing tools, with emerging studies calling for a wider focus on methods and systems, including solutions and process designs and infrastructural and institutional transformations. This points to a possible softer definition of ‘tech’ in this context.

Is civic tech an extension of government?

According to some definitions, civic tech is a movement aimed at modernising or humanising government and is thus government-centric, as it improves service delivery through citizen participation and collaboration or supplementation of government’s role.¹⁴ However, there have also been much wider applications of civic tech aimed at challenging or pressuring governments. Some civic tech applications have nothing to do with governments at all; instead, they serve their own agendas and priorities directly, possibly also connecting and collaborating with one another. These include informal and semi-formal volunteer and non-profit initiatives whose purpose is to arrive at solutions for (their own definition of) the public good.¹⁵

Civic tech is therefore associated with two dominant modes: one relates to civic–government interfacing on or for digital innovation, and the other one focuses on civic-driven digital solutions

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In spite of the vast and somewhat fuzzy picture that has been painted here, it is generally recognised that the civic tech field exists (albeit self-defined) and has spawned a large number of initiatives. Various studies have revealed 614 such platforms and 1,246 keyword counts.¹⁶ In 2021, the Civic Tech Field Guide, which is a global civic tech monitor, recorded more than 4,000 ‘tech-for-good’ projects.

13 Shinji Kobayashi, Luis Falcón, Hamish Fraser, Jørn Braa, Pamod Amarakoon, Alvin Marcelo and Chris Paton, ‘Using open source, open data, and civic technology to address the COVID-19 pandemic and infodemic,’ *Yearbook of Medical Informatics* 30, no. 1 (2021), 038–043.

14 Radhika Mia, ‘Defining and understanding the civic tech space’ (Civic Tech Innovation Network, Johannesburg, 2022), <https://civictech.africa/wp-content/uploads/2022/04/Civic-Tech-Definitions.docx.pdf>.

15 John Biberman, ‘eGovernance and civic technology: Lessons from Taiwan’ (ICT India Working Paper, no. 48, Columbia University, Earth Institute, Center for Sustainable Development, New York, 2021).

16 Aelita Skaržauskienė and Monika Mačiulienė, ‘Mapping international civic technologies platforms,’ *Informatics* 7, 4 (2020), 46, <https://doi.org/10.3390/informatics7040046>.

Considering all of the above and for the purpose of this paper, civic tech can be defined as ‘the appropriate and effective use of digital innovation in connecting government and citizens, in public participation, in transparency and accountability, and in delivering public services’.¹⁷

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Profile of civic tech in Africa and SADC¹⁸

The civic tech movement first appeared in 1998, with a competition administered by the US Census to find better ways to organise data. It was only during the early 2000s, however, that the movement started to gain momentum, notably in the wider development discourse in response to the Knight report.¹⁹

The state of civic tech in Africa

In Africa, civic tech first made an appearance in Kenya during the 2007 post-election violence when ‘active citizens’ created an online platform where incidences of violence or abuse could be reported.²⁰ The platform, Ushahidi, went on to be used by many others around the world to gather and disseminate crowdsourced information.²¹ It demonstrated how, using digital tools, governments could spread information more effectively and citizens could share their own information, ideas and concerns directly. Today, there are a number of projects under way across sub-Saharan Africa in which technology is used to improve governance and crisis management, such as an SMS project to facilitate humanitarian assistance in Somalia and the reporting of human rights abuses in Guinea.²² Similar work is being performed in Malawi where, together with private partners, the country’s health ministry is using mobile network operator data to improve the delivery of health services.²³

17 This is in line with the CTIN’s core mission found at: <https://civictech.africa/about-ctin/>.

18 SADC is the Southern African Development Community

19 Mia, ‘Defining and understanding the civic tech space.’

20 Philippe Couve et al, ‘Civic tech in Africa: People and technology dynamising our democracies’ (CFI, 2018), <https://cfi.fr/en/news/civic-tech-africa-people-and-technology-dynamising-our-democracies>.

21 Couve et al., ‘Civic tech in Africa.’

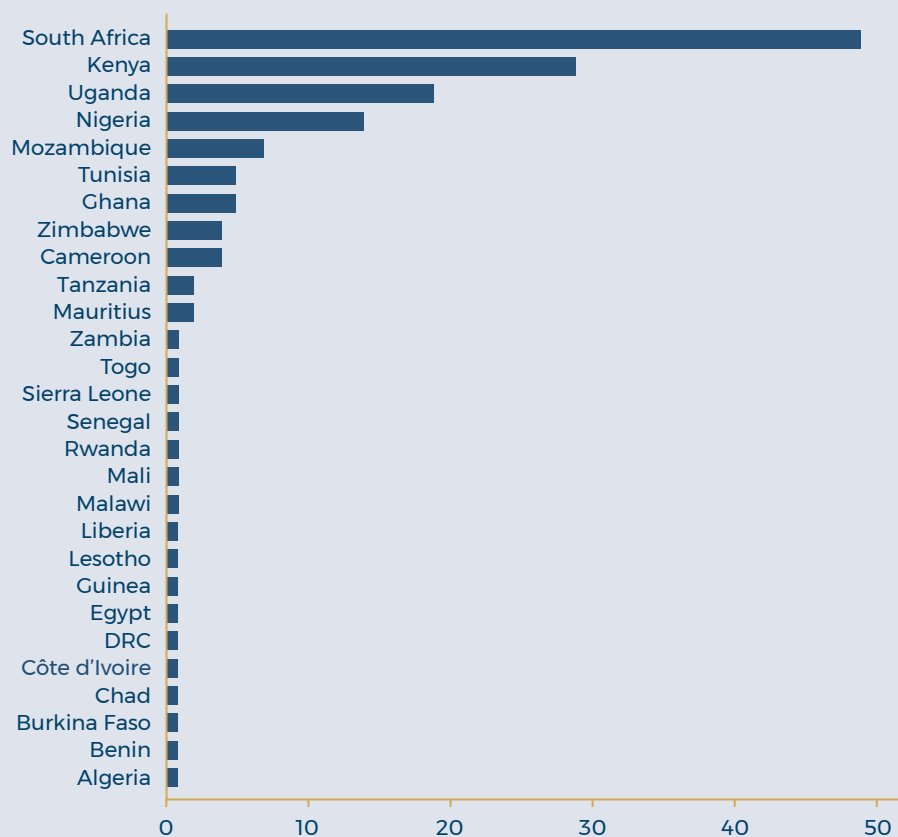
22 Suda Perera, ‘Accessing the inaccessible in difficult environments: The uses and abuses of crowdsourcing’ (Research Paper, Birmingham, UK: Developmental Leadership Program, 2015).

23 Erwin Knippenberg et al, ‘Using mobile phone data to make policy decisions’ (Technical Paper, Cooper/Smith, Digital Impact Alliance & Infosys, 2019).

Civic tech in Africa is growing, although at different speeds, in line with countries' legislative and regulatory environments. Moreover, the openness to civic tech varies from one country to the next.²⁴ Data from the CTIN's civic tech database shows that the majority of civic tech initiatives (around 70%) in the SADC region are being rolled out in South Africa or are of South African origin (see Figure 1). Indeed, civic tech has been shown to be more concentrated in advanced economies, which are likely have greater access to finance, advanced skills and expertise.²⁵

Civic tech in Africa is growing, although at different speeds, in line with countries' legislative and regulatory environments

Figure 1 Number of civic tech initiatives by country in Africa

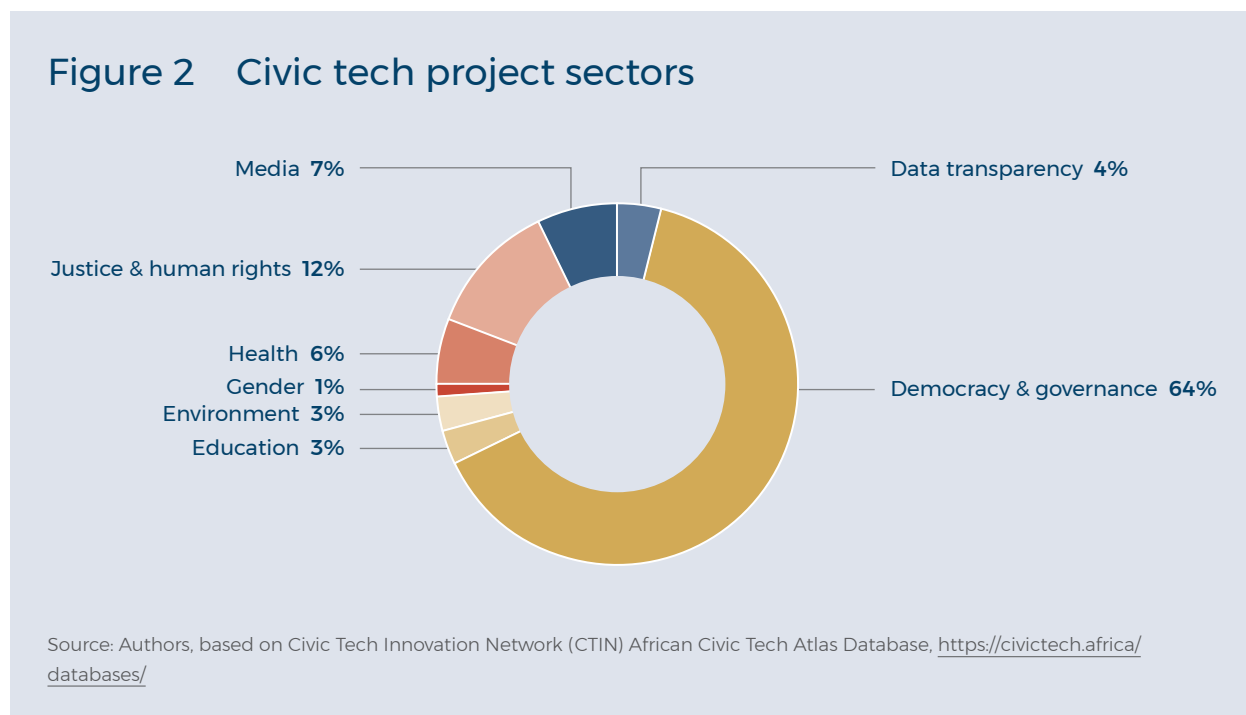


Source: Authors, based on Civic Tech Innovation Network (CTIN) African Civic Tech Atlas Database, <https://civictch.africa/databases/>

24 Couve et al., 'Civic tech in Africa.'

25 Couve et al., 'Civic tech in Africa.'

Regarding the various civic tech sectors reflected in the CTIN database, 64% of civic tech initiatives are focused on Democracy & Governance (Figure 2). This is consistent with the civic tech literature that often refers to democracy and governance as being the natural domain for civic tech projects.²⁶



In the democracy and governance sector, both secondary and tertiary objectives focus on promoting open data portals and platforms. In this regard, the majority (over 50%) of civic tech initiatives in Africa are web-based – that is, hosted on websites or web platforms.

Emerging visions of civic tech futures in the SADC region

Through a focus group conducted with civic tech and governance stakeholders, the authors of this paper invited collective narratives of future visions of democracy and governance, as well as civic tech in the SADC region. Participants were encouraged to consider what the probable and preferred futures of civic tech in SADC would be and then to look beyond these to more imaginative possibilities. The exercise revealed a range of themes, conditions and enablers in relation to various civic tech futures and outcomes, as well as some envisaged threats and challenges that are already emerging.

It is important to note that the participants' positionality as researchers and practitioners within the civic tech field in southern Africa may have influenced their perspectives on civic tech futures. Participants were all educated professionals (at different stages of their

²⁶ Civic Tech Innovation Network (CTIN), 'Exploring African civic tech' (Research Closeout Report, Civic Tech Innovation Network, Johannesburg, 2022), <https://civictech.africa/wp-content/uploads/2022/05/Exploring-Civic-Tech.pdf>.

careers) and were living and working in various southern African cities. However, they had varying ethnic, cultural and socio-economic backgrounds. Participants generally had similar views on the issues surrounding civic tech and highlighted the importance of improving accessibility and digital education in addressing inequality.

No. of participants	Organisational sector	Geographical focus
1	Accountability & Transparency	Africa
4	Civic Technology Organisations	Africa
1	Research	South Africa
4	Public Policy	Southern Africa

Source: Authors

In the first phase, when asked about likely futures for democracy and governance in SADC in the run-up to 2030, participants provided predominantly negative comments regarding: governance (characterised by a loss of confidence in the state, disempowered officials, authoritarianism, privatisation, poor public accountability, weakened regional economic communities and a neo-colonised Africa); technological developments (characterised by hyperconnectivity, widespread access to the internet in urban areas, low state capacity, weakened digital rights, as government and commercial interests collude, and growth in civic tech initiatives); and social environments (characterised by inequality, informality, economic innovation and rising, community-driven development).

In the second phase, when prompted to consider more desirable futures in SADC in 2030, democracy and governance were depicted as being part of an idyllic, caring society in which all citizens would be empowered and recognised in the decision-making process. In this picture, there would be freedom, equity, fairness, justice and an informed citizenry, with democratic governance being prioritised. In keeping with such a scenario, lines of communication between government and residents would be open and unimpeded and freedom of speech would be embraced. Inequality and poverty would have declined due to the vibrant, sharing economy which would be evident in both urban and rural areas.

Even though civic tech is growing at different speeds across Africa, it is present in all SADC countries, which should lead to increased state accountability and transparency, more efficient government service delivery, and improved overall performance not bedevilled by politics. The youth across the continent are leveraging access to the internet and technologies to develop new pathways for civic participation in governance processes. There are thickly connected civic tech communities forming networks and sharing information. Citizens are therefore looking to civic tech to help Africa attain positive developmental outcomes.

In the third phase, when prompted to stimulate their imaginations still further (and given the prospect of a circular, non-hierarchical future), participants provided rich themes and images of:

- Empathy and understanding, buoyed by a genuinely new social compact;
- Diversity, harmony and organic circles of life, as illustrated by life in the oceans;
- Safe and just futures;
- Accelerating and sustainable growth;
- Freedom and joy;
- Planetary unity and interconnectedness;
- The return to and connection with nature (in essence, a Wakanda); and
- Everyone having a voice.

Interestingly, there was no mention in this scenario of government or other institutional forms; the future was seen as essentially organic, shared and positive. The rationale for imagining these futures was not normative. However, they do offer a heuristic foundation for envisaging other futures, which could then be further interrogated using the Three-Horizons Framework. The latter considers possible future horizons and transitions and uses a SWOT framework to examine risks and associated conditions.

Pathways and obstacles

Two broad pathways for civic tech appear to be emerging: civic tech focused on governments and civic tech focused on development and freedom.

Civic tech focused on governments

One of the key roles of civic tech is to react to governance deficiencies. According to the CTIN database of civic tech initiatives in the region, nearly two-thirds of identified SADC civic tech initiatives are focused on democracy and governance. While these technologies may play a role in improving the quality of democratic governance in the region, it is important to consider two key questions: first, is the region truly amenable to open,

Nearly two-thirds of identified SADC civic tech initiatives are focused on democracy and governance

participatory governance; and second, if governments are opposed to more democratic governance, will the implications be that civic tech advocates remain in perpetual conflict with their own governments, thereby leading to increased policing in these states? Clearly, there is a need for a new and richer understanding of the different forms of open, participatory governance which would make optimal use of civic tech capacity. Up for debate, of course, is whether there is any indication that countries in the region are ready for such openness.

The Open Government Partnership (OGP) is a multilateral initiative championing transparent, inclusive and accountable governments. Of the 16 member states of SADC, only three are OGP signatories – Malawi, Seychelles and South Africa. The reasons for this may vary, but Dimba and Grudz argue that many African leaders are suspicious of the OGP, viewing it as a ‘Western Trojan Horse’. Instead, they favour governance tools such as the African Peer Review Mechanism or APRM, which is seen as a ‘home-grown’, trusted initiative.²⁷ Moreover, Razzano and Grudz point to the OGP’s eligibility criteria as a key reason for the limited participation across the continent.²⁸ Despite Malawi, Seychelles and South Africa being signatories, there has actually been stagnation in the active implementation of OGP values and recommendations, according to various accounts. It is reported that the limited legal power of OGP Secretariats and the lack of budget allocations restrict their ability to compel agencies to implement the OGP.²⁹ Additionally, Berliner’s study into why some OGP commitments (across all member states) have not been met highlighted that, in general, commitments are most likely to be fulfilled in countries that are already more open and demonstrate good governance.³⁰

Improving the civic tech–state relationship will encourage governments to formulate and implement digital policies that will enable civic tech ecosystems to function smoothly

If civic tech and the state could work together synergistically, it would support the particular civic tech mode that focuses on positive state–civic interactions. Civic tech is seen as the driving force behind increased transparency and accountability in political processes, while enabling diverse groups to engage with governance in a meaningful way.³¹ Improving

27 Mukelani Dimba and Steven Grudz, ‘OGP in Africa: Another sharp tool in the governance toolbox’, Open Government Partnership in Africa (blog), October 6, 2017.

28 Gabriella Razzano and Steven Grudz, ‘A next-generation peer review: What does the open government partnership have to offer?’ (Policy Briefing no. 143, South African Institute of International Affairs, 2015).

29 Vitus Azeem, ‘A comparative study of the OGP national action plans in Africa’, Open Government Partnership (blog), October 23, 2015.

30 Daniel Berliner, ‘Ambition and realities in OGP commitments: Analysis of commitment completion across countries using hierarchical models’, Open Government Partnership, 2015.

31 Mia, ‘Defining and understanding the civic tech space.’

the civic tech–state relationship will encourage governments to formulate and implement digital policies that will enable civic tech ecosystems to function smoothly.

However, the reality is often ‘one step forward and two steps back’. This was evident in Tanzania’s exit from the OGP in 2017 when a new political leadership took office. ‘Under the Magufuli administration, Tanzania has witnessed a number of anti-democratic actions... arbitrary arrests of legislators and members of the opposition... and the crackdown on independent media and vocal critics of the government...’³² The case of Tanzania clearly shows that if a government is at odds with the civic tech movement in the democracy and governance space, it can erect considerable barriers to progress. If governments and civic tech remain at odds and at an impasse, the implications for civic tech could be severe, if not dire. Deploying resources and capacity to enable actors to act primarily as a watchdog over their own governments would not be an efficient strategy for civic tech. Those resources and capacity would be better used elsewhere, where they would have a greater impact.

Seeing civic tech as the opposition and relegating it to the ‘outsider space’ conjures up an image of a dystopian future in which tech-enabled youth activists and resistance movements remain in perpetual and increasingly sophisticated conflict with the state.

Civic tech focused on development and freedom

Notwithstanding the above concerns, civic tech has another trajectory. It can play an important role in advancing development and freedom, outside the structures of ‘governance only by government’. Rather than maintaining an oppositional stance, it may be more efficient for civic tech activists to understand the needs of both citizens and government.³³ Civic tech has the potential to strengthen communities and build local resilience. For example, it could support or (where appropriate) replace various aspects of government service delivery, especially those aspects that require deeper local contextualisation, innovation and monitoring. This could be an important complement to limited state capacities, which could be allowed to go elsewhere.

Civic tech could also play a critical role in building digital skills and capabilities, as it offers a much wider (than is available in the corporate sector) and more inclusive space for people to develop and practise such skills. The need for digital skills is rising in the wake of the Fourth Industrial Revolution (4IR). In fact, technology is becoming more integrated into all aspects of modern life and digital capabilities will enable people to more readily access and participate in business, industry, education, governance and other spheres as society becomes increasingly digitalised.

32 Pieterella Pieterse, ‘Tech for governance programmes in Tanzania – (how) can tech be used to promote good governance in the Magufuli era?’ (Programme Learning Report, Making All Voices Count, Brighton, 2017), <https://opendocs.ids.ac.uk/opendocs/handle/20.500.12413/13340>.

33 Radhika Mia, ‘Scaling civic tech in Africa: Exploring the business models of three civic tech initiatives from Africa’ (Civic Tech Innovation Network, Johannesburg, 2022), <https://civictech.africa/wp-content/uploads/2022/04/Scaling-Civic-Tech-in-Africa.docx.pdf>.

While the majority of civic tech initiatives in the SADC region focus on democracy and governance, there are also diverse examples emerging of developmental civic tech in sectors such as education, health, the environment, gender and justice. Community Tablet is a Mozambican initiative whose mission is to ‘reduce the digital gap by empowering communities with digital education’.³⁴ Community Tablets travels to rural communities to promote engagement and educate citizens. Another example, this time in the gender space, is Gender Links Lesotho which developed the Nokaneng App. ‘Gender Links Lesotho in partnership with the Ministry of Gender and Youth, Sports and Recreation, Vodacom Lesotho, Main Level Consulting and Partnership for Prevention of Violence Against Women and Girls, funded by the German Development Agency (GIZ), developed a GBV [gender-based violence] smart phone application – Nokaneng App.’³⁵ The app, whose strength lies in its virtual support community, creates awareness about GBV and incorporates an emergency alert system which can be used in cases of violence. In Malawi, VillageReach, together with the government and Swoop Aero, an Australian drone logistics company, is using drones to deliver medications to remote locations, thereby improving equity and access to healthcare.³⁶

Seeds in the present

There are already some visible seeds of these futures in the present.³⁷ For example, there is widespread rejection of exclusionary communities, systems and governance structures, both in popular media and in the public conscience. The notion that it is important to be more representative, inclusive and diverse in order to empower citizens is gaining traction. In this regard, technology is being leveraged to support grassroots-driven social accountability campaigns, exemplified by movements like Amandla.mobi.³⁸

There is a growing willingness on the part of governments to leverage civic and government tech initiatives from third-party developers

Furthermore, there is an increasing awareness and understanding, specifically in government circles, of the important role that civic tech plays in governance. Focus group participants in this study reported that there is a growing willingness on the part of governments to leverage civic and government tech initiatives from third-party developers.

34 Community Tablet, <https://tabletcomunitario.org/mz/>.

35 ‘Lesotho: Nokaneng App – Going digital on GBV,’ *Gender Links*, February 26, 2019, <https://genderlinks.org.za/casestudies/lesotho-new-app-to-prevent-gbv/>.

36 Innocent Mainje, ‘Leveraging the integrated medical drone delivery system for COVID-19 response in Malawi,’ <https://www.village-reach.org/wp-content/uploads/2022/09/SC-Resilience-Framework-D4H-22-Malawi-FINAL.pdf>.

37 Bill Sharpe et al, ‘Three horizons: A pathways practice for transformation,’ *Ecology and Society* 21, no. 2 (2016), 47.

38 Amandla.mobi is an organisation that leads campaigns to create real change through targeted, co-ordinated and strategic action. These campaigns focus in particular on low-income, black women.

An example of this is SEMA, an organisation in Uganda whose mission is to ensure that 'citizen feedback becomes central to how governments improve their service delivery'.³⁹ Through their various feedback tools – an Internet of Things feedback device, an Unstructured Supplementary Service Data (USSD) code, a toll-free line, a phone (and WhatsApp and in-person surveys) – they have empowered citizens to voice their concerns and provide local government with data that can help improve the quality of services.⁴⁰ Since 2018, 69% of the public offices to which SEMA has deployed its civic tech tools have improved their service delivery and 46% have reduced their waiting times.⁴¹ This is yet another, clear example of civic tech's ability to improve democratic processes, especially when underpinned by a willingness by government to embrace and leverage civic tech initiatives.

In the civic tech space, key data sources are open or moving towards openness,⁴² creating an enabling participatory democracy. There is also an increase in the number of civic tech organisations in the SADC region, especially in South Africa, as revealed through the CTIN's monitoring activities. Civic tech initiatives are multiplying, broad-based tech policies are emerging, governance literacy is improving and advocacy capacity is being developed, thus contributing to a more empowered civic space. As South Africa has seen the most growth in the civic tech arena, there may be opportunities for other SADC member states to learn from South Africa's experiences – both its successes and its failures.

Necessary conditions

A lack of awareness of civic technologies, a lack of digital skills and an inability to access civic technologies serve as critical barriers to individuals and communities being able to participate in the increasingly democratised tech and governance spheres. 'Only 20% of the population in Africa has access to the internet compared to almost 50% across the entire world, and 80% of the population in developed countries'.⁴³

Although civic tech can improve urban life in a number of ways, it is also capable of increasing inequality. In the past, exclusion was understood to be not having easy access to infrastructure and amenities. Yet today, in the era of the smart city, exclusion includes not having access to the internet or digital services and tools.⁴⁴ Several factors contribute to this limited accessibility, including the cost of computers and phones, the cost of accessing the internet, unreliable electricity provision, and the tendency for most applications and websites to be available in English only, excluding those who speak other African languages.⁴⁵

39 SEMA, <https://talktosema.org>.

40 CTIN, 'Connecting citizens and services to improve societies (2022)', <https://civicttech.africa/case-study/connecting-citizens-and-services-to-improve-societies/>.

41 SEMA, <https://talktosema.org>

42 Salsa Digital, 'GovTech, CivicTech and open data movement' (White Paper, 2020), <https://salsa.digital/insights/the-govtech-civicttech-and-open-data-movement>

43 Richard Gevers and Sophie McManus, 'Technology for development and inclusion in Africa' (Policy Briefing 204, South African Institute of International Affairs, Johannesburg, 2020), 3.

44 Jessa Dickinson, Mark Díaz, Christopher A Le Dantec and Sheena Erete, "'The cavalry ain't coming in to save us': Supporting capacities and relationships through civic tech' (in Proceedings of the ACM on Human-Computer Interaction 3, no. CSCW, 2019), 1-21.

45 Gevers and McManus, 'Technology for development.'

Although civic tech can improve urban life in a number of ways, it is also capable of increasing inequality

Civic tech efforts are also more concentrated in developed, urban areas. The inability of citizens to access the internet and other digital tools needs to be seriously addressed if civic tech truly seeks to be inclusive. Furthermore, for civic tech to have any impact, there needs to be greater awareness of its many facets and its potential to drive positive social change. Currently, civic tech awareness is very limited and is concentrated amongst the 'elite'. Targeted education and training programmes, as well as more literacy and community development initiatives, need to be introduced. This is particularly important for the most vulnerable in society and will help to produce well-informed, educated, computer-literate and independent citizens. As individuals, communities and organisations acquire a better understanding of civic tech, they will be able to utilise civic tech tools to bring about meaningful change.

Another necessary condition for mobilising civic tech is collaboration. Collaborative action across sectors and between civic tech actors deepens networks and creates a shared understanding of civic tech possibilities. Ensuring that multiple stakeholders are a part of tech development and connecting and sharing information help to stimulate people's interest in and grasp of new tools and methods. Collaboration is also important for the maturation of civic tech through partnerships with incubators and accelerators.⁴⁶

Collaborative action across sectors and between civic tech actors deepens networks and creates a shared understanding of civic tech possibilities

Certain minimum conditions and enablers are necessary to realise the more positive aspects of the envisaged futures. It is essential that the appropriate range of capacity boosters – from basic digital literacy to high-quality education – becomes more accessible and affordable, as equipping citizens with digital skills will help them to secure their rights. In this way, individuals and organisations will develop a better understanding of their democratic space and how best to leverage civic tech tools. Access to high-speed internet and other digital tools is a key enabler. It is also important for building community-owned network infrastructure, especially in rural areas. Investment in affordable rural broadband

46 Mia, 'Scaling civic tech.'

access would empower the citizens in those areas to participate in their own governance. Without such access, there is a risk that civic tech will simply widen the digital divide and exacerbate inequality. Moreover, digital literacy is essential if civic tech is to avoid being seen as just as exclusive as the different types of public and private sector governance are currently perceived to be.

Over and above access and education, it is also important to develop strong regional data protection and sovereignty frameworks whose rules are strictly enforced. Collaboration is another important enabler, as multi-stakeholder tech development is necessary for civic tech to have a meaningful impact.

Disablers

There is still unequal access to civic tech tools due to the pervasive digital divide and high data costs. To develop thickly connected civic tech communities, there must be affordable access to the internet and other civic tech tools, otherwise ‘technology tends to reflect a society, which, in this context, is still one of inequality and discrimination’.⁴⁷ Limited access poses a major threat to positive civic tech futures, especially in rural areas. Access to public information also needs to be addressed. Where public information is not readily available, misinformation spreads and hinders effective decision-making.

The relationship between civic tech and government is often one of opposition. Governments and civic tech are frequently thought to have competing agendas, giving rise to an ‘us vs. them’ mentality

The relationship between civic tech and government is often one of opposition. Governments and civic tech are frequently thought to have competing agendas, giving rise to an ‘us vs them’ mentality. ‘Civic technology is meant to be responsive to the needs of citizens’ but governments may not trust civic tech tools and what they aim to achieve.⁴⁸ There are various reasons for this, including the dominance of hierarchical and command-and-control paradigms, fear of political influence, and poor capacity for regulation and management of standards. The ability of government officials to absorb civic tech has indeed tended to be limited by a lack of digital skills and an archaic culture that is at odds with and suspicious of civic tech solutions.⁴⁹

47 Richard Gevers, ‘How civic technology can drive accountability in South Africa’ (Policy Insights 47, South African Institute of International Affairs, Johannesburg, 2017), 3.

48 Dickinson et al., ‘The cavalry ain’t coming.’ 2.

49 Civic Tech Innovation Network (CTIN), ‘Exploring African civic tech.’

Distrust was a foundational value of liberal democracy, creating a 'trade-off between distrust of those in power, as well as distrust of direct citizen participation which produced a representative system in which citizens legitimise a government ... but remain outside of ... that government'.⁵⁰ Although some distrust may still be a part of this system, building trust and civic relationships is an essential step towards including citizens in governance activities and ensuring inclusive development.⁵¹ While trust allows for the development of social and political capital, distrust keeps the state accountable and motivates communities to participate.⁵² Improving this relationship would allow civic tech to focus on addressing developmental challenges, with the support of government, and delivering impactful solutions to citizens.

There is a worrying trend towards 'digital dictatorship' in African countries, with 'old leaders' adopting 'new tricks'.⁵³ Through internet shutdowns, restrictive legislature, social media taxes, restrictions on information dissemination and/or the spreading of false information, governments have found new ways to manipulate and silence citizens, creating political processes that are not fair, open or democratic.⁵⁴ This trend towards political misuse of digital resources creates challenges for the future of African democracy and governance, as such activities severely constrict the civic tech space and prevent any meaningful development. To combat this, there is a need for regional collaboration aimed at creating a policy environment that supports civic tech and its role in strengthening democracy and government. This would be a valuable topic for future research.

Another threat is the growing disillusionment and disconnect with government processes. A loss of confidence in the state due to poor accountability seems probable. This leaves public officials trapped between civic and government processes and demands.

Politics can be a more direct disabler of civic tech innovations. Changes in political leadership, for example, often lead to the progress made in the previous administration coming to a halt. Embedding democratic innovations is a gradual process that requires continuity and long-term commitment, where new systems and legislations are developed and the relationship between governments and their citizens is reimagined.⁵⁵

Addressing civic tech funding is also vital, as the absence of funding is one of the main disablers of civic tech initiatives. Civic tech tends to face a dilemma in that governments will only fund projects if, firstly, they are open to civic involvement and, secondly, the civic technology is aligned to government thinking and agendas. This applies to private funders as well. Both the private sector and international donors have their own interests and with

50 Eric Corbett and Christopher A Le Dantec, "Removing barriers" and "Creating distance": Exploring the logics of efficiency and trust in civic technology,' *Media and Communication* 7, no. 3 (2019), 104-113.

51 Corbett and Le Dantec, "Removing barriers" and "Creating distance".

52 Dickinson et al., 'The cavalry ain't coming.'

53 Ronak Gopaldas, 'Digital dictatorship versus digital democracy in Africa' (Policy Insights 75, South African Institute of International Affairs, Johannesburg, 2019), 5.

54 Gopaldas, 'Digital dictatorship versus digital.'

55 Whittington, 'Democratic innovation and digital participation.'

this power they are able to steer agendas. This type of funding is unsustainable, as it is not guaranteed to continue. Long-term funding for projects is also limited as funder interest in civic tech has declined and the current business models and funding regimes in the civic tech space are inadequate. There needs to be greater donor funding but also an increase in funding from all levels of government.

Challenges

Grasping the purpose of civic tech is a challenge, as there is no easy or shared definition and understanding of the concept; nor is there consensus on its desired outcomes and impact. Often, the long-term implications are not fully considered or even known. Risk assessment is therefore different, with experimentation often being the order of the day. Thus, new approaches to risk governance are required. There also needs to be a better understanding of the factors that support meaningful citizen participation and how to design civic tech platforms for maximum impact.⁵⁶

To fully appreciate the benefits to society of leveraging civic tech in Africa, more local research is needed, which should also help to dispel popular myths about various civic technologies. The research being conducted by the CTIN in collaboration with the University of Johannesburg's African Centre for Evidence, as well as other exploratory initiatives by entities such as the Futures Programme at SAIIA and the Human Sciences Research Council (HSRC) Policy Action Network, are beginning to fill the gap.

While this paper has outlined the potential of civic tech to improve democracy and governance in southern Africa, there are some negative aspects that need to be considered. These include the growing trend towards digital dictatorship (discussed above), data abuse and the violation of individuals' privacy, civic activism characterised by extremism, and the exclusionary nature of some civic tech tools.⁵⁷ Awareness of these unsavoury aspects of civic tech will make people more cautious when designing and using civic technology. Another challenge that needs to be addressed is potential stagnation in the civic tech field due to a lack of digital education and awareness, poor digital infrastructure and limited access. Continued inequality and a lack of access within the civic tech space may result in civic tech 'breaking apart' because citizens are unable to participate equally. In this regard, there is no cohesive civic space but rather a series of micro spaces that vary in their degree of openness.⁵⁸ To combat this potential future, it is important to foster a free, open and inclusive digital space.⁵⁹

56 Mia, 'Defining and understanding.'

57 OECD, 'Digital transformation and the futures of civic space to 2030' (OECD Development Policy Papers no. 29, OECD Publishing, Paris, 2020), <https://doi.org/10.1787/79b34d37-en>.

58 OECD, 'Digital transformation and the futures.'

59 OECD, 'Digital transformation and the futures of civic space to 2030.'

Recommendations and conclusion

Although it is a fairly established concept, civic tech is still quite exploratory and experimental. In particular, it remains to be seen which of the two pathways discussed in this paper will dominate: government-focused civic tech or civic tech that is community-driven and emancipatory. Some recommendations for realising positive alternative democracy and governance futures are as follows.

Innovators should deepen democratic engagement and empowerment:

Deepening democratic engagement and empowerment through civic tech must always be the focus. To this end, ‘... civic technologies need to become more than interfaces that facilitate transactions between residents and city services’. Furthermore, instead of focusing on a transactional model, innovators should seek to develop relationships and leverage local assets to address urban challenges.⁶⁰

New, more sustainable funding models for civic tech are needed:

There is a need to build new, sustainable funding models and networks, which will include finding ways to convert local civic and digital skills and assets into income. It is recommended that civic tech organisations find innovative ways to generate income to reduce their dependence on donors, such as leveraging their assets and skills to provide services.⁶¹ It has been suggested, for example, that civic tech innovators ‘build funding networks of angel investors and high net worth donors; entice traditional democracy funders; make inroads to impact the investing community; collaborate on investments; etc.’⁶² In addition, they could find other ways to generate income (besides donor funding). For example, iCampus in Liberia offers co-working spaces, consultancy/training and audio-visual services.⁶³

There is a need to build new, sustainable funding models and networks, which will include finding ways to convert local civic and digital skills and assets into income

Multilateral institutions (MLIs) such as the AU also have a role to play. For example, the African Union Civic Tech Fund has collaborated with international partners to create the

60 Dickinson et al., “The cavalry ain’t coming in to save us”, 2.

61 Mia, ‘Scaling civic tech in Africa.’

62 Mia, ‘Scaling civic tech in Africa.’

63 Mia, ‘Scaling civic tech in Africa.’

Civic Tech Africa Fund, which promotes the use of civic technology to amplify citizens' voices in 11 AU member states. The mandates, reach and significant fundraising capacity of such MLIs present important opportunities for creating innovative, responsive funding instruments.

At the same time, though, the philanthropists and partners that have been supporting civic tech need to look to the future and support any transitions in technology or actor focus.⁶⁴ Abruptly terminating support for the entire sector would be irresponsible and would ignore the critical timeliness needed for public good initiatives, including the development of participatory digital capabilities.

Governments and public agencies should partner with civic tech:

It has been noted that governments need to pay attention to emerging civic tech trends. To this end, the public sector should invest in education, digital literacy and awareness of civic tech within the public space to ensure that community members, government officials, policy makers and politicians are all aware of the nature and benefits of civic tech. If governments have insufficient digital literacy, they will be unable to leverage technology to solve developmental problems and will tend to believe that technology is the solution, rather than a mechanism for change.⁶⁵ It is crucial that 'greater capacity and technology literacy should be developed at all levels of government to combat misuse and misunderstanding of technology's role in the development of society'.⁶⁶

Different types of civic tech cater for different democracy and governance issues, ranging from improving political accountability and transparency and making governance more responsive, to providing access to information and facilitating public participation in decision-making. Powerful examples of effective government-civic partnering in South Africa include civic tech partnerships with the Department of Public Service and Administration (Parliamentary Monitoring Group), the National Treasury (MuniMoney) and local governments (SCODA and eThekweni Edge). These types of partnership could easily be expanded to regional bodies like SADC, MLIs and development finance institutions for wider impact and 'bottom-up traction', thus also helping to forge local resilience by building and deploying local capabilities.

Governments should support healthy digital ecosystems to advance democracy and development:

Governments should create or at least support enabling environments where civic tech can have a meaningful developmental impact in its various modes and can enjoy state support in its quest to do so. Importantly, civic tech can help to facilitate participatory

64 CTIN, 'Session report: Future of civic tech financing and sustainability' (Civic Tech Innovation Forum Report, 2021), <https://civictch.africa/wp-content/uploads/2023/03/Report-Future-of-Civic-Tech-Financing-Sustainability-1.pdf>.

65 Gevers and McManus, 'Technology for development.'

66 Gevers and McManus, 'Technology for development,' 1.

digital democracy and delivery. The focus is often on the access divide but the participation divide also needs to be addressed.⁶⁷

Civic tech is helping to empower communities to develop creative approaches to addressing local challenges and opportunities and to arrive at their own solutions. For example, in a community using an e-mail list to distribute information, residents were able to report criminal activity and other concerns, increasing residents' participation in local governance.⁶⁸ Community leaders were responsive to these concerns, narrowing the gap between citizens and their local government.

It is well established in the literature that it is vital for officials and residents to collaborate when developing policies that will impact communities. Civic tech can be used as a tool to facilitate this.⁶⁹ Civic tech tools may include online government services, digital mapping tools, message boards, online dashboards, USSDs, e-voting (if set up with adequate security measures) and social media.⁷⁰

'Development is about providing people with the ability and resources to improve their livelihoods. Fundamentally, it is about meeting a community at a starting point and moving along with it as its socio-economic, health, education or other developmental metrics are improved.'⁷¹ If communities are equipped with the necessary skills, information and knowledge, they will develop the ability to participate in and shape their own development.

The above recommendations are not exhaustive; they focus on core aspects (and actors) supported by the findings of this particular study. Civic tech capacity and impact also relate to entrepreneurial and business ecosystems, the role of civil society and citizens, and even the role of knowledge institutions. These interest areas and interactions all beg for further study and attention.

In closing, it should be stressed that civic technology is growing across the African continent, presenting unprecedented opportunities to improve democracy and governance. For this to occur, however, governments need to become more open, participatory and enabling. Civic tech and governments need to forge a relationship that will enable them to work synergistically rather than in opposition. There are already encouraging signs of a growing awareness of the leading role that civic tech can play in the governance domain. However, there is still much work to be done to ensure that civic tech becomes truly accessible, equitable and sustainable in the future.

67 Dickinson et al., 'The cavalry ain't coming.'

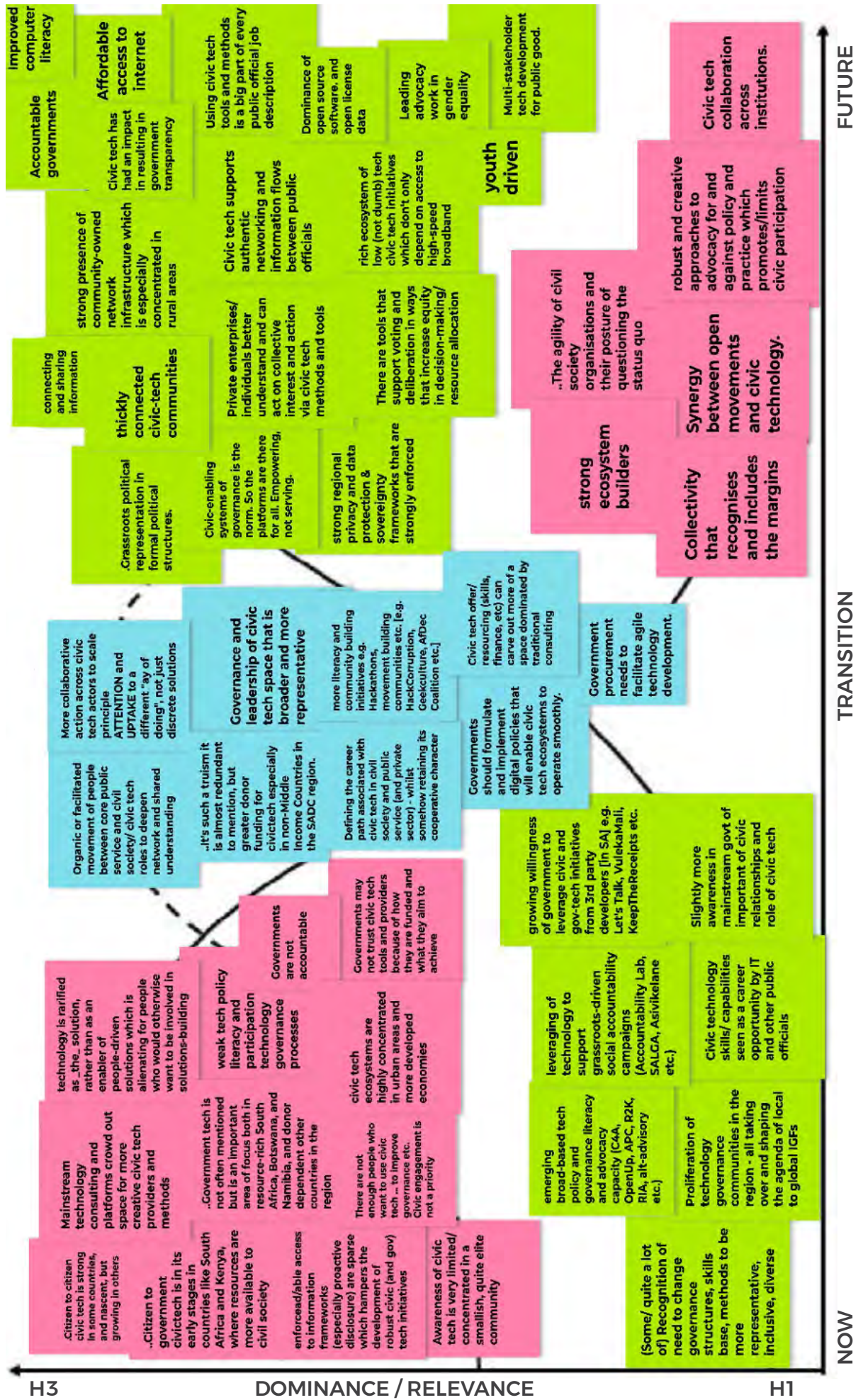
68 Sheena Erete and Jennifer O. Burrell, 'Empowered participation: How citizens use technology in local governance' (in Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems, 2017), 2307-2319.

69 Dickinson et al., 'The cavalry ain't coming.'

70 Pollicy, 'Civic participation: How to use technology to participate' (2019), <https://medium.com/pollicy/civic-participation-how-to-use-technology-to-participate-cf66c8e22c6d>

71 Gevers and McManus, 'Technology for development,' 4.

FUTURES OF DEMOCRACY AND GOVERNANCE IN SADC



Source: Authors, based on data from the focus group

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Acknowledgement

SAIIA gratefully acknowledges the support of the Konrad Adenauer Stiftung for this publication.

SAIIA and the authors acknowledge and appreciate the role of the Civic Tech Innovation Network in assisting with data and networking for this project, and they thank the civic tech stakeholders who participated in our foresight exercises, giving us invaluable insights.

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SAIIA is an independent, non-government think tank whose key strategic objectives are to make effective input into public policy, and to encourage wider and more informed debate on international affairs, with particular emphasis on African issues and concerns.

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