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HOW CIVIC TECHNOLOGY CAN DRIVE ACCOUNTABILITY IN SOUTH AFRICA

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'All citizens have a right to access information gathered about them by the state.'

South African Constitution

EXECUTIVE SUMMARY

Despite the open data movement's early momentum it has struggled to make an impact while transitioning from 'civic hacking' into mainstream society and governance. However, within South Africa there are a number of civic technology projects and initiatives focused on government, civil society organisations (CSOs) and citizens that are moving towards achieving real impact. As the world hurtles into the information age, big data, privacy, transparency and access to knowledge are becoming increasingly central themes. Within this context, employing technology to drive accountability and transparency in society provides an opportunity to democratise knowledge and see real change within South African communities.

Three important frames in understanding technology for accountability (T4A) are open data, civic technology and the accountability stack. Open data projects most often result in the delivery of an Open Data portal, and civic technology projects in an app or website. Neither of these alone can drive accountability within society. Framing T4A projects within the accountability stack concept means using appropriate information in context to drive action. The only way real, sustainable and positive social change can happen is if the primary focus of those employing the civic tech community is on citizens and the problems they face.

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INTRODUCTION

The open data movement can be traced back to discussions about the open web. In a 2009 TED talk Tim Berners-Lee (who invented the world-wide web in 1989) spoke of 'raw data now'. Enabled by open source technology developments, early adopters of the open data movement were civic hackers, activists and, shortly afterwards, civil servants in the UK and US. They were driven by the belief that giving people access to raw data would enable change. Early tools and initiatives showed that civic hackers were the primary users. Wikipedia, for instance, is an example of an early driver of the open knowledge, open data and open government movement.

The modern trend of data and information being labelled as a currency by governments and businesses gives it value and prominence. The increased popularity of terms such as 'big data',[1] 'smart city' and 'Internet of things' within government, business and civil society means they are often used out of context or with little to no real understanding. These are indicators of the belief that technology and data science is a panacea for development challenges. Various apps and tools – such as interactive graphs or clickable maps – allow for live interaction with information in a visual manner. This lessens the gap between datasets and users where there is an existing baseline data literacy. Similar tools and systems are also increasingly becoming available and appealing to governments, civil society and journalists, and are often referred to as 'civic tech'. This policy insights paper discusses how open data and civic technology need to be framed in an accountability context. It includes examples of tools, websites and apps in Southern Africa as well as recommendations on how one might get involved in and collaborate with this 'movement'.

BACKGROUND TO THE CURRENT CIVIC TECHNOLOGY ENVIRONMENT

The rise of open source technology and the open web is making data and technology more accessible. With Google's open sourcing big data technology and companies such as Amazon making cloud computing cheap and easily scalable, the information age is a time when technologists have an incredible amount of power.

The intrusion of technology into every aspect of life means that to be successful, organisations need to utilise it to meet their clients' expectations. However, most organisations are not resourced similarly to the start-ups of Silicon Valley. This is even more challenging for organisations in the Global South. Continued technological improvements mean that the distance between those with fewer resources and less access, knowledge, financial capital and experience and those who do not face these challenges grows steadily larger.

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This is the first fallacy of T4A: that technology has the power to change or impact. A subtle assumption of this fallacy is: because technology can scale, connect and reach a wider, diverse group with solutions it creates social change. In reality, technology is the pipe, not the water. Most of the enduring success stories out of Silicon Valley arise from the ability to understand a human problem and provide a solution. The technology then enables scale, reach and functionality. In our context, technology in a country such as South Africa acts more as a discrimination

agent than as a driver of equality. Technology tends to reflect a society, which, in this context, is still one of inequality and discrimination.

THE INITIAL WAVES OF OPEN DATA AND CIVIC TECHNOLOGY – WHAT WE HAVE LEARNT

Historically, the primary output of the open data movement is the open data portal[2] (for example the UK government portal or the US government portal). It is an open repository of data that is machine-readable, has proper metadata[3] and allows anyone to access it and use any data it contains for any purpose. However, an important lesson learned is that open access to information and data alone does not lead to significant impact and/or change. The 'data optimism' of those early years led people to believe that data alone could solve problems. Yet only a few categories of people, such as data specialists or civic hackers, possessed the skills to build something useful (for example, a government's putting a bus route and schedule dataset on a portal means a civic hacker can build a bus tracker phone app with it). However, it was a great marketing tool for governments that adopted and published open data, reflecting the supply-heavy nature of the early open data movement. Governments were congratulated for their transparency (the metric of success being how many datasets were opened), but there was little ability (and this is still the case) to track the usage of data and the impact of its use. In other words, there was a rise in transparency but not in accountability, indicative of the dangers of 'open washing'. The 'data optimism' also did not take into account the general technology illiteracy and lack of access that most of the world still experiences.

The intended users or recipients of impact – civil servants, citizens, civil society representatives and journalists – were not typical early adopters or at times even tech-savvy. The concept of 'civic technology' represents the second framing of technology in the open movement, after open data. Civic technology started to incorporate a user-driven approach to access to knowledge. A user is connected to information or knowledge in a way that is natural or comfortable to that user, in the hope that he/she can then employ the technology to make a difference. Civic tech is often built on open source technology and using open data. Wazimap is a good example of this. Using one of the most significant public open datasets in South Africa, the StatsSA census 2011 (and soon its community survey 2016), Media Monitoring Africa and OpenUp (previously Code for South Africa) created a site that used an existing census reporter platform from the US, and a tool that made demographic information easily accessible. The original intention was to provide a tool for journalists to access data and even embed interactive data visualisation within articles. The user base has since grown to include citizens, researchers and civil servants.

Although the mixture of civic technology and open data has provided some success stories, its impact growth seems to have stalled. The focus of these initiatives is still on producing tools or web applications. Funding and project parameters are set up to this end, rather than to actually solve a particular problem. User-centred design is also difficult to implement, expensive and time-consuming, and can lead to bias. This second wave of civic technology continues to focus on supply-side and technology, rather than on people and problems. There have been some exceptions: for instance, the Black Sash and OpenUp have collaborated to create the

Community-based Monitoring tool that allows civil society to gather and analyse information about local service delivery from recipients' point of view. This is then packaged and delivered to the community users (often an A4 printed infographic in their mother tongue), which they then use in workshops with local government to discuss their needs and monitor and evaluate local government. In this context, open data and civic technology provide important lessons for accountability through technology.

THE ACCOUNTABILITY STACK

T4A starts with a real person who has a defined problem, and the process or project is only complete when that person's problem is solved

The community-based monitoring project[4] is an example of the third wave of using T4A. It starts with a real person who has a defined problem, and the process or project is only complete when that person's problem is solved. This should be the starting point for using T4A. It is not about the technology or the data, but about the person. Alongside these principles, old ideas are starting to be applied in a new way. 'Democracy in action' is one of these. How can citizens use technology and data in informing, empowering and activating change within their societies? OpenUp believes that '[c]itizens become active and take action to improve their lives when they are informed and empowered to effect change'.

The influential concept of the 'accountability stack'[5] was first articulated by Will Perrin, a board member of the UK-based philanthropic organisation The Indigo Trust. Perrin later described his initial thoughts around the factors he originally thought made up the accountability stack as being 'necessary but not sufficient'.[6] For example, accountability requires access to information and for data to be open, but this alone will not create accountability. The 'accountability stack' is a useful phrase in terms of open data, civic technology and achieving real change. It implies that there is not necessarily a different technical approach or new technology required, but rather that the accountability stack is a reference for project impact. It is about starting and ending with people and understanding how technology can be used throughout this journey, while accepting that it may end in a different result to the one originally envisioned and utilise different technology than initially planned. What if paper or radio is the best way to engage with the people who have the problem? Perhaps there is no place for any 'technology' in what was conceptualised as a civic technology project.

RESPONSIBLE DATA

The concept of responsible data[7] is embedded within the technology environment of accountability. In an era where data privacy is being threatened, invasive practices by governments and big business have created confusion and fear. In some cases early projects that involved opening government data had a negative effect for the data owners, and in others citizens' data was shared without permission. The responsible data handbook by The Engine Room provides a useful set of guidelines for understanding the dynamics around using data responsibly. In using T4A in the South African context, one has to ensure that responsible data concepts become central and that there is a recognition that ultimately humans are behind the data, and that T4A projects are meant to help people and communities.

MECHANISMS

Certain mechanisms and key roles are needed to ensure the sustainability and impact of a civic technology project. Typically the focus is on the information space between local government and citizens, and so a project generally needs to have both citizen and civil servant users. Civic technology labs do not expect to relate directly to every context and need, nor do they have the resources or capacity to carry a project alone. In partnering with CSOs that work with the targeted communities, a project team framework is created, which helps to understand both user needs and problems, as well as to utilise appropriate technology to solve them. If the CSO partner has the capacity for continued interaction and outreach with the community, it also ensures the sustainability of the project. There is a strong relationship between civic technology and data-driven journalism (such as in the example of Wazimap). Utilising data and technology in driving accountability and transparency through the media should be the norm in newsrooms. Open Data Durban, for instance, recently partnered with *City Press* and Code for Africa to create Ezolwaluko, a project aimed at providing access to health information to initiates and traditional surgeons in South Africa.

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In a project collaboration between a CSO and a civic technology lab, a media partner can play a critical role in promoting public awareness. However, it is important to establish proper engagement with the media partner and ensure that it can accurately report on the project. While government collaboration has been slow within the civic technology space, Municipal Money[8] is a good example of a project where the government (in this case the National Treasury) wants to open access to information to citizens, and a civic technology partner helps it to achieve this goal.

The following lessons on collaborating on open data projects with local government partners were extracted from Open Data Durban's previous work.

WHAT ARE THE OPPORTUNITIES?

Three key lessons around opportunities to use civic technology and open data are:

1 explore, test and use the tools that exist, and provide feedback;
2 bring a citizen's need to a civic technology organisation and conceptualise a project together; and
3 host a workshop, training session or meet-up.

CONCLUSION

The only way real, positive social change can happen is if the primary focus of those employing civic tech is on citizens and the problems they face. Then one can look at what data needs to be opened or accessed in this context, and what technology would best facilitate the solution. Within the realm of active citizenry and the drive for accountability, it is important that practitioners do not reinvent the wheel and that they do employ user-centred design techniques. Practitioners and partners also need to be wary of falling into the consulting or service provider

Utilising data and technology in driving accountability and transparency through the media should be the norm in newsrooms

paradigm. A civic technology partner (as described above) is often a CSO in its own right and has a theory of change and a mission to achieve, so approach partnerships as a partner and not a client, and be ready to both learn and teach.

BOX 1 USE THE TOOLS THAT EXIST

The following is a list of some of the civic technology tools in South Africa that can be used for accountability initiatives. If an organisation/individual would like to:

- explore and use the StatsSA Census 2011 data and soon the 2016 community survey data, use Wazimap;
- understand community-based monitoring, visit the CBM website;
- contact and/or know who their representatives are, use the People's Assembly site and Speak Up Mzansi;
- access, explore and use bylaws in Johannesburg, Cape Town or Durban, use Open By-laws;
- access municipal finance and budget data going back to 2012, use Municipal Money;
- engage with health news and information, visit Health-E-News;
- read news focused on the human rights of vulnerable communities, visit GroundUp, which is busy partnering with GroundSource, a community messaging platform to enhance community-centred journalism and research;
- explore the biggest free and open collection of government gazettes, visit Open Gazettes;
- explore South African corporate data and topics such as ownership of companies and tender awards, use Trace;
- explore South Africa cities' context and data, use the SA Cities Network Open Data Almanac;
- track environmental impact assessment data and see good examples of data-driven journalism, use #GreenAlert and #MineAlert;
- find the full list of generics and prices for any prescribed medicine, use the Medicine Price Registry; and
- explore innovative data/tech journalism projects such as:
  - The Living Wage Project – the challenges of making a living wage as a domestic worker in South Africa;
  - Ezolwaluko – initiation health technology journalism; and
  - Unequal Scenes – drone photojournalism showing spatial inequality.

This list shows a wealth of information and tools. In most cases they allow users to export, embed and download data. There is a great example of a growing citizen toolkit at whatcanido.org.za, which has even more accountability-focused action items. This presentation from a workshop on 'Technology 4 Accountability in Africa', organised by the South African Institute of International Affairs in November 2016, provides additional links and information on tools currently available.

RECOMMENDATIONS

1 Make sure T4A projects start with a person (citizen, civil servant, journalist, community member, CSO manager, etc.) with a problem to solve, and that the project deliverables, monitoring and evaluation, and outcomes are framed by this problem being solved and not by technology being delivered. In most cases technology being delivered is only the start of a project.

2 Opening data, and providing access to information and knowledge, is necessary (but not sufficient) as a base for most T4A projects. Find a way to link this into an actionable outcome, and frame a project based on the demand for the information in context rather than what is easy to share, low risk or available.

3 Meet the users of your project and initiative where they are. Bring them into your planning and testing early on. Understand the context that you are working in. Is there access to Internet? What is the general level of data and tech literacy? What is the nature of the organisation and the community, and how will the internal culture feel about openness and related topics? Sometimes paper or radio is the most appropriate technology to achieve impact.

4 A civic technology partner is most often a CSO in its own right and has a theory of change and a mission to achieve, so approach partnerships as a partner and not a client.

ENDNOTES

1 'Big data' refers to datasets whose size is beyond the ability of typical database software tools to capture, store, manage and analyse. See McKinsey&Company, *Big Data: The Next Frontier for Innovation, Competition, and Productivity*, McKinsey Global Institute Report, May 2011, http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/big-data-the-next-frontier-for-innovation, accessed 29 May 2017.

2 An open data portal is a website where it is possible to access, view and/or download an open dataset (for example a map or a table), often with other features. See Open Data Handbook, 'How to open up data', http://opendatahandbook.org/guide/en/how-to-open-up-data/#make-data-available-technical-openness, accessed 29 May 2017, for more information.

3 '[D]ata that provides information about other data', Merriam-Webster Dictionary, 'Metadata', https://www.merriam-webster.com/dictionary/metadata, accessed 29 May 2017. This describes the data and, for example, how it is structured, where, when and how it was collected, and other information that informs what it can be used for.

4 In a community-based monitoring project, access to data on service delivery is given to community members, to engage with local government on improving service delivery.

5 The accountability stack describes urgent, important and feasible civic information that anyone can openly access to drive and facilitate transparency and accountability in society.

6 Perrin W, 'London anti-corruption summit 2016 – basic, achievable, structural steps to tackle corruption', The Indigo Trust, blog post, 16 November 2015, https://indigotrust.org.uk/2015/11/16/london-anti-corruption-summit-2016-basic-achievable-structural-steps-to-tackle-corruption/, accessed 28 May 2017.

7 Responsible data is '[t]he duty to ensure people's rights to consent, privacy, security and ownership around the information processes of collection, analysis, storage, presentation and reuse of data, while respecting the values of transparency and openness'. Responsible Data Forum, https://responsibledata.io/about/, accessed 28 May 2017.

8 Municipal Money is an open data application programming interface and data website that provides users with access to South African municipal budget and expenditure information in an interactive and user-friendly manner, and includes educational videos and other resources to help a user understand and interpret the information provided.

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