



## URBAN SAFETY BRIEF No.1/2022

# The Impact of Closed-Circuit Television (CCTV) in Violence and Crime Prevention Practice and the Institutionalisation of Safety

This Urban Safety Brief considers the imperative of partnership policing for ensuring safer cities in South Africa. It looks at how partnership policing can be used to address the complex crime and safety challenges faced by cities.

The SA Cities Urban Safety Reference Group's Briefs Series is designed to distil the state of current knowledge on urban safety-related topics for a policy and planning audience. It is presented quarterly to the City Budget Forum and other key stakeholders.



## INTRODUCTION

Imagine a country that has surveillance at every corner, "cameras that record when you leave your house, when you arrive at work, and when you decide to secretly duck out to the mall on your cigarette break" (Swart: 2021). Imagine a city where Artificial Intelligence (AI) can scan your face, determine your mood and alert someone in a control room to respond in what they regard as an appropriate way.

Technology has become instrumental in assisting the police to solve crimes. Deoxyribonucleic acid (DNA) profiling has made a significant contribution to the identification of perpetrators and securing convictions, as has improved fingerprint technology and other forensic techniques and technologies. Surveillance purports to capture every part of an incident as it happens, thus providing a deterrent against criminal activity and recording irrefutable evidence for the conviction of those not deterred.

Across the globe, there is a rapid growth and widespread rollout of Closed-Circuit Television (CCTV). In a recent study conducted on biometric surveillance in Kenya and South Africa, governments, international organisations and the private sector were found to be the key drivers of biometric surveillance, (Allen and van Zyl: 2020) investing in CCTV with the intention of protecting their property from crime and violence.

Research reveals a cluster of perceptions that drive the growing use of CCTV:

1. CCTV is effective in preventing crime as it deters opportunistic criminals and therefore reduces crime.
2. While more expensive than many other crime prevention interventions, CCTV delivers unquestionable value as a crime prevention and/or security mechanism.
3. CCTV assists with investigation, arrest and convictions, removing criminals from the streets and thus reducing crime.
4. Privacy is a luxury that should be compromised in favour of surveillance systems.
5. CCTV systems are essential to municipal safety and security strategies.

This brief aims to interrogate the logic of these perceptions, what drives them, how they influence safety and security strategies and their consequences.

such as women in low-income areas, even when they do not have adequate private space to retreat to. This undermines integration and inclusion.



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## 01 Perception 1: CCTV is effective in preventing crime as it deters opportunistic criminals and therefore reduces crime

South Africa suffers a very high crime rate, with high levels of violence.<sup>1</sup> It is widely believed that potential criminals are less likely to commit crimes when being watched by cameras. An advocate for child rights and safety stated during that if CCTV cameras were positioned in dark stairways or alleys, children would be less likely to suffer victimisation while traversing these spaces (Van Niekerk interview, 2021).

In the mid-1990s Business Against Crime South Africa (BACSA) facilitated the process of “implementing and linking CCTV surveillance systems in Central Business Districts (CBDs) in the major metropolitans of South Africa” (Minnaar, 2007:176). The motivation was that surveillance could provide an increased footprint to cover areas where the South African Police Service (SAPS) did not reach. Welsh and Farrington (2008) found that CCTV surveillance had a modest impact on the reduction of crime. Social systems are dependent on a number of factors to operate optimally, while criminals are innovative and are often more agile than private security surveillance interventions, finding ways to bypass, disarm or avoid CCTV cameras while perpetrating crimes. This is illustrated by the experience of the City of Cape Town which has 2 345 cameras in public spaces, owned by the Metropolitan Police, the Cape Town Integrated Rapid Transit (MyCiti-IRT) public bus system, the South African National Roads Agency (SANRAL) and privately registered CCTV (property owners’ surveillance) and licence plate recognition cameras (LPR). At the standing committee on Community Safety on the City’s policing plan for the 2021/2022 financial year, Metro Chief stated that the budget for maintenance of CCTV surveillance had ballooned from the budgeted R9.8 million to R50 million as a result of vandalism of the cameras.<sup>2</sup>

Duncan (2018) argues that it is difficult to assess the impact that surveillance has on crime as there have not been enough independent impact assessments conducted to support this. A further confounding factor is that CCTV systems can rarely be triangulated with other sources of statistics because their footprints are not the same as, for instance, police precincts.

Huawei, global leaders in marketing and implementing sophisticated CCTV systems now promote them to: ‘monitor registers and transactions (employee theft and fraud); protect material goods and infrastructures; monitor inventory and wares (deliveries); protect staff and clients; control access to locked areas; checking emergency situations (fire, alarms, etc.); monitor parking lots, vehicles, entries

and exits’. Huawei also state that: ‘Intelligent video surveillance is also increasingly used for non-security purposes, such as managing operations and market launches. In this context, video analytics is used in particular to count clients, analyse their behaviour and in-store movements, and compile statistics on consumer habits.’<sup>3</sup>

The growth of the private security industry to over 9000 service providers by 2020 depended on South Africans living with a consistent level of fear - to believe that they need the services of private security. As a consequence, profit motive exploits increasing levels of fear and in recent years, messaging that links the provision of security inextricably with CCTV systems. Wealthy communities in South Africa have subscribed to the idea that CCTV is essential to community safety. In Westcliff alone, of approximately 100 homes in Johannesburg, home owners have spent upwards of R2.6 million on CCTV installations and systems, excluding the ongoing cost of personnel to watch the footage and personnel and vehicles to respond to incidents that may be caught on camera (Jammy interview, 2021).

## 02 Perception 2: While more expensive than many other crime prevention interventions, CCTV delivers unquestionable value as a crime prevention and/or security mechanism.

In 2008, a Johannesburg suburb called Sharonlea became a model for surrounding neighbourhoods with ‘smart surveillance’. The project was rolled out by CSS Tactical which provided services of armed guards and CCTV surveillance to residents in the neighbourhood. Vumacam is currently implementing plans to install 15,000 cameras in several suburbs in Johannesburg. To guard against crime, the mostly wealthy suburbs have become littered with high concrete walls, electric wire, guard dogs, surveillance cameras, guards armed with powerful firearms and alarm systems. The number of gated communities and security complexes is increasing in South Africa. These areas are characterised by CCTV surveillance, boom gates, biometric systems and armed guards. Most of these gated areas are under CCTV surveillance that record 24/7.

The reality is that not all communities afford to install CCTV surveillance. “Critics have also blamed the use of CCTV systems for displacing crime, rather than deterring it. Where reductions in crime levels have taken place because of CCTV, they were localised and often not statistically significant” (Duncan, 2018).

1. SAPS. Police Recorded Crime Statistics Republic of South Africa. First quarter of 2021/2022 financial year (April to June 2021) available at: [https://www.saps.gov.za/services/downloads/april\\_june\\_2021\\_22\\_quarter1\\_presentation.pdf](https://www.saps.gov.za/services/downloads/april_june_2021_22_quarter1_presentation.pdf)

2. Cape Town Metropolitan Police Department 2021/22 Annual Police Plan, available at: <https://pmg.org.za/committee-meeting/33764/>

3. More information available at: <https://e.huawei.com/en/products/intelligent-vision/cameras/software-defined-camera/software-defined-camera-vs-ip-camera>

### 03 Perception 3: CCTV assists with investigation, arrest and convictions, removing criminals from the streets and thus reducing crime.

Even in cities where movements are widely monitored through surveillance, there is not enough evidence to support this perception.

With over 5000 cameras live and 2900 poles installed in the province of Gauteng to achieve safe smart cities<sup>4</sup> Vumacam states that it has worked with SAPS and Johannesburg Metro Police Department (JMPD) to apprehend criminals and combat crime in Johannesburg. Through the use of license plate recognition, four suspects wanted for multiple crimes including common robbery and rape were apprehended<sup>5</sup>. This is one of the two success stories on their public site.

Duncan (2018) stated that in 2015 the police only arrested 4% of the suspects from the 2640 criminal incidents that were caught on camera in the City of Cape Town. This is a concern which prompts the question: can the City afford the cameras? They are installed at the cost of increased numbers of law enforcement officers, training and other resources such as, for instance, response vehicles. The technology is only one part of the intended system and is rendered ineffective if the other parts of the system are flawed or inadequate. A cost-benefit analyses conducted by the Institute for Security Studies (ISS) indicated there are no models to conduct cost-benefit analyses for social benefit projects or programmes that seek to reduce the risk factors for crime and violence.<sup>6</sup> This makes it difficult for municipalities to measure the relative benefit of spending on CCTV and other types of spending and / or investment in crime prevention.

### 04 Perception 4: Privacy is a luxury that should be compromised in favour of surveillance systems.

Many South Africans are concerned about how the widespread rollout of CCTV surveillance affects their right to privacy<sup>7</sup>. As CCTV systems bloom in public spaces, cities, roads, homes, offices and now in suburbs, there are important questions to ask in terms of their benefit, value and cost versus their infringement of our rights to privacy. It may be argued South Africans have become so habituated to being watched that we no longer see the cameras much of the time; however if this is true, then it can also be argued that criminals may also be inured to the risks of committing crimes while under surveillance. Knowing that you are being watched can also result in inhibition.

Individual rights to digital privacy are laid out in the Protection of Personal Information Act (Act 4 of 2013) (POPI Act). Notwithstanding the strict regulation of personal information set out in the POPI Act, many South Africans accept and even welcome surveillance in return for a promise of increased security. The POPI Act also has some exemptions and these are outlined in subsection 1<sup>8</sup>.

Cameras, particularly 'intelligent cameras' have the ability to track the movements of individuals or groups and to understand their habits and vulnerabilities. "Is surveillance used for the democratic purpose of making people safer, or is it being used for the repressive purpose of social control, especially of those considered to be politically threatening to ruling interests?" (Duncan 2018). It is said that those who sit in control rooms can identify individuals with suspicious behaviour. How is this behaviour defined and what are the human rights consequences for those who fit the profile of 'undesirable' pedestrians or motorists moving through neighbourhoods under permanent surveillance?

The private security industry is regulated by the Private Security Act of 2001, which aims to ensure that the private security industry act in the public and national interest. Section 14 of the Constitution of the Republic of South Africa, 1996 (Act of 1996) ('the Constitution') states that everyone has the right to privacy. This privacy is not subjective to race, age, class or nationality, therefore to comply and abide by the Constitution private security companies should not infringe on citizens right to privacy. Whereas the purpose of the Intelligence Services Oversight Act (Act 40 of 1994) (ISOA) is to "review the intelligence and counter-intelligence activities of any Service [and] to receive and investigate complaints from members of the public and members of the Services on alleged maladministration, abuse of power, transgressions of the Constitution, laws and policies". These Acts are essential where people's rights have been infringed, where individuals have been wrongfully approached because they were identified on camera as demonstrating 'suspicious behaviour'<sup>9</sup>.

The privacy concerns also prompt the question: what happens to the data that is captured by these cameras, how long is it stored and who has access to it? In their CCTV Surveillance Policy in Terms of the POPI Act, No. 3 of 2013 Vumacam states that "all data will be stored on hosted servers and identified using an automatic recording sequence. The data will be stored for a period of at least 30 days, being the length of time the data is required to be maintained in order to achieve the purpose for which it was collected"<sup>10</sup>. Municipalities can access data from municipal owned CCTV cameras to support planning and to resolve incidents (Zulu interview, 2021).

4. For more details on Vumacam visit website on <https://www.vumacam.co.za>

5. Available from <https://vumacam.co.za/vumacam-and-licence-plate-recognition-cameras-assist-in-arrest-of-multiple-suspects/>

6. Gould, C. & Mufumadi, D. 2021. Costs and benefits of preventing violence. Institute for Security Studies. Available at: <https://issafrica.s3.amazonaws.com/site/uploads/sar-47.pdf>

7. Chair (2020:11), "The fourth scenario focused on surveillance by drawing on the roll out of CCTV or surveillance cameras and facial recognition systems in South Africa. There was a high level of awareness of this roll out and 73% of the participants found this to be a relevant issue of privacy and data. Two issues were highlighted as the most significant for participants – 81% of the participants were concerned about how the technology may be used to invade their privacy and, at the same time, 64% saw the usefulness of surveillance cameras to address crime." Available at [https://mydatarights.africa/wp-content/uploads/2020/12/mydatarights\\_policy-paper-2020.pdf](https://mydatarights.africa/wp-content/uploads/2020/12/mydatarights_policy-paper-2020.pdf)

8. The public interest referred to in subsection (1) includes—1. the interests of national security; 2. the prevention, detection and prosecution of offences; 3. important economic and financial interests of a public body; 4. fostering compliance with legal provisions established in the interests referred to under paragraphs (b) and (c); 5. historical, statistical or research activity; or 6. the special importance of the interest in freedom of expression.

9. Available at: <https://www.citizen.co.za/news/south-africa/2036857/security-company-apologises-for-racist-advisory/>

10. Available at: <https://vumacam.co.za/wp-content/uploads/2019/03/Vumacam-CCTV-Surveillance-Policy.pdf>

**05 Perception 5: CCTV systems are essential to municipal safety and security strategies.**

In South Africa, the growth of CCTV began after 1994 as a mechanism to promote safety and security (Minnaar, 2007). Studies have shown that the growing investment in surveillance comes at considerable cost<sup>11</sup> and this has resulted in governments having to divert resources from other interventions to underpin operation and maintenance of the technology.

This has not changed the intentions of municipalities to expand CCTV surveillance networks and to continue to do so over the next five years. CoCT Camera Rollout Plan of 2021-2026 for instance plans to expand the rollout to cover areas such as Nyanga, Mfuleni, Mitchells Plain, Delft, and Kraaifontein<sup>12</sup>.

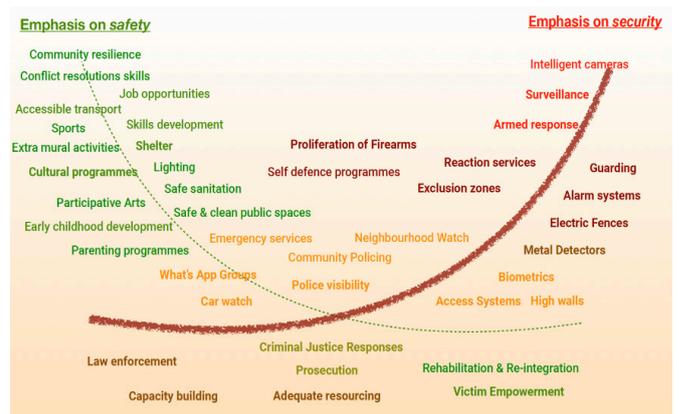
In preparation to the 2010 soccer world cup, the City of Johannesburg installed 216 cameras while CoCT had 331 cameras in the Inner City to deter and prevent crime through their Safe Cities initiatives.

The other challenge with investing in the installation of these cameras is municipalities struggling to maintain them. The Tshwane Metropolitan Police Department's (TMPD's) CCTV network installed in Tshwane Central and Sunnyside SAPS precinct have not been maintained since 2019 due to financial constraints. A large portion of the safety and security budget vested in these cameras (Sutil interview, 2021).

Although Crime Stats continue to reflect an increase in criminal activities,<sup>13</sup> municipalities also continue to invest in surveillance.

As respondents to this research, municipal officials have with rare exceptions (Cachalia interview, 2021) supported increased dependence on CCTV, with reasons ranging from a perception that it makes those who use public spaces feel safer, to a determined belief of their own that CCTV is rightfully a dominant element in local safety and security delivery. As long as this is the prevailing view, it is unlikely that the landscape will change, save to intensify the presence of CCTV on our streets and in public places.

South Africans are trapped in a cycle of crime and violence, fear of crime, and profit-driven messaging that suggests that private security technologies centred on CCTV surveillance systems are essential to their safety and security while there is inadequate evidence to support this. On the contrary, despite widespread use of CCTV, crime continues to climb steeply. Absent marketing and education about alternatives to technology-based 'hard security' systems, it is unlikely that municipalities, many already deeply committed to CCTV and with others regarding it as aspirational, will greatly diversify their safety and security approaches away from CCTV.



**CONCLUSION**

Two major questions remain unanswered:

1. What would the status of crime and violence be if municipalities, the private sector and communities approached crime prevention and urban safety and security with a more diverse set of interventions and with a balance of expenditure on CCTV systems and investment in crime prevention?
2. The cost of maintaining these cameras is crippling safety budgets and in other instances municipalities do not have the budget to maintain the installed cameras. Is it too late for municipalities to turn back from a path that locks them constantly into deeper commitment to CCTV systems, leaving less and less funding for other crime prevention – and even law enforcement – interventions?

The diagram above show a range of safety and security interventions. The continuum demonstrates that following a security focus will lead to security interventions and outcomes, while following a safety focus will lead to safety interventions and outcomes. Safety and security are often used interchangeably. Safety is "a complementary concept to crime prevention, and starts from the observation that inadequate urban development and local governance and social and territorial exclusion patterns encourage crime and violence"<sup>14</sup>

Security refers to "the immediate protection against a known or perceived threat to one's physical body, while safety refers more broadly to an environment where people can live without experiencing fear or threats to their health or well-being."<sup>15</sup>

11. In order for CCTV systems to be sustainable city authorities should make the necessary provisions in annual budgets for the maintenance, upgrades and expansion of the CCTV system (including law enforcement and data analysis).  
 12. Cape Town Metropolitan Police Department 2021/22 Annual Police Plan, available at: <https://pmg.org.za/committee-meeting/33764/>  
 13. SAPS. Police Recorded Crime Statistics Republic of South Africa. First quarter of 2021/2022 financial year (April to June 2021) available at: [https://www.saps.gov.za/services/downloads/april\\_june\\_2021\\_22\\_quarter1\\_presentation.pdf](https://www.saps.gov.za/services/downloads/april_june_2021_22_quarter1_presentation.pdf)

CCTV is a security intervention and it is very costly so it tends to reduce expenditure on safety interventions and draw focus away from safety towards security. It is important that municipalities, the private sector and other stakeholders explore other interventions ensuring a balance between safety and security. Junck (2022) states that “surveillance has rightfully become associated with innovative



## RECOMMENDATIONS

1. The same standards should apply to investment in CCTV cameras and systems as apply to other crime prevention interventions; this means that strategies and investment decisions should be evidence-led.
2. There needs to be improved knowledge building and data analysis regarding the use of CCTV footage in arrests and prosecution of criminals.
3. Policy regulating the private security industry and service providers should provide for transparency regarding access to data and protection of privacy.
4. Comparative cost benefit and feasibility studies should be undertaken to explore a better balance between community-based prevention, law enforcement and security interventions.
5. Municipalities should be required to divulge the basis for their decisions to allocate relatively large amounts of public funding to CCTV systems and to report regularly on their efficacy.
6. Municipalities should not invest in CCTV systems if they cannot afford proper support and response personnel and resources and if they cannot afford maintenance of the systems.
7. CCTV systems should be subject to regular objective review and results published and widely understood.
8. There is a need for widespread municipal and public education programmes and access to good practices for community-based and environmental crime prevention programmes and to balance these with ‘hard security’ interventions and costs.

14. UN-Habitat. 2015. Conference on Housing and Sustainable Development. Habitat 3 Issue Paper on Safer Cities, 31 May 2015. Available online: [http://habitat3.org/wp-content/uploads/Habitat-III-Issue-Paper-3\\_Safer-Cities-2.0.pdf](http://habitat3.org/wp-content/uploads/Habitat-III-Issue-Paper-3_Safer-Cities-2.0.pdf)  
 15. Civilian Secretariat for Police Service. 2018. Developing Community Safety Plans: A guidebook for provincial and municipal officials.

### The brief was compiled by the SA Cities Urban Safety Reference Group.

The Urban Safety Reference Group is a platform for peer-to-peer learning and knowledge sharing among practitioners from the SACN participating cities as well as other key government role-players on urban safety and violence prevention. It is convened by the South African Cities Network (SACN) with the support of the GIZ Inclusive Violence and Crime Prevention (VCP) Programme.

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