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ENHANCING SECURITY AND CRISIS MANAGEMENT: STRATEGIC DEPLOYMENT AND USE OF CCTV SYSTEMS FOR EFFECTIVE PREVENTION, DETECTION, AND RESPONSE.

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ABSTRACT:
This document provides a comprehensive overview of the functions, applications, and strategic importance of Closed-Circuit Television (CCTV) systems in security and surveillance. It explores how CCTV serves as a deterrent, detection mechanism, and evidence-gathering tool, emphasizing the significance of real-time monitoring for effective crime prevention and early warning and Response. The study highlights practical instances where CCTV could have mitigated risks if properly deployed and monitored, such as in retail and industrial settings. Additionally, the document discusses the critical role of CCTV in early warning systems for disaster and security management, and the necessity of establishing Forward Operating Bases (FOBs) to enhance operational responsiveness. It underscores that professional CCTV deployment, combined with strategic logistical planning and tactical positioning such as FOBs, can significantly improve timely response and overall security efficacy in both private and public sectors, with a particular focus on Nigeria's security challenges.

INTRODUCTION

The closed circuit television (CCTV) is a security tool used for surveillance and is often referred to a system whereby, video signals are transmitted via a set of monitors or devices for surveillances or security purposes.

CCTV refers to an electronic surveillance system that employs video cameras to transmit visual data to designated monitors or recording devices within a closed network. The primary aim of the cctv is to enhance security by monitoring, detecting and deterring criminal activities in both public and private spaces (Norris & Armstrong, 1999; Gill & Spriggs, 2005). Welsh and Farrington (2007) look at cctv as a non-broadcast monitoring system that records incidences privately for the purposes of observing specific areas. Similarly, Farrington, Gill, Waples and Argomaniz in their submission consider the cctv as a visual technology designed to prevent crime and improve public safety through the systematic observation and collection of evidences.

Looking at the definitions above will be enough to conclude that cctvs are used for the purposes of detecting, deterring and getting evidences of breaches by the enemy. However, cases abound where cctvs are used as a decoration for the office of top executives.

Working in the Niger Delta exposed me to the use of cctv especially during my time in a multinational company called SAIPEM where all the cctv cameras were linked to a central control post for the purposes of Deterrence, Detection, Response and probably Evidence. The experience was different in subsequent outings where I had to write many memos to defend the need for the proper use of the cctv and in some cases had to use incidences that occurred to prove a point for the need for the proper use of the cctv.

In this study, we shall look at the actual and real uses of the cctv and how they can be harnessed as an effective policing/surveillance tool for both private and government users. The study will cover apart from the functions of the cctv, the legal requirements and implications of the use of cctv.

Functions of the Closed-Circuit Television (CCTV):

The closed-circuit television (cctv) play vital roles and functions in the modern day security operations and management. The cctv is used in many places including private residences, business premises, public squares, institutions and even in private organisations to ensure the safety and security and professional efficiency of those places. The cctv have three (3) basic functions; deterrent, detection and evidence but detection is most important out of the of the 3 functions as

it has the tendency to frustrate or defeat an enemy in real time. Let's consider the various functions and their applicability.

Deterrence:
The first purpose of installing the cctv is to create fear in the mind of the would be criminal. The aim is to deter any person intending to unlawfully access the facility and this is referred to as deterrence.
Deterrence as a way of definition by the Oxford dictionary refers to the action of discouraging an action or event through instilling doubt or fear of the consequences. CCTV once installed acts as a warning to an intending criminal as it is required by Law for a written signage announcing its presence. Deterrent is something that prevents people from doing certain things by making them afraid of what will happen to them if they do it. It can equally be referred to as anything that act as a discouragement, obstacle or that which restrain people from doing certain things.
The cctv ordinarily should discourage, deter or restrain people once installed and with a warning signage in place. Deterrent can fail where the enemy (adversary) fail to notice the cctv or where they see it but are determined to commit the act not-withstanding the cctv. A good example is the fire incidence of the Ebeano Supermarket in Abuja, Nigeria which is reported by various media but can be accessed on https://www.youtube.com/watch?v=Xz5Pgrby8Zo wherein a little girl of 9 years old accessed the supermarket and set the entire facility ablaze but was not detected until the evidence function was activated. The girl probably didn't take note of the caution that there was a cctv and she will be detected. Another example played out in a power plant which I was protecting in Rivers state. All efforts to create a control room monitoring centre fell on deaf ears as the Chief Finance Officer will always query the rational for employing someone to watch television until an incident occurred where some masked criminals did not only vandalise the armoured cable but also harvested the cctv camera itself. A play back was made and the exact actions previewed but the masked criminals were not identified. A determined adversary may still proceed to penetrate or commit the act even when they have been warned ab initio and this takes us to the next function which is the Detection function.

Detection:
Detection is the ability to discover an adversary attempting to gain access into a facility and/or to an asset… it can be done by guards on patrol, dogs, sensors, cctv or by the physical protection system (PPS). In addition to installing the cctv, sensors can be deployed and linked with cctv so as to alert the owners once an enemy attempts to breach a system or unlawfully access a facility. The detection function is most suitable as it causes an aggressor to be detected in good and early time for the response function to be activated. This function can only be effective if there is someone dedicated to monitor the cctv footages in real time. Incidences abound where the cctv is left unmanned and only to use it to get play back footage after the incidence had already occurred. The 2 examples above of the Ebeano supermarket in Abuja and that of the power plant in Rivers state would have been frustrated if the cctvs were monitored in real time and the adversary detected. What a little salary earner would have done to save the multi-billion Naira supermarket was not possible because there was nobody monitoring the cctv. This is very common even in banks as the cctv monitoring points are placed in the offices of either the branch manager or the operational manager who himself/herself is usually engulfed with huge activities and occasionally peep at the screen to see if there is a visitor approaching or waiting for them. If there was a control monitoring room and a staff on duty, the operator would have discovered first of all, the unusual movement of a 9 year old girl without a guardian into the supermarket. The operator would have discovered the little flame when she lit the place and would have called the security operatives on the floor to attack the fire and also apprehend the girl. The evidence gotten afterwards cannot return back the burnt supermarket. Many other issues might also come up during Insurance investigation and audit to show if the incident was mitigated or not.

Evidence:
The evidence function of the cctv is the last resort after an incidence occurrence and the owners of the facility or the Law Enforcement Agents wants to have proof or evidence of the occurrence. In the 2 examples given above, the cctv footages were played and the little 9 year old girl was seen as the arsonist of the Ebeano supermarket while some masked criminals were discovered in the case of the power plant. However, this function can only be useful if the identity of the person is discovered and it is someone that can face trials and possibility jail but in this case, the girl cannot be jailed and the parents cannot be prosecuted.

Closed-Circuit Television (CCTV) as a tool for Early Warning
Early warning and early response is the situation that allows an impending danger to be detected in real time and efforts made adequately for timely response and apprehension. It is the process that identifies potential crises, flood, disease outbreak or conflicts while early response is the timely action taken to prevent or mitigate the crises from escalating based on the information provided by the early warning system (Nwakwo & Uguoma 2020).
The cctv can be used as an effective and efficient tool for early and timely detection. Early detection leads to early warnings and it help prevent disasters that would have happened (Kaplan & Garrick, 1981). Early warning helps to improve preparedness, it reduces loss of lives and property, it also help in proper resource allocations and as well as enhance community resilience (World Meteorological Organisation, 2018).
Additionally, early warning help timely dissemination of information to various government agencies, it helps the communities and other authorities to take proactive actions to avert the disaster, it equally help to ensure better coordination with government leading to robust and effective response strategies (Palmer et al, 2019). These can be done through several medium including the use of informants and/or PTZ (Pan, Tilt and Zoom) cctv cameras mounted on elevated mast with night vision infrared for a continuous monitoring. Using this kind of technology reduces the number of manpower required and also enhances response timing (Alexander, 2013). Needless to still emphasise that early detection helps to mitigate long-term and social environmental consequences and also reduces recovery costs (Blaikie & Brookfield, 1987).

Closed-Circuit Television (CCTV) as a tool for Early Respond
The Respond function of the Physical Security Triangle refers to the timely intervention of the Response force to either neutralize or defeat the enemy. This is done by a clear, precise and concise communication of those incharge of the detection function when an intrusion is detected according to Garcia cited in Har (2018). This function become ineffective if those detecting are not available or inactive. The example of the Ebeano Supermarket and that of the power plant indicate the absence of the detection personnel even though there were cctv cameras installed.
The response function in crises situation determines how such crisis could be mitigated. Conflicts in Nigeria that have grown out of proportion is partly as a result the poor respond timing and accumulation of certain circumstances including the build-up of what was sown in the 1990s by the Military rule which were repressive and intolerant on one hand and blatantly partisan and corrupt on the other hand. Although militant groups existed prior to the 1990s, they were quite unknown to Nigerian politics except for the case of Isaac Adaka Bolo led rebellion of 1966 according to Ikelegbe as cited in JCEWR (2021). Subsequent agitations such as the Movement for the Emancipation of the Niger Delta (MEND), OPC (Oodua People Congress), Movement for the Actualisation of the Sovereign State of Biafra (MASSOB), Niger Delta Avengers (NDA) etc and others such as Boko Haram (BH), Islamic State of West Africa Province (ISWAP) grew prominent due to lack of early warning and responses.

How to Deploy the CCTV for Early Responses

As earlier stated, the cctv plays a vital role of detecting the enemy or a menace. Examples abound of issues, incidences that would have been talked if the cctvs were deployed or rightly applied where they are deployed. The above cases of the Ebeano supermarket and the power plant are clear indication of what will happen if the cctv is used for decoration and not its proper usage.

CCTV (closed-circuit television) can be an effective tool for early response in disaster management and security situations when used properly. To make CCTV useful for quick and early responses, cameras should be strategically installed in high-risk areas, such as disaster-prone regions, entry points, conflict zones, and critical infrastructure (Li et al., 2018). For instance; PTZ dome cameras with capacity to cover a radius of 5km monitored from a control centre will make detection and reportage timely. Operatives on 24/7 duty once they detect any suspicious movement while panning the cctv cameras can equally tilt and zoom it to see the actual threat in closed quarters. The real time assessment of the cctv from the control and command centre will enable the response force to assess the situation and take prompt action (Chen & Zhao 2020). Take note however that response can be done if there is availability of logistics and the proximity of the response force hence the need for a Forward Operating Base (FOB). A Forward Operating Base is a secured temporal or semi-permanent location used to support operation goals of a tactical operation. It is usually located at an outskirt or remote location wherein supplies and equipment are provided for them but under the command of a regimented command hierarchy (Har, 2024).

The Importance of the Forward Operating Base (FOB) in achieving desired Early Warning and Response (EWER)

The forward Operating Base (FOB) as earlier stated above is a secured temporal or semi-permanent location used to support operations goals of a tactical operation. It is usually located at an outskirt or remote location wherein supplies and equipment are provided for them but under the command of a regimented command hierarchy Har, (2024). For Benue state and indeed Nigeria to consider having multiple FOBs, we must first of all trace the importance of FOB to EWER;

A Strategic Point for Launching Operations

The FOB is used as a point to launch strategic attacks against the enemy (ies). In the case of Benue state, the FOB can be established at entry points where criminal herders uses to enter the state during dry season. Notice that these criminal herders are not just herders as most of them are mercenaries and gun runners who require cattle to disguise for their trade. The FOB will enable timely intervention/apprehension when these criminal elements attempt to penetrate into the state. This strategic position will help the response team to carry due diligence of the incoming herders with the "other herders who had lived in Benue for quite a long time" to ascertain if they are genuine or otherwise (Johnson, 2020).

Providing Logistical Support

The fact that the Respond forces are required to live in the remote areas where the FOBs are situated, there will also be need for the provision of their logistical needs and supplies such as food stuffs, fuel, medicals, stationeries, ammunitions etc for the smooth running and functionality of the bases and ensuring the security of the hostile environments where the FOBs maybe domiciled.

Forward Operating Bases are very helpful for intelligence gathering as the respond forces have first-hand interactions with the local populace (Smith & Lee, 2019).

Operational Flexibility

Establishing FOB at remote and conflict prone areas helps in no small measure in ensuring operational flexibility. Imagine what it would have taken for a response force to move on a rough untarred road of about 60 kilometers to attend to a distress! This can be easily done where there is an FOB closer to the place requiring interventions and this is what is referred to as operational

flexibility. Using Benue as a case study, it takes a rough drive of more than an hour to move from Adikpo the headquarters of Kwande Local Government Area (LGA) to attend to Abande, Moon or any other part of the LGA towards the Kassimbila or towards the Cameroun border. The case will be different if an FOB is established at Imande Dura or around Anwase axis for easy interventions. FOB help improve troops safety and are vital in maintaining security presence in remote, complex entry points or crises zones (Davis, 2021).

Legal issues/requirements of CCTV

Legal issues regarding to the deployment and use of the cctv includes but not limited to; privacy, data protection compliance and the need for clear signage where cctvs are installed. Lets attempt to explain these requirements from the lens of a security professional and not actually from that of a legal authority/professional:

Data Privacy and Consent

The Nigerian Constitution section 37 states the rights of citizens to their privacy hence it becomes a violation to a citizen's right if a deployed cctv captures him/her without his/her consent. According to the Law, data acquired even from a private residence must still be protected. The Constitution guarantee to protect individuals' rights to include all forms of communication, homes, correspondences etc. The section 28 of the Data Protection Act of 2023 mandates cctv users to first conduct an impact assessment before installation of cctv even in their private homes (Tech cabal 2025).

CCTVs cameras pointing at public spaces such as street or other public places should be subjected to more strict protection and compliance especially considering that the GDPR (General Data Protection Regulations) will apply to any owner of the cctv even if the cctv is installed in the private homes but captures images beyond the private facility. The regulation states that someone who installs cctv is a data controller and should protect the data if the cctv footages covers the public spaces and as such should protect it (Islington Council 2025). Other Laws prohibit the sharing of cctv footage online or the registration of cctv covering public spaces Youtube (2025).

Other Commercial and Domestic Uses

There are other commercial and domestic uses of the cctv such as the use of signage. Owners of cctv cameras are required by Law to indicate on the signage that cctv is in operation on a property where it is installed. The signage alerts citizens that a particular facility or property is under cctv surveillance. Anyone who have seen the signage and later turn to claim the privacy violation will not have any justification haven been previously warned or alerted that the cctv is in progress.

Another issue of concern is for commercial users of cctv. That is, those who may deploy cctv for commercial uses will need to register the cctv with the relevant authorities and state the reason for the use before deploying it to use.

There is also the requirement for the privacy impact assessment to be conducted in the environment before installing the cctv. The privacy impact assessment is a mandatory requirement to reveal the ethical and legal implication of having cctv surveillances of the facility or the property.

Similarly, the duration time for storing the data should not exceed 31 days according to the Law and just as there should be restriction of staff to the data generated from such commercial cctv footage data, Islington Council (2025).

CONCLUSION

The study underscores that CCTV systems are vital tools in modern security management, serving critical functions such as deterrence, detection, and evidence collection (Gill & Spriggs, 2005; Farrington et al., 2007). Effective utilization of CCTV, particularly through real-time monitoring can significantly improve early warning and response capabilities, thereby preventing or mitigating security threats, accidents, and criminal activities (Kaplan & Garrick, 1981; Palmer et al., 2019).

However, the potentials of the CCTV is often underutilized due to negligence, lack of strategic deployment, quackery or poor monitoring practices, as exemplified by incidents in Nigeria where valuable opportunities for early intervention were missed (Norris & Armstrong, 1999). Furthermore, integrating CCTV with logistical support structures such as Forward Operating Bases (FOBs) can enhance operational flexibility, quick response, and overall security effectiveness in remote and high-risk zones (Davis, 2021).

This study states in clear terms that cctv systems are a unique and useful modern technology for effective and efficient security surveillances and management. The cctv functions of deterrence, detection and evidence serves great purposes for its installation (Gill & Spriggs; Farrington et al, 2007). The effective and proper use of the cctv especially when deployed for real time monitoring will enhance the actualization of the EWER programs and thereby mitigate the likelihood (probability) of risk occurrence (Kaplan & Garrick, 1981; Palmer et al., 2019). Nevertheless, the benefits of CCTV are often times been eluded due the poor usage, negligence, poor monitoring and evaluation practices, and poor or lack of strategic and professional deployment (Norris & Armstrong, 1999) as evidenced in the referenced cases of the Ebeano supermarket and the Power plant in Rivers state. For the cctv to serve the purpose of EWER, there must be monitoring centres for easy detection and communication to the response forces. Similarly, there must be FOBs at remote crises areas such as entry points in the case for Benue for operational flexibilities, quick responses and overall EWER capabilities (Davis, 2021). For an effective cctv utilization, the following may be

RECOMMENDED

- Strategic Deployment and Maintenance
- Integration with Response Infrastructure
- Enhancement of Legal and Regulatory Frameworks
- Development of Strategic FOBs
- Training and Capacity Building
- Public Awareness and Signage etc.

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