SMART CITIES, SAFE CITIZENS: ZIMBABWE

PARADIGM INITIATIVE

CIPE
CENTER FOR INTERNATIONAL PRIVATE ENTERPRISE

SMART CITIES, SAFE CITIZENS: ZIMBABWE

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ACKNOWLEDGEMENTS

Contents

PARADIGM INITIATIVE

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LIST OF ACRONYMS

BCC	Bulawayo City Council
CCTV	Closed Circuit Television
CDPA	Cyber and Data Protection Act
GIS	Geographic Information Systems
ICT	Information and Communication Technology
PIN	Paradigm Initiative
POTRAZ	Postal and Telecommunications Regulatory Authority of Zimbabwe
NDS1	National Development Strategy 1
TTI	Tendy Three Investments
ZNHSP	Zimbabwe National Human Settlements Policy

KEY TERMS AND CONCEPTS

Smart city

A city where traditional networks and services are made more efficient with the use of digital solutions for the benefit of its inhabitants and business. A smart city goes beyond the use of digital technologies for better resource use and less emissions. It means smarter urban transport networks, upgraded water supply and waste disposal facilities and more efficient ways to light and heat buildings. It also means a more interactive and responsive city administration, safer public spaces and meeting the needs of an ageing population.[1]

Smart city initiatives

These initiatives aim to build a smart city and ensure a more responsive service delivery system harnessing digital technologies.

Data controller

(a) Refers to any natural person or legal person who is licensable by the Data Protection Authority;
(b) Includes public bodies and any other person who determines the purpose and means of processing data in terms of the Cyber and Data Protection Act, 2021.[2]

Illegitimate requests

These are unlawful requests for data collected through smart city initiatives without a court order.

Respondents

Individuals who completed the perception survey deployed by PIN.

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1. JEuropean Commission - https://commission.europa.eu/eu-regional-and-urban-development/topics/cities-and-urban-development/city-initiatives/smart-cities_en
2. Cyber and Data Protection Act, 2021 - https://www.veritaszim.net/node/5522.

EXECUTIVE SUMMARY

The report highlights government priorities and prominent safe city initiatives in Zimbabwe, assesses the possible benefits and challenges and considers the perceptions of citizens and critical actors.

An online survey was used to capture the views of diverse Zimbabwean stakeholders concerning smart city initiatives. The survey findings identified numerous benefits of smart city initiatives, from detecting and preventing crime, enhancing access to local city councils and service delivery, improving traffic management systems, enhancing water management systems, increasing investments and economic growth, and facilitating safety through street lighting solutions.

The survey also uncovered views from concerned citizens, capturing the considerable perception of smart city initiatives used as weapons to target human rights defenders and critics of the government; and for corrupt practices occasioned by opaque procurement processes.

Other concerns include a lack of transparency and engagement of citizens in processes; and a lack of adequate resources to fully automate parking systems resulting in semi-smart city initiatives.

The recommendations proffered in this report provide key stakeholders in government, the private sector and civil society in Zimbabwe with a way forward to achieve a form of equilibrium where smart cities equal safe citizens across the spectrum of human rights on the one hand, and crime control on the other.

RESEARCH METHODOLOGY

These findings are based on desk research gathering information on smart city initiatives, reviewing national policies and an online survey reflecting the views of individuals drawn from Zimbabwe's urban society.

An online perception survey was deployed through convenience sampling. Out of 203 responses, 200 were from individuals in major cities in Zimbabwe and three responses were submitted by individuals based in Johannesburg, South Africa, who presented their views on the systems in Zimbabwean cities.

Views from seven other key respondents from civil society and the private sector were collected through an online survey and key informant interviews. Most respondents were from Harare and Bulawayo, all digitally literate with access to the internet and digital technologies, cutting across a range of stakeholders.

01

INTRODUCTION

Zimbabwe is an African country in Southern Africa with a population of 15 178 957,[3] according to the last population census conducted in April 2022.

Harare province has a population of

2 427 231

and Bulawayo has

665 952

people.[4]

With such large populations, an efficient service delivery system can be enhanced by technology if human rights are a priority in deploying technologies. A smart city should ideally deliver on efficiency and technological advancement that characterises the modernity of urban development.

3. ZimStat Zimbabwe 2022 Population and Housing Census Volume 1 https://www.zimstat.co.zw/census/
4. ZimStat Zimbabwe 2022 Population and Housing Census Volume 2 https://www.zimstat.co.zw/census/

In a dream society, it is safe for the citizenry to enjoy their freedom of movement and privacy without wondering if the big two - systems and services - have eyes watching their every move. Yet, for crime prevention, catching those who usually escape accountability is a priority for surveillance camera deployment.

For businesses, the efficiency of digital parking systems could draw the right clientele to them in the Central Business District (CBD) in city centres, clearing the city of commotion and chaos brought on by uncontrolled parking that affects their business operations - yet those on the fringes of the CBD may bear the brunt of uncontrolled parking, calling for a balanced strategy to address potential threats for business enterprises.

Surveillance technologies are perceived as safeguarding property in the CBD, ensuring local businesses have the potential to recover their property in case of break-ins into their premises.

The advent of these emerging technologies has culminated in the concept of smart city initiatives. African governments are embracing enabling their cities to have the agility brought on by technology to deliver services efficiently. While this is positive, the backdrop of repressive practices, such as arbitrary arrests and abductions of human rights defenders and actors expressing dissent, foster reservations and failure of citizen buy-in for smart city initiatives.

> " *Smart cities may mean safe citizens for some, but they may have a chilling effect on others.*

02

GOVERNMENT PRIORITIES

Zimbabwe's National Development Strategy (NDS1), operational from January 2021 to December 2025, articulates the government of Zimbabwe's smart city priorities in pursuit of a digital economy, including increasing the internet penetration rate from 59.1% in 2020 to 75.4% by 2025 and developing programmes such as smart government systems, smart agriculture, smart health, smart transport and safe cities through ICTs.[5]

Internet penetration rate increase from

59.1%
in 2020 to

75.4%
by 2025

5. National Development Strategy (NDS1) paragraph 529
https://www.dpcorp.co.zw/assets/national-development-strategy-
1_2021---2025_goz.pdf

In October 2023, the Minister of Information Communication Technologies, Postal, and Courier Services, Dr Tatenda Mavetera, mentioned that the government was committed to advancing ICT development, citing the Smart Zimbabwe Master Plan and the Smart City initiative to install security cameras and enhance security and traffic management.[6]

The benefits of smart cities are immense and can assist cities in their capabilities to detect crime, improve transport systems, enhance traffic control, ensure revenue generation through digitalised parking systems and draw investment for economic growth.

In November 2022, the Minister of National Housing and Social Amenities highlighted that the government was piloting three smart city initiatives – Melfort in Mashonaland East Province, Figtree in Matabeleland South and Chirundu in Mashonaland West Province. He stated that stakeholders were being consulted, with no mention of the consulted stakeholders.[7] The government stressed that local urban councils and the private sector would strategically steer the project as critical stakeholders.

The Zimbabwe National Human Settlements Policy (ZNHSP) stipulates that the government, in collaboration with local councils, plans to rejuvenate urban settlements that are no longer fit for human habitation.[8] Such rejuvenated settlements will feature modern amenities powered by digital transformation. While modern amenities are not defined in this policy, it is a fair deduction that modernising human settlements leverages digital technologies.

The ZNHSP is linked to the National Vision 2030, a policy with the theme Towards a Prosperous & Empowered Upper Middle Income Society by 2030. The Vision 2030 highlights the government's prioritisation of information and communication technologies (ICTs) across all national development strategies as an enabling tool for development and e-government.[9]

6. Manica Post Government develops new ICT policy https://www.manicapost.co.zw/govt-develops-new-ict-policy/
7. Sunday News Smart cities to generate investment, boost economic growth https://www.sundaynews.co.zw/smart-cities-to-generate-investment-boost-economic-growth/
8. The Zimbabwe National Human Settlements Policy at 2.9. https://www.nationalhousing.gov.zw/?page_id=1634
9. Government of Zimbabwe Vision 2030 (paragraphs 219-222) https://www.zim.gov.zw/index.php/en/government-documents/category/1-vision-2030

The Bulawayo City Council's City Economic Development Officer, Mr Kholisani Moyo, quoted the vision to declare Bulawayo as a smart city by 2024. This is still a priority yet to be realised, focusing on geographic information systems (GIS), payment and billing systems, video conferencing systems, e-learning systems, drones to gather information, closed circuit television (CCTV), fire alarm systems installed to domestic premises and interactive Bulawayo City Council applications.[10]

The Vision 2030

highlights the government's prioritisation of Information and Communication Technologies (ICTs) across all national development strategies as an enabling tool for development and e-government.

10. The City of Bulawayo The Smart City Concept http://www.citybyo.co.zw/Notices/TheSmartCityConcept

03

SMART CITY INITIATIVES IN ZIMBABWE

3.1
The Zim Cyber City Project

In February 2023, the government of Zimbabwe launched the Zim Cyber City project in Mount Hampden, Harare commissioned by the Ministry of Finance and Economic Development and approved by President Emmerson Mnangagwa with an estimated value of US$500 000 000.[11]

The private entity running the project is a United Arab Emirates company called Mulk Holdings International, which operates through its subsidiary, Zimbabwe Global Investments. This first real estate investment is channelled through the Zimbabwe Global Investments Special Economic Zone programme.[12]

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11. Afrik21 ZIMBABWE: A $500m smart city 18km from Harare to be built https://www.afrik21.africa/en/zimbabwe-a-500m-smart-city-18km-from-harare-to-be-built/#:~:text=In%20Zimbabwe%2C%20the%20'Zim%20Cybercity,as%20a%20digital%20transport%20system. See also Zim Global Investments https://zimglobalinvest.com/
12. Zim Now Zimbabwe in Massive Street Lighting Project https://zimbabwenow.co.zw/articles/786/harare-in-massive-street-lighting-project

The plan for the Zim Cyber City is a 2 500 000 square feet mixed-use development that includes Parliament and ministry buildings as well as residential and commercial buildings.[13] The Parliament building has already been completed, financed by China,[14] with the government looking at foreign investments to support the rest of the project.

The ambitious project is envisaged to bring on board innovations such as traffic tracking, smart homes, e-hospitals and smart technologies to handle traffic and waste management. The national benefits articulated include foreign investment bringing a boost to the ailing Zimbabwean economy.[15]

The government has identified several locations in major cities earmarked for smart settlements and amenities, such as Ascot Racecourse and Cowdray Park in Bulawayo, Melfort and Pomona in Harare.[16]

These plans show the government's intent to prioritise developing settlements that leverage technology.

Zim Cyber City project estimated value of
US$500 Million

13. Smart Cities World Zimbabwe breaks ground on $500m smart city near Harare https://www.smartcitiesworld.net/planning-and-redevelopment/zimbabwe-breaks-ground-on-500m-smart-city-near-harare-8670
14. Newsday Zim's new cyber city: Urban utopia or surveillance menace? https://www.newsday.co.zw/local-news/article/200008088/zims-new-cyber-city-urban-utopia-or-surveillance-menace
15. The Herald Zim Cyber City https://www.herald.co.zw/zim-cyber-city-pinnacle-of-structural-design-innovation/
16. Zimbawe Situation Bulawayo smart city sites identified https://www.zimbabwesituation.com/news/bulawayo-smart-city-sites-identified/

3.2

Smart Street Lighting

The City of Harare is partnering with ZESA Holdings and Rwanda Energy Group under the Smart Partnerships Agreement with Rwanda. The project will encompass the installation of city lights in Harare, with a specific target of 1202 city lights. The system will include surveillance cameras on the major city roads in Harare. The lights are designed and built with cameras accessible from the "back office."[17]

While the project may be helpful for traffic monitoring and crime management, the integration of surveillance technologies poses a potential threat to privacy in the absence of transparency and policy measures regarding data storage, use and responses to illegitimate requests for data.

Since August 2022, Victoria Falls has been installing smart city lights with an initial target of 100 street lights to move towards smart city status. A Chinese company, Satewave Technologies, is rolling out smart lights both in Harare and Victoria Falls.[18] While this is a positive step, where it is accompanied by the installation of surveillance cameras, privacy considerations are pertinent.

17. Urban Councils Association of Zimbabwe City of Harare Embarks on Smart Street Lighting Project
https://ucaz.org.zw/2022-08-03-city-of-harare-embarks-on-smart-street-lighting-project/
18. Newsday Satewave https://www.newsday.co.zw/theindependent/technology/article/200015357/satewave-churns-out-power-solutions-for-zim

3.3

Bulawayo City Parking System

In 2022, the Bulawayo City Council (BCC) rolled out a parking system criticised by local businesses and citizens based on the high parking costs. The Zimbabwean African Peoples' Union (ZAPU) expressed concern in a petition about the opaque procurement process and demanded BCC resolutions to show the procurement processes and how the South African company Tendy Three Investments (TTI) was awarded the tender.[19]

Since 21 March 2022, parking in the Central Business District (CBD) attracts a fee of US$1 per hour. The BCC was set to benefit 30% of the revenue collected within the six-year project lifetime. A lack of transparency and adequate consultations resulted in residents and local businesses compiling an online petition against the initiative. Nevertheless, the parking system remains in existence.

Following the 2023 Zimbabwean elections, newly elected councillors demanded to see the contract between TTI and the BCC, questioning the legitimacy of the procurement process.[20]

The procurement process remains unclear, as this information is not accessible on BCC's website. With clearly marked parking bays in the CBD, parking tickets being issued digitally and vehicle registration numbers collected by the digital system, there is a need for TTI to provide information on their data protection procedures to safeguard citizens from privacy breaches occasioned by illegitimate requests for data.

Parking in the CBD attracts a fee of

US$1

per hour

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19. The Chronicle https://www.chronicle.co.zw/watch-cbd-parking-fees-furore-escalates/
20. Sunday News Avail the TTI/BCC contract, Councillors demand https://www.sundaynews.co.zw/avail-the-ttibcc-contract-councillors-demand/

04

SURVEILLANCE AND HUMAN RIGHTS

Amidst concerns raised regarding the parking system in Bulawayo, the BCC and TTI are planning to roll out surveillance cameras for purposes of crime control from February 2024.[21] This signals an interest in deploying surveillance technologies at the local council level in Zimbabwe.

There is a need for extensive consultations and transparency concerning the procurement process to ensure human rights safeguards.

Section 57 of the Constitution of Zimbabwe, 2013[22] provides for the right to privacy for all, yet the deployment of surveillance technologies in Zimbabwe triggers concerns of privacy breaches and other human rights violations such as abductions and arbitrary arrests. This is occasioned by incidents that have caused human rights defenders to query the deployment of surveillance technologies in Zimbabwe.

21. Chronicle Bulawayo City Council and Tendy Three Investments to roll out cctv camera project https://www.chronicle.co.zw/bulawayo-city-council-and-tendy-three-investments-to-roll-out-cctv-camera-project/#google_vignette
22. Constitution of Zimbabwe, 2013 https://www.veritaszim.net/node/6427

In 2020, a political party member, Joana Mamombe and two others reported a case of abduction. Instead, the government arrested them on charges of allegedly lying about their abduction and publishing false news.

The Minister of Home Affairs and Cultural Heritage then, Hon. Kazembe Kazembe, responded[23] by targeting the three then-MDC Alliance activists Joana Mamombe, Cecilia Chimbiri and Netsai Marova, recording their movements and locations at particular times in a bid to cast aspersions on their defence that they were abducted. While they were acquitted on these charges in June 2023,[24] the record of their movements showed the government's invasive ability and inclination to monitor the movements of citizens using surveillance equipment.

The Media Institute of Southern Africa (MISA) Zimbabwe expressed alarm over this conduct, calling for the need to guard privacy in the advancement of technology.[25]

Section 18 of the Cyber and Data Protection Act, 2021 (CDPA) stipulates that "to safeguard the security, integrity and confidentiality of the data, the controller or his or her representative, if any, or the processor, shall take the appropriate technical and organisational measures that are necessary to protect data from negligent or unauthorised destruction, negligent loss, unauthorised alteration or access and any other unauthorised processing of the data."[26]

This imposes a duty on any data controller collecting data through any smart city initiatives to ensure the security of that data to prevent harm or illegitimate access to information and a mandate on businesses to ensure they have clear policies on how they respond to illegitimate requests for data collected through surveillance tools.

23. Twitter https://twitter.com/ZiFMStereo/status/1268467649123622912?s=20
24. ICJ Zimbabwe: ICJ welcomes the acquittal of Joana Mamombe and Cecelia Revai Chimbiri by the high court on criminal charges of communicating false statements related to their abduction, torture and sexual assault https://www.icj.org/zimbabwe-icj-welcomes-the-acquittal-of-joana-mamombe-and-cecelia-revai-chimbiri-by-the-high-court-on-criminal-charges-of-communicating-false-statements-related-to-their-abduction-torture-and-sexual/
25. MISA Zimbabwe Government surveillance should be lawful, justified and necessary https://zimbabwe.misa.org/2020/06/08/government-surveillance-should-be-lawful-justified-and-necessary/
26. Veritas Cyber and Data Protection Act, 2021 https://www.veritaszim.net/node/5522

05
PROCUREMENT UNDER COVER

The bedrock of democracy is couched in the ability of citizens to meaningfully participate in decisions that impact their human rights. Consultative processes provide opportunities for citizens to express their views on initiatives the government may want to deploy, particularly in developing cities and local governance processes.

Service delivery marred by opaque procurement systems and devoid of residents' voices results in distrust, resistance and ineffective implementation.

> **"**
>
> *Digital authoritarianism thrives in the absence of transparency and targets human rights defenders and actors who may be perceived as enemies of the state.*

Zimbabwe is founded on respect for values and principles, which include good governance.[27] Transparency is a specific component of good governance, and this is notably lacking when it comes to the procurement of surveillance technologies in Zimbabwe.

On 9 March 2021, MISA Zimbabwe expressed concerns about the procurement of surveillance technologies in a letter addressed to the Parliament of Zimbabwe, highlighting the need for the government to be transparent (see extract).[28] The letter implicated China and Japan as the suppliers of cyber security equipment in Zimbabwe. Although these human rights concerns were raised, since 2021, there has been no response to address these issues, evidenced by the continued lack of transparency in procuring surveillance technologies.

Zimbabwe has since had national elections[29] on 23 and 24 August 2023, and a new Parliament was constituted, calling for renewed engagements.

An extract from a letter addressed to the Speaker of Parliament, Jacob Mudenda, on 9 March 2021.[30]

MISA Zimbabwe raised such concerns earlier in 2018, following reports of undefined facial recognition equipment that was reportedly acquired from China, and the cybersecurity equipment that Japan had pledged to Zimbabwe.

More recently, two reports have emerged indicating that Zimbabwe is a customer of Circles, a surveillance firm that reportedly exploits weaknesses in the global mobile phone system to snoop on calls, texts, and the location of phones around the globe.

Circles is also reported to be affiliated with NSO Group, which develops the often abused Pegasus spyware. Circles, whose products work without hacking the phone itself, says they sell only to nation-states.

MISA Zimbabwe is therefore concerned not only with the use of such tools in the absence of substantive cybersecurity and data protection legislation in Zimbabwe but also with the lack of transparency around the acquisition of this cybersecurity equipment and the conditions under which it is sold to Zimbabwe. The lack of transparency and information around these deals is against the spirit of good governance and basic principles governing public administration as enshrined in Sections 9(1) and 194(1)(f) and (h) of the Constitution.

MISA Zimbabwe thus urges Parliament to exercise its oversight function by examining how the acquisition and use of unspecified surveillance equipment will influence or curb the lawful enjoyment of the fundamental rights to privacy and free expression.

27. Constitution of Zimbabwe, 2013 See section 3(1)(h) and 3(2)(g) https://www.veritaszim.net/node/6427
28. MISA Zimbabwe Concern over the Acquisition and use of surveillance tools https://zimbabwe.misa.org/2021/03/10/concern-over-acquisition-and-use-of-surveillance-tools-in-zimbabwe/
29. ZEC Proclamation and Resultant Activities https://www.zec.org.zw/proclamation-and-resultant-activities/
30. MISA Zimbabwe Concern over the Acquisition and use of surveillance tools https://zimbabwe.misa.org/2021/03/10/concern-over-acquisition-and-use-of-surveillance-tools-in-zimbabwe/

06

PERCEPTION SURVEY FINDINGS

The objective of the survey developed by Paradigm Initiative was to understand respondents' general perceptions concerning smart city initiatives in Zimbabwe.
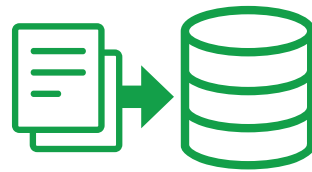
For the purpose of data collection from 1 to 19 January 2024, the term "smart city initiatives" was defined as initiatives that leverage information and communications technologies (ICTs) to "improve operational efficiency, share information with the public and provide a better quality of government service and citizen welfare."[31]

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31. TWI What is a smart city? - Definition and Examples
https://www.twi-global.com/technical-knowledge/faqs/what-is-a-smart-city

There were 203 responses received from respondents from major cities in Zimbabwe, and three responses from Zimbabwean citizens based in Johannesburg.

6.1
Respondents

Table 1 | **Geographical representation of respondents**

City	Respondents
Bindura	2
Bulawayo	62
Chitungwiza	3
Gokwe	1
Gwanda	4
Gweru	6
Harare	95
Johannesburg	3
Kadoma	1
Kariba	5
Kwekwe	4
Lupane	2
Marondera	2
Masvingo	4
Murewa	1
Mutare	3
Norton	2
Victoria Falls	1
Zvishavane	2

Gender Representation

Figure 1 | **Gender representation of 203 respondents**

🟥 Females	**54%**
🟩 Males	**45%**
⬜ Other	**1%**
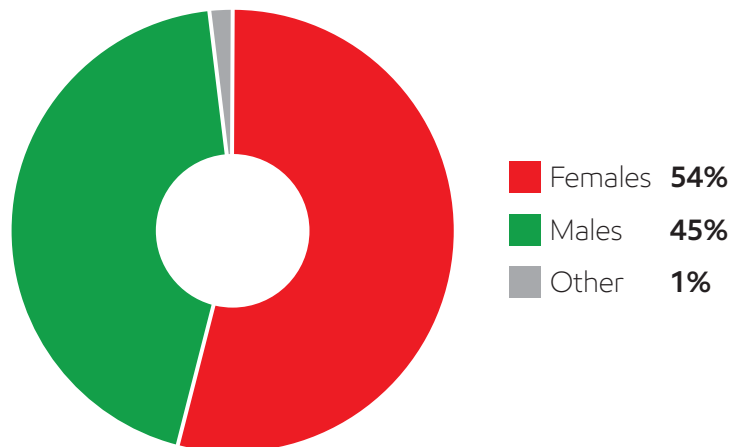
Sector Representation

The data was collected from a diverse range of stakeholders:

Figure 2 | **Sector representation**

What classification best explains your participation?

203 RESPONSES

Classification	%	Count
Media Practitioner	11.8%	24
A resident	40.9%	83
Human Rights Defender	20.2%	41
Civil Society Actor	22.2%	45
City Council Representative	2.5%	5
Business Person	14.8%	30
Disability rights	0.5%	1
	0.5%	1
Town Planner in the Private	0.5%	1
Engineer	0.5%	1
Clergy	0.5%	1
Lecturer	0.5%	1
Student	0.5%	1
Legal Aid Insurance	0.5%	1
Media and Development Co.	0.5%	1
Lawyer	0.5%	1
Citizen	0.5%	1
Server and Hostes	0.5%	1
Wealth Manager	0.5%	1
Social Worker	0.5%	1
Development	0.5%	1
A City Systems Engineer	0.5%	1

6.2
Surveillance Technologies

Do you trust the deployment of surveillance cameras and other surveillance technologies in your city?

Figure 3 | **Respondents' expression of trust in surveillance technologies**

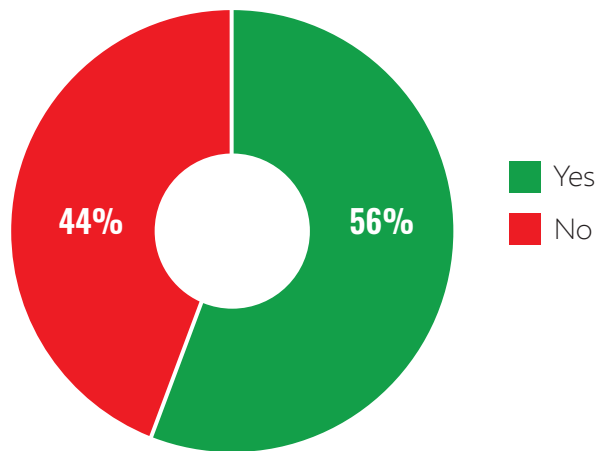### Trust of Surveillance Technologies

- Yes
- No

Figure 3 shows that 56% of respondents trust surveillance or surveillance technologies, while 44% distrust such practices or tools enabling it.

The majority expressed trust based on the potential of smart city initiatives to give security and safeguard citizens from crime. Surveillance technologies were regarded as a positive aspect of addressing crime prevention.

The respondents who expressed their lack of trust in surveillance technologies were concerned about the potential of surveillance technologies being deployed as a tool of repression targeting human rights defenders and actors criticising the government. Most respondents who expressed distrust of surveillance technologies across all sectors described themselves as working in town planning, as residents, human rights defenders and civil society actors; while most business actors had no concerns.

On the one hand, surveillance in Zimbabwe is mainly perceived as a tool to address safety concerns for local businesses, prevent and detect crime, and reduce traffic violations. On the other hand, it is seen as a weapon in the hands of political actors aimed at violating human rights and targeting critics of the government.

The responses suggest the need for a balancing act, where crime prevention and security of vulnerable groups such as human rights defenders, the media and civil society actors are prioritised.

Table 2 captures some of the views expressed by citizens.

Survey Responses

Table 2 | **Direct quotes from respondents to the survey**

Reasons for trusting surveillance/ surveillance technologies	Reasons for lack of trust in surveillance/ surveillance technologies
They might work to make cities safer.	*No clear boundaries on invasion of privacy.*
Surveillance cameras are effective tools in preventing and deterring crime.	*It would be used to monitor political/human rights/civic activities by activists and would be used for violating rights, including unlawful arrests, enforced disappearances and torture.*
They enhance data gathering, and reduce business costs by improving efficiency, etc.	*I don't trust the government and do not trust them to use that technology for the public good. Instead, I believe it would be used to monitor and punish people who do not conform to their political views.*

I have never seen them, but with traffic incidents I believe they would be useful.

The main thing to do is address the source or root cause rather than just install cameras. There are power outages. There are no coordinated systems in Zimbabwe. Local authorities are independent from each other or the government. There is a need to do a lot before such technologies are applied. Most people and local organisations, including local authorities and government, don't understand the meaning of a smart city, a lot has to be done.

It would be a welcome initiative. I believe it can help put on record incidents that go unnoticed and the public struggle, which has become a norm because there is often no one watching, like the bad driving in the city by combi drivers. (*combi – local commuter transport)

Surveillance is often used against people more than to help them.

It can help to keep a check on criminal activities and facilitate the identification of criminals.

The lack of infrastructure and its maintenance creates mistrust.

It will be quite helpful in the case of crimes being committed, and low corruption, only to mention a few.

I think the government will use this to infringe on my right to privacy.

> I think people would behave better if they knew they were being watched.

> It will be used more for surveillance to curtail the freedom of people by the government, especially for people who demand accountability.

> I think it would help keep people safe as there are currently a lot of violations of traffic rules.

> For Zimbabwe, it is likely to be abused to interfere with our private lives.

> It would generally be a good initiative, but many foundational issues would first need to be set in place to realise the best value.

> The government is authoritarian and might misuse the data obtained through street surveillance for repressive purposes. Notwithstanding, however, this technology can help manage the city planning process.

> Very few cameras are deployed in my city to monitor citizens' movements. Most are found at companies protecting their properties or in affluent residential areas. So, this is not a threat to citizens' movements or privacy.

> The history of surveillance by the government in Zimbabwe and the lack of transparency in the use and transmission of the data collected makes it difficult to trust any deployment of surveillance technology.

> So much crime is going unpunished for lack of evidence.

> There is no transparency on how data is collected and for what purposes it shall be used. There needs to be clear policies to regulate surveillance and oversight mechanisms to prevent abuse of human rights.
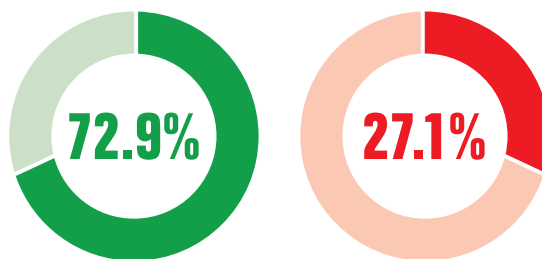
6.3
Service Delivery Applications

Do you think a city council service delivery application that requires a resident to use a smartphone and the internet would improve access to the local city council and enhance service delivery for ALL in your city?

Figure 4 | **Respondents' expression of service delivery applications**

72.9% **27.1%**

The majority of the respondents (72.9%) expressed positive views on service delivery applications, On the other hand, 27.1% expressed concerns over city councils' ability to sustain any engagements on automated systems.

The majority of the respondents (72.9%) expressed positive views on service delivery applications, expressing optimism about the potential benefits.

Some respondents emphasised that a digital application would expedite reporting and responses to local city councils, especially in urgent situations requiring speedy action. One respondent commented: *"Yes, this will help alert the City Council on time for the collection of refuse and also to alert them whenever*

there are water bursts pipes or sewage or dysfunctional robots."

Efficiency and convenience were recurrent perceptions in the responses. Respondents expressed a need to gain seamless access to their local councils and perceive technology as an enabler of that access, allowing them to engage conveniently. A respondent stated, *"communication can be done in the comfort of our homes, which is very convenient for the residents."*

On the other hand, 27.1% expressed concerns over city councils' ability to sustain any engagements on automated systems, considering they are still operating manually across their service delivery processes.

A concern was raised on the possibility that a city council using digitised systems may exclude those without access to digital technologies such as smartphones, widening the digital divide.

The discriminatory nature of smart access to the city council was highlighted as a factor to consider in deploying digital technologies, and the high cost of data was mentioned as a barrier to internet access.

While the majority felt that everyone would benefit, the respondents' queries were substantial, representing a considerable view that such smart applications have exclusionary effects on a significant part of the population in Zimbabwe.

Survey Responses

Table 3 | **Quotes from respondents to the survey**

If reports of service needs and emergencies can be made and attended to urgently through the use of an app, that might bring about more efficient service delivery.

The digital divide is wide in Zimbabwe, especially because of the cost of living and the low-income levels. As a result, access to smartphones and the internet is a luxury that several ordinary Zimbabweans cannot afford. If the city council were to provide service delivery in digital form the majority of citizens would be left behind.

*There are high levels of poverty, and as such, not everyone has access to a smartphone and the internet, so it will not improve access to all but only to those who can afford phones and data.*

So much of our city council is manual that should have long been digitised by now.

Do you think a digital parking system in your city would be useful?

Figure 5 | **Responses to digital parking system**

87.2%   12.8%
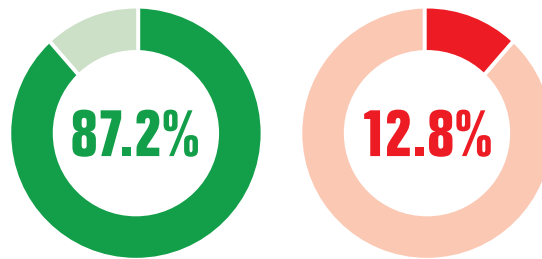
The responses indicate that 87.2% of the respondents were happy with digital parking systems, while 12.8% expressed reservations.

While most respondents agreed that digital parking systems improve efficiency in the city centres, concerns were raised on the amount charged for parking as a factor affecting local businesses. This indicated the need for consultations to ensure buy-in from the private sector and residents.

A local business indicated that *"the parking system creates order in the CBD. However, our clients have stopped coming into the city because the parking fee is too exorbitant"*.
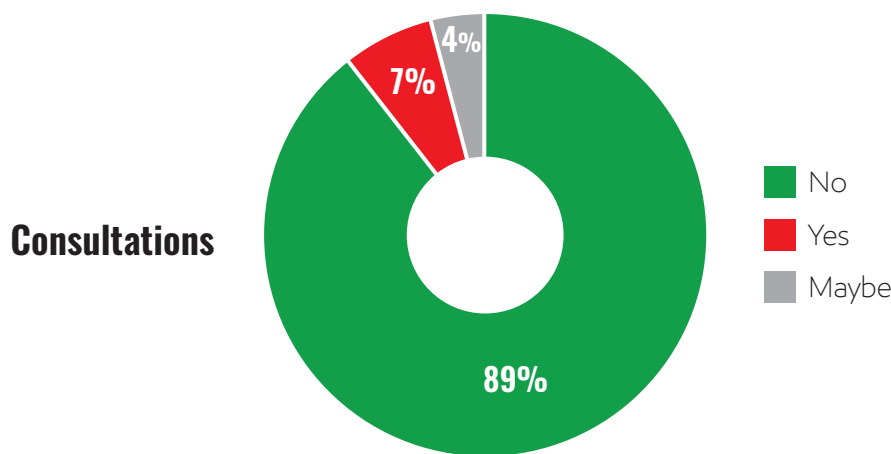
6.4
Consultation on Smart City Initiatives

Have you ever been consulted in the process of the smart city initiatives?

Figure 6 | **Respondents' views on whether or not they have ever been consulted regarding smart city initiatives.**

Consultations

7%

4%

89%

- No
- Yes
- Maybe

Most respondents indicated they were not consulted when smart city initiatives were deployed. The data shows that most respondents have not participated in smart city initiatives or are unaware of consultative processes.

This gap must be addressed, especially where smart city initiatives are deployed to enhance service delivery or development as envisaged in government policies such as NDS1.

Survey Question

Do you think this would be important, and why?

Most responses to this question emphasised the importance of buy-in from citizens leading to co-ownership of smart city initiatives. Many respondents believe that consultations instil a sense of ownership, ensuring that the comm-

unity actively participates in developmental initiatives. One respondent emphasised that *"it would help in owning the program and for the council to develop a program responsive to citizen needs."*

Other perceptions were similar, highlighting transparent communications and accountability as reasons citizens should be involved in carrying out any envisaged smart city initiatives. Some respondents stressed the importance of transparent communications regarding the objectives and benefits of adopting digital systems. A respondent highlighted that *"it helps to understand why the initiatives are deployed."*

Another noted: *"Very important. It's easy to support initiatives you helped formulate."*

A frequent call for a bottom-up approach is evident, with respondents advocating for an inclusive process where residents actively contribute to decision-making. They proffer that this approach is essential to ensuring that smart city initiatives align with the practicalities and unique challenges faced by the community.

Respondents believe that citizen engagement enhances the implementation of citizen-centred initiatives, fosters transparency, shows commitment to inclusion and results in more efficient service delivery by local authorities.

In summary, these responses reflect a consensus among respondents on the multifaceted benefits of citizen consultations.

Survey Question

Do you have any concerns with smart city initiatives? If so, please advise what they are.

70 respondents had no concerns with smart city initiatives,

133 had issues with them.

Table 4 | **Respondents' expressions of concern on smart city initiatives**

Some of the stated concerns

The fear of targeting individuals for political or other reasons.

Improving and cleaning the city manually before going digital.

There should be comprehensive consultation to consider different social factors.

The need for prioritisation of other initiatives such as fixing potholes, easy access by persons with disability, ensuring pavements are clean, and making stalls for vendors, as persons with disabilities find it challenging to navigate vendors in cities, and the need to fix drains.

Physical human jobs will be compromised.

It is my first time hearing about it.

Technology is prone to hacking and the misuse of surveillance measures such as surveillance cameras and hacking used to track business people and their activities so that they know their exact location.

Lack of guidelines to enforce the Zimbabwean Cyber and Data Protection Act meaningfully.

The companies contracted to manage parking services are the biggest beneficiaries. It's also convenient for motorists as it saves time.

Fear of targeted weaponisation of smart city initiatives against journalists and human rights defenders.

"There is an absence of awareness-raising initiatives that are yet to be undertaken on data protection as most data controllers and processors are yet to comply with the requirements of the law fully.

"The issue of internet and data access. Smart cities are ideal but need to explore other avenues to ensure they are modern, digital and inclusive.

"Absence of meaningful policies on smart city initiatives embedding data protection guidance.

"Lack of understanding of what smart cities are.

"To make cities inclusive, councils should consult with persons with disabilities.

"Lack of infrastructure with challenges in terms of basic amenities like clean water, electricity, and proper road networks. These issues need to be resolved before implementing advanced technologies in smart cities.

"There is a concern that smart city initiatives might undermine affordability and accessibility for most of the population. The costs associated with implementing and maintaining smart technologies could further marginalise the poor and exacerbate existing inequalities.

"Smart cities rely heavily on data collection and surveillance technologies. The concern is that such initiatives might infringe upon citizens' privacy and compromise their security.

"Women and human rights defenders are most at risk.

Do you have any positive views on smart city initiatives and recommendations? Please advise.

Table 5 | **Extracts of respondents' positive views and recommendations on smart city initiatives**

Some positive views and recommendations

I believe it is the way to go as the world is moving towards digitalisation. If any country fails to do this, it might be left out of the development trajectory and miss the benefits of improved service delivery.

We need more of them and consistency.

They make the city smart, service delivery becomes effective, and traffic jams are reduced.
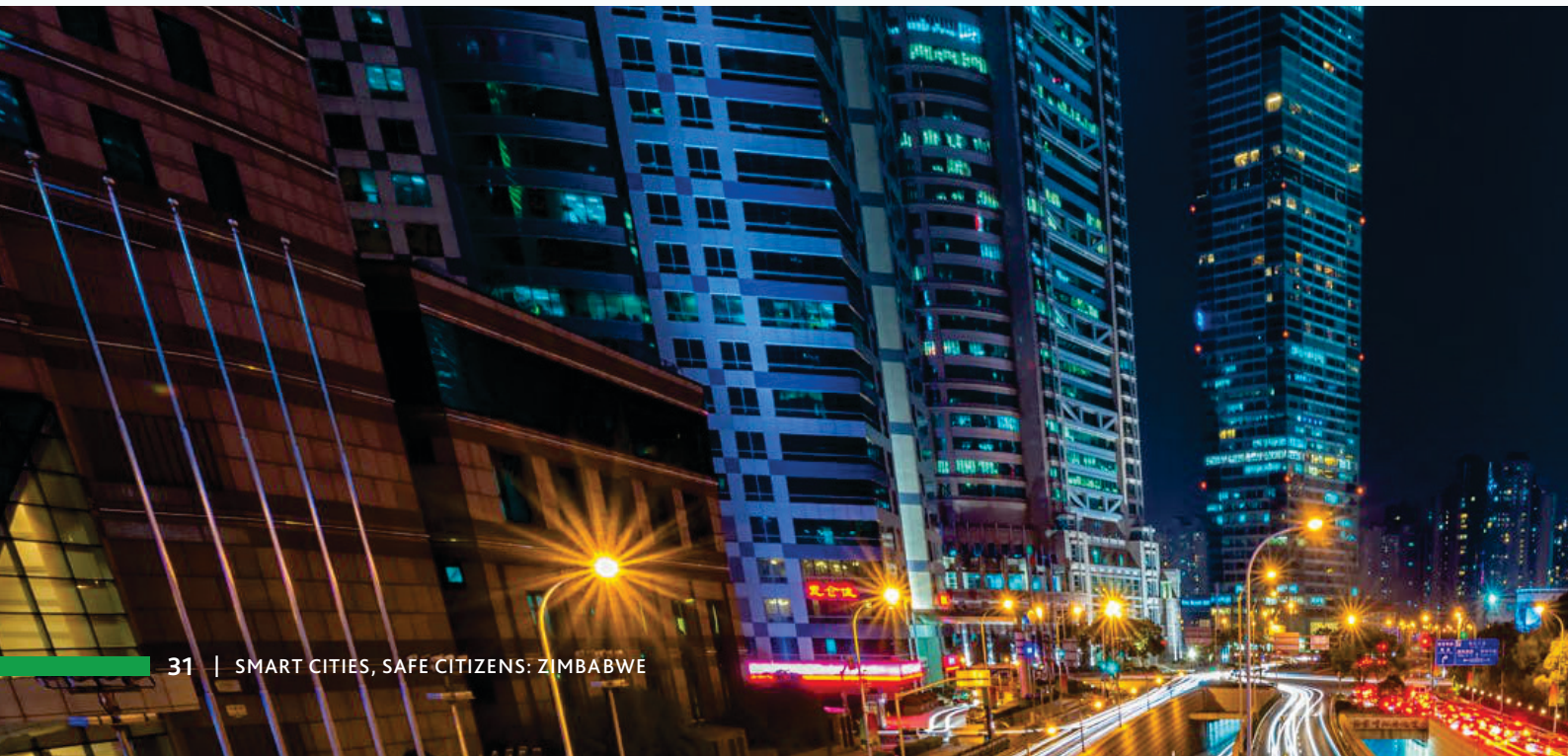
They increase efficiency and cut down on wastage in cities.

I recommend the city council develop a well-detailed plan laying out all the work. This would be the implementation, etc. They should also find a supplier with a good reputation to do the work. They should avoid giving tenders to companies that do not perform and that do not have a good track record.

Yes, smart city initiatives are useful for law enforcement purposes, and they have been implemented in countries like South Africa, where the crime rate is high. However - it is important that such initiatives are not rushed, and instead, all necessary safeguards should be put in place, including training of various stakeholders.

> *Implement it soonest, please.*

> *It is always ideal to harness the power of the internet and technology to improve service provision and quality of life.*

> *The church can be a good platform to promote the absorption and utilisation of smart cities.*

> *Smart city initiatives would make service delivery more efficient and effective.*

> *They reduce communication times and allow direct communication between people and city managers/authorities.*

> *Improved transportation systems and efficient public services.*

> *Smart cities are essential for attracting investment and creating employment opportunities. They also allow order in the planning and movement of human and vehicle traffic.*

6.5
Key Informant Responses

Paradigm Initiative also gathered views from two local business owners in Bulawayo and one civil society representative:

Q&A

Local Business Owner 1

What are your views on the digital parking system in your city?

It is hard to appreciate the digital parking system here in Bulawayo. The Bulawayo City Council did not consult us before deploying their digital parking system. My business is in the CBD, and since TTI started their parking system, the business has never been the same. Clients don't want to park outside our premises and pay the hefty parking fees or risk having their cars clamped and towed away.

Local Business Owner 2

Does surveillance help your business?

Surveillance is good for citizens because it helps with crime detection and evidence required in criminal cases. I use surveillance cameras for my business to monitor what happens and detect theft. It also helps me to safeguard my clients. I have no concerns with surveillance cameras. The city council is delaying; they should have deployed these technologies a while back.

What are your views on digital parking systems?

My business is at the periphery of the Central Business District, and the digitised parking system does not apply there.

Since the establishment of the digitised system, my business has suffered significantly because clients who visit my business no longer come to that area because a lot of local drivers have moved out of the CBD, where they are asked to pay US$1 per hour, to my area of the city to park for free, congesting the area and creating a sense of insecurity for clients.

The system has managed to chase a lot of drivers from the CBD while causing chaos in the outer parts of the city centre.

In addition, I cannot call the digitised parking system a smart initiative because it still heavily depends on humans. Humans spend their entire day standing and collecting parking fees, and this is not sustainable when automation can create a proper contactless digitised parking system.

Comment:

Local businesses have concerns with the parking system owing to their view that they were not consulted and that there is a better way to run the current digitised parking systems to get optimum value and serve the city residents and business owners. Surveillance technologies are viewed as a security feature.

Digital Security Expert:

Tawanda Mugari (Digital Society Africa)

What is your view of smart city initiatives?

These initiatives have their benefits but also their disadvantages. For example, the Zim Cyber City project in Mt. Hampden has no transparency, and information is scanty around it, creating mistrust. Our cities would benefit a lot from automation because, currently, there is reliance on manual systems to track the billing accounts of residents. These initiatives can enhance the efficiency of transport systems and water management systems. A key concern is that of smart water meters that were once proposed. They were meant to be procured at some point, but it is unclear what eventually happened. Procurement processes are opaque, and that is the problem. Smart city initiatives, however, can be abused because those with digital access can defraud those who don't have it in the process of offering assistance. In addition, with the high cost of data, not everyone has access to the internet.

What are your views on surveillance?

My view is 50:50. It helps address crime on the one hand and yet poses a threat to others, such as human rights defenders.

Comment:

Lack of transparency was cited as an element contributing to a lack of trust in surveillance technologies and digital exclusion, leading to the exclusion of the poor in a community. Smart applications that require smart phones and the internet are the preserve of the elite, showing the potential of smart city initiatives to increase the digital divide.

07

CONCLUSION AND RECOMMENDATIONS

The government's digital economy priorities are commendable. Yet, the national and local governance landscape needs to improve if a shift in citizen perceptions towards a trusting citizenry is to be realised.

The concept of safety can be viewed in two ways - safety from crime, and safety from human rights violations. In this research, perceptions seemed to be split along these lines. Smart city initiatives that address government priorities need to align with human rights standards, ensuring privacy is guaranteed to citizens.

Data mining is a practice that follows smart solutions and services, but the life of that data needs to be clearly defined and safeguarded. In the wrong hands, unsanctioned access to data without judicial oversight leads to dire consequences.

Using technology for good, and fostering the practice of conducting data impact assessments is a crucial solution to addressing concerns before technology is launched as an intervention by government and private sector actors.

Zimbabwe is yet to leverage the full potential of technology to revitalise cities and increase efficiency in service delivery. Before more transformation arrives in a fast-paced digital age, levelling the field so that all stakeholders feel safe should be prioritised.

Crime control should happen in such a way that civic spaces remain open for human rights defenders to perform their mandate without fear of being targeted by surveillance technologies.

Consulting citizens should be embedded in local governance processes, ensuring no one is left behind. This is a core element of participatory democracy.

Furthermore, digital inclusion must be a government priority that aligns with national and local government budgets to bridge the digital divide and guarantee access to service delivery for all. Smart city initiatives should be spread to smaller towns and cities to fully realise inclusive urban development.

Recommendations to Local City Councils

- Local city councils and private contractors should observe relevant standards for ICT projects, such as national policies, technical standards, and human rights commitments.[32]
- Automate systems within local city councils to enhance service delivery across the board from service delivery applications, parking, water, to data management systems.
- Be transparent regarding the procurement processes, disclosing the benefits to residents.
- Explore innovative strategies to public procurement to ensure safety and best services.[33]
- Consult residents before imposing smart interventions that may result in a backlash.
- Improve service delivery across smart and non-smart initiatives such as refuse collection and attending to potholes.
- Ensure adequate financial benefits from partnerships with private sector actors are retained by the local city councils to develop cities.
- Foster and leverage partnerships with civil society organisations to access residents and enhance their participation in consultative processes.[34]

Recommendations to the Ministry of ICTs

- Ensure that policies addressing a digital economy reflect a human rights-based approach to leveraging technology, clearly stipulating the need to protect vulnerable groups such as persons with disabilities, the media and human rights defenders.
- Include relevant stakeholders in consultative processes before developing smart city-related policies.
- Raise awareness of smart city initiatives in the country to showcase the benefits and build trust.

32. NED (Page 24) Smart Cities and Democratic Vulnerabilities https://www.ned.org/wp-content/uploads/2022/12/Smart-Cities-and-Democratic-Vulnerabilities.pdf
33. UN Habitat Managing Smart City Governance (Box 1.3) https://unhabitat.org/sites/default/files/2023/11/managingsmartcitygvnce_playbook.pdf
34. UN Habitat Box Managing Smart City Governance (Box 2.1) https://unhabitat.org/sites/default/files/2023/11/managingsmartcitygvnce_playbook.pdf

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Recommendations to Government Agencies	• Prioritise bridging the digital divide by adopting a multi-sectoral approach to addressing digital access. • Avoid illegitimate requests for data without judicial oversight over the reasons for requesting access.
Recommendations to Private Sector Actors	• Be transparent regarding data protection mechanisms to safeguard data collected through digital technologies. • Safeguard data collected through smart city initiatives in compliance with the Cyber and Data Protection Act, 2021.
Recommendations to Civil Society Organisations	• Raise awareness of the benefits and challenges of smart city initiatives to encourage citizen agency over their data and motivate buy-in for beneficial smart interventions. • Encourage citizen participation in local governance processes, collaborating with the government. • Engage with the newly elected Parliamentarians on the challenges and benefits of smart city initiatives.
Recommendations to the Data Protection Authority (POTRAZ)	• Raise awareness of the Cyber and Data Protection Act of 2021 to foster a data protection culture in Zimbabwe. • Fully operationalise the Cyber and Data Protection Act of 2021 by enacting supporting regulations. • Assess private sector actors deploying smart city technologies to ensure compliance with the Cyber and Data Protection Act, 2021.
Recommendations to the Zimbabwe Human Rights Commission	• Investigate reports of the government illegally accessing data, placing human rights defenders at risk, and recommend human rights respecting practices. • Monitor the civic space and conduct investigations where government and private sector actors are implicated in targeting human rights defenders using digital technologies.

Online Google form survey questions

Paradigm Initiative deployed a 10-minute online survey titled Making Cities Smart! What are your views? The following questions were asked:

1. City/Town.
2. Gender representation.
3. What classification best explains your participation?
4. Do you trust the deployment of surveillance cameras and other surveillance technologies in your city?
5. Please explain your answer.
6. Do you think a city council service delivery application that requires a resident to use a smartphone and the internet would improve access to the local city council and enhance service delivery for ALL in your city?
7. Please explain your answer.
8. Do you think a digital system for parking in your city is useful?
9. Have you ever been consulted in the process of the smart city initiatives?
10. Do you think this would be important and why?
11. Do you have any concerns with smart city initiatives? If so, please advise what they are.
12. Do you have any positive views on smart city initiatives and recommendations? Please advise.

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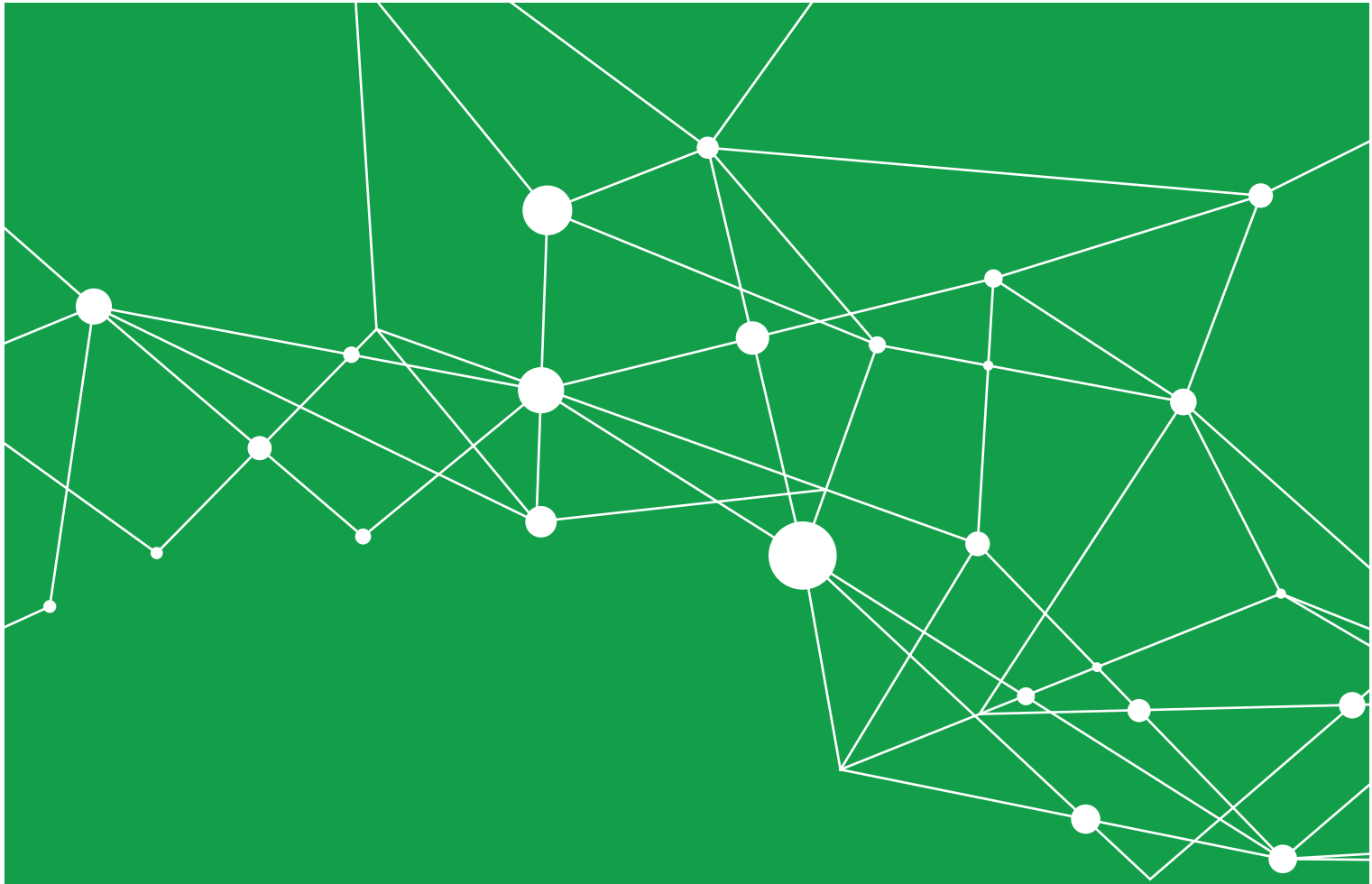
About Paradigm Initiative

Paradigm Initiative works to connect underserved young Africans with digital opportunities, and ensures protection of their rights.

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