

## **ELEMENTS OF SECURITY FOR A GATED AND GUARDED COMMUNITY IN THE CONTEXT OF SMART LIVING**

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### **ABSTRACT**

Various elements of security are requisite for crime prevention in gated housing communities. To establish a sustainable secure housing area in the context of the Smart City, initial planning needs to take into consideration both the physical security and social wellbeing of the community. In this paper, the development of a gated housing community in a guarded neighbourhood is taken as a ‘best practice’ example of an urban setting where residents experience a level of security in keeping with the precepts of Smart Living. Various issues arise frequently in the development of gated communities and guarded neighbourhoods; these may involve guardhouses, the design and height of fences, physical barriers and security needs. Many gated and guarded community housing developments have yet to adhere fully to the basic principles of crime prevention through environmental design (CPTED) in their planning of physical security. This article seeks to identify the principal measures in crime prevention in relation to housing development in the context of the Smart City while adhering to the elements of CPTED for Smart Living. The broad adoption of CPTED strategies in planning sustainable housing and surroundings are aimed at providing better quality of living in the Smart City.

**Keywords:** Security, Crime, Gated Community, CPTED, Smart Living

### **INTRODUCTION**

The Smart City can be viewed from six dimensions, namely the Smart Economy, Smart Mobility, Smart Environment, Smart People, Smart Living, and Smart Governance (Table 1). These six elements are linked to the regional and neo-classic theory of urban growth. To build a Smart City, an important aspect that it embodies lies in Smart Living that has its foundations in peacefulness, security, comprehensive amenities, and comfortable lifestyle. Smart Living increases efficiency in daily lives by facilitating automated systems such as those that enable the monitoring of home appliances and environmental settings, and security management.

The term ‘Smart City’ often crops up in discussions on the use of modern technology in urban living. Here, modern technology refers not only to information and communication technology (ICT), but it pertains also to transportation technology, infrastructure and mobility that are available to residents. Among the amenities enjoyed by residents, an essential component encompasses security and comfort (Giffinger et al., 2007; Caragliu et al., 2009).

In the long run, security remains one of the primary objectives in housing development to alleviate the concerns of residents concerning their personal safety (Ceccato, 2012). This is particularly the case for sustainable smart cities (Landman, 2012:240). Residents are attracted to such a community that offers them the perception of peace of mind and personal security (Raco, 2007:306). Hence, sustainability of a secure neighbourhood cannot be achieved without due attention to steps taken to address the problem of crime and fear of crime in the community (Cozens, 2007:189; Landman, 2012:240).

Table 1: Components of a smart city and related aspects

<b>Components of a smart city</b>	<b>Related aspect of urban life</b>
smart economy	Industry
smart people	education
smart governance	e-democracy
smart mobility	logistics & infrastructures
smart environment	efficiency & sustainability
<b>smart living</b>	<b>security &amp; quality</b>

Source: Albino et. al., 2015

Fear of crime can be allayed by various measures adopted by the police, the government and society; for instance, community co-operation with the singular motive to combat crime plays an important role (Doran and Burgess, 2012). Crime and the fear of crime can be overcome with proper developmental plans that emphasize the importance of security. Gated community living is already seen as a response towards crime and social instability in the city (Almatarnah and Mansour, 2012). Walled and gated communities limit access to the public. They are continuously guarded and under surveillance by CCTV to fulfil the market demand for increased security (Atkinson and Blandy, 2005). As a whole, the gated community has broadly succeeded in reducing the feeling of persecution and fear of crime (Vilalta, 2011).

The 'Smart City', as depicted in the literature, is focused on its brand of technology, administration, economy, environment, etc. According to Chourabi et al. (2012), the quality of life in a community is ultimately an important factor in determining whether a city can be defined as "smart". Smart Living is an integration of all the elements that make for a quality, meaningful and happy life. Here, the element of safety is requisite to the precept of Smart Living and Smart Cities at the highest level. The gated community provides social and physical space for interaction among residents. Such interaction reinforces the perception of security and wellbeing in the community (Abdullaha et al., 2015). In this regard, the community's surroundings play a key role in the control of crime. Nevertheless, scholars have observed that, despite obvious similarities in what makes for a safe community, neighbourhoods differ in their capacity and success to curb crime through exerting territoriality and social control.

## **LITERATURE REVIEW**

### **Experiencing Smart Living from the Aspect of Security**

The physical environment of an urban community plays a role in shaping a society that is at ease in its day to day living. Secure surroundings, easy access for residents and good location are key

elements that contribute to the feeling of a free society (American Association of Retired Persons, 2005). The term ‘living standards’ is associated with material wellbeing. The Oxford Dictionary (2011) defines ‘living standards’ as ‘the degrees of wealth and material comfort available to a person or community’. Nevertheless, the non-material aspects of security and welfare are undeniably also very important aspects of the living standard. In this paper, ‘living standards’ is synonymous with wellbeing, security, and the environment that encompass both the material and non-material in attaining Smart Living (Gleisner et al., 2012).

In the literature, wellbeing is characterised using ‘objective’ and ‘subjective’ approaches. Objective measures in living standards reflect aspects that are observable, evident and that may sometimes be quantified. They are not influenced by the perception of the individual but are dependent on actual personal experience. To assess variables such as living standards, objective measures are used to determine median income, and non-material aspects (e.g. hours of leisure time). On the other hand, subjective measures for living standards reflect the effect of the individual’s experience and emotion. Subjective measures are used to assess the level of satisfaction the residents experience (e.g. whether their income is adequate), and non-material standard of living (e.g. perception of safety (Gleisner et al. 2012).

Smart living is a trend that involves various changes to established norms in lifestyles that touch on housing, workplace, infrastructure, security, and urban environment. In the context of engineering trends in housing construction, Smart Living is seen as an innovative, cost-effective and efficient lifestyle choice that is in keeping with current times (Probst et al. 2014). Similarly, the Smart Home is where artificial intelligence and automation take over many menial tasks for the home owner in the areas of security, comfort, entertainment, and communication with the outside world (Aldrich, FK, 2003; Chen and Chang 2009)

The ‘quality of life’ is an essential component in Smart City living that places stress on security. Indeed, it is this component which espouses comfort and a quality lifestyle that defines the Smart City (Giffinger et al. 2007). Nevertheless, there are researchers who do not regard quality of life as a separate dimension of the Smart City since all relevant aspects of the Smart City would already be contributing towards a heightened quality of life that is upheld as its core tenet (Albino et al. 2015).

Security as a primary element in a city would function best in controlled and comfortable surroundings (Cozens and Love, 2015). Donald (2001) identifies eight indicators characterizing the quality of living, namely: (i) coherence that includes participation, inclusion, belonging, recognition, and legitimacy; (ii) human services that include quality and access to healthcare, social support services and social security network; (iii) learning opportunities that include a high standard of education and professionalism, public education and public research institutions; (iv) public safety and the crime rate; (v) affordable housing, living space and amenities; (vi) public transportation; (vii) environment quality and (viii) culture, recreation and lifestyle excellence (Thite, 2011).

### **Maintaining Security through the CPTED Strategy**

The mechanisms to reduce crime takes cognizance of required physical changes to the existing layout of the housing area, such as the topography and road access (Armitage et al., 2011). The practical extent of surveillance cannot stop crime completely in many situations because criminals avoid obvious break-in points such as those close to neighbouring properties and busy

roads, preferring targets that are located in poorly lit areas or those that are hidden from view by walls, vegetation, or the landscape. More concrete planning for physical security is called for to put a stop to crime in urban gated communities (Blakely and Snyder, 1998). Wallis and Ford (1981) propose four principal aspects to contain crime, *viz.* the physical layout of the community, a management plan, involvement of the police, and social interaction. Crime reduction through re-designing of the physical layout could involve increasing lighting, eliminating ‘blind spots’, installing guard houses and surveillance cameras, establishing boundary corridors, closing road, erecting fences and walls, and raising the overall image of the property and its surroundings (Kim, 2006).

Such steps would be in accordance with the principles of crime prevention through environmental design (CPTED) which postulates that the design and planning of the neighbourhood influence the quality of public security as well as provide opportunities for social interaction while engendering a feeling of security (Foster et al., 2016). There are several physical means by which territorial security can be maintained to keep out intruders. Hence, town planners can play a significant role from the outset in enhancing security through CPTED principles (Abdullaha et al. 2015). Newman (1972; 1973) was among the first theorists to expound the concept of crime control through rational planning design and layout of the surroundings, CPTED being the essential embodiment of such a concept (Fisher and Piracha, 2012). In the planning of housing areas, crime risks that fuel the need for physical security measures along the lines of CPTED underline the need for guidelines governing the inclusion of such features (Kent and Wheeler, 2015).

Physical security involves measures aimed at strengthening the physical structure and layout of an area and its surroundings from the security viewpoint (Reeves et al., 2011). The physical features of a location include the environment, public spaces, boundary walls, and dividing fences between housing lots. A commonly adopted strategy in implementing physical security is controlling access to the property using various kinds of barriers such as gates, walls and fences that are overseen by security personnel stationed at guardhouses. For example, Reynald (2009, 2010b) contends that the likelihood of criminal activity is tied to the area that is secured in relation to the marked boundaries and barriers that have been put in place. Such overt defences have the potential to deter crime even in instances where the walls and barriers are as much for symbolic value (Reynald, 2010).

Gated community housing designed for Smart Living is equipped with all manner of infrastructure facilities dedicated to security such as fences, walls, alarms, security personnel, and CCTV (Roitman, 2003). Within the tight security, an intercom system screens visitors before allowing access. Each house is equipped with a security system linked to the guardhouse to facilitate communication between the resident and the guardhouse to vet visitors or to seek emergency assistance. Landman (2012: 249) emphasizes the critical importance of entry-exit control at designated gates manned by security guards. In addition, good lighting of the secured area is essential. The selected specifications of the security systems and arrangements all play their part in reducing the opportunities for, and the incidence of crime (Ekblom, 2011).

CCTV systems are commonly installed to enhance the effectiveness of security control. Security personnel can monitor a large area without having to be physically present. This reduces the need for frequent patrols, enabling a smaller security contingent to manage the area under surveillance (Blandy, 2006). Cameras are normally deployed at the entry and exit gates and at other strategic locations for images of visitors and their vehicles to be captured. Such recordings are also very useful in aiding the police in apprehending perpetrators who might have committed wrongdoing in the guarded community. For CCTV to be effective on a real-time basis (rather than as a means of video recording to be reviewed after the event), it is of course essential that the security personnel concerned remain always vigilant in front of the video monitors.

## The CPTED Theory in Security Management

In analysing crime incidence in the built environment, Newman (1972) focuses on how the ‘defensible space’ might be exploited for better security while Jeffery (1971) advocates a more holistic approach by adopting the principles of CPTED. Lens (2013) reiterates Newman’s defensible space theory for which empirical evidences show a link between crime incidence and the design of built up areas and their surroundings. Newman asserts that defensible space can be established, firstly, through the erection of physical barriers such as walls, fences and gates and, secondly, through the allocation of designated safe public areas where residents can congregate in the neighbourhood (Newman, 1972:4).

Jeffery’s CPTED concept shares similarities with Newman’s defensible space proposal. However, the former stresses more on the planning and design of defensive barriers and other deterrents from the outset. Moreover, CPTED encompasses decisions on land use in the siting of residential houses, shops and offices. Four areas that require particular attention for crime prevention in the CPTED scheme are: i) housing design or block layout; ii) land use and circulation patterns; iii) territorial features; and iv) physical deterioration (Lens, 2013).

Crime prevention based on the principles of CPTED provides also for the alleviation of the fear of crime (Cozens and Love, 2015). CPTED principles are not necessarily new; they have in fact been observed from time historic, Even from the Iron Age, the selection of defensible locations and fortifications for seats of governments had been characterised by the building of walls, gates, moats, drawbridges for protection. In modern times, the concept has been re-cast to include territorial refinement, protection of the natural environment and its access, and the identification of weaknesses for target hardening (Gruenewald et al., 2015). The CPTED concept is today recognized as an effective, efficient, and environment-friendly approach to reduce the risk of crime, alleviate fear, foster social interaction and good neighbourliness, and help raise the quality of life (Fisher et al., 2015; Foster, 2016). Sustainable communities that optimize economic and environmental resources (Figure 1) are held as models of good practice in the planning of smart townships. Ease of movement and communication, a feeling of security and comfort and efficient amenities services are the hallmarks of smart living in a successful Smart City. In this connection, CPTED-fashioned plans for accommodation translated into a sustainable reality in the future are expected to fulfil the needs and expectations of families in all aspects of their day-to-day lives (Queensland Department of Public Works, 2008).

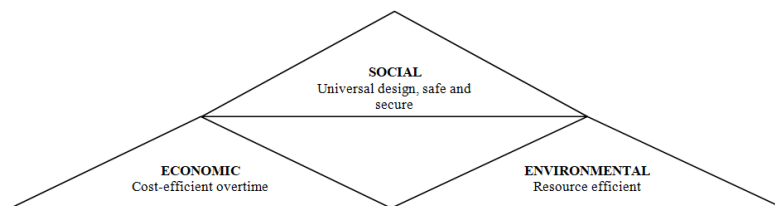


Figure 1: The ‘Triple Bottom Line’ approach to sustainability  
Source: Queensland Department of Public Works (2008).

## CPTED Principles in Gated Community Housing

In recent times, gated properties have seen a surge in popularity because of the emphasis placed on security measures in such schemes to combat crime and allay concerns over safety in urban areas. The aspects of physical security in focus include measures to maintain the quality of the natural environment, lighting, vehicular and foot access, social spaces, the landscape and the management input required to maintain community infrastructure (Armitage et al., 2011:30).

Walls, fences, intercom systems and burglar alarms are standard specifications. Access to such neighbourhoods is only *via* entry/exit gates controlled by security personnel (Breetzke et al., 2014). The rise in crime rates has been a primary factor in fuelling the demand for gated communities and guarded neighbourhoods. Residents who feel unsafe where they live because of the crime rate are emotionally affected and this influences their decision to seek residence where security is more assured (Foster et al., 2008; 2016). Atkinson and Blandy (2005:178) opine that it is not only the actual high fences and concrete walls that offer comfort and assurance, but their symbolic presence goes a long way towards offering residents peace of mind and to assuage their fears. In this way, a commitment to security amounts to a promise of a lifestyle amidst the privacy of coveted surroundings. Where the local government is concerned, the gated community offers a self-funded infrastructure for a select group of residents that translates into savings in public funds (Kleibert and Kippers, 2015).

#### a) Social Community Space

Discussions and debates on public perception on crime and fear of crime in a community boil down eventually to an issue of territoriality (Wilson, 2000). Hence, territorial security goes a long way to lower the fear of harm to property and to personal violation. Other key issues requiring attention in the social community include social economy and house ownership, social interaction, cohesion of the society at large and crime abatement (Brown and Bentley, 1993).

At the planning stage, the housing developer assesses the security needs of the community and attempts to meet the specific requirements in layout and design. A basic way to achieve this is to have the community in question gated and guarded. In fact, the developer is likely to use the term ‘community’ to attract buyers (Blakely and Snyder (1997:18). The buyer feels he is buying not just a house, but also a membership into the exclusive ‘community’. Some researchers believe that the concept of community enhances co-operation and interaction among residents who see a common goal in their welfare by raising the level of security in the community.

The Social Network Theory (Vilalta, 2011:110) predicts that a strong cohesive network among residents in a community would act collectively to address matters of security, and consequently lessen the fear of crime. Conversely, communities where the social network is less well established are more likely to experience acts of crime and its residents are more likely to be imbued with the fear of crime. From the theoretical standpoint, strong social relationships, whether formal or informal, among residents lessens the fear of crime, and it is hence essential to foster such relationships and camaraderie for social cohesiveness in a gated housing community (Morrison, 2003). Putman (1993:35) states that an investment in social ties, norms, and trust paves the way for co-operation for mutual benefit. The social capital involved is derived from the sum of the resources of individual members who, through their recognition and appreciation of the contribution of other members, function effectively as a group. Forrest and Kearns (2001) has this view on social cohesiveness:

*“...by implication, a society lacking in cohesion would be one which displayed social disorder and conflict, disparate moral values, extreme social inequality, low levels of social interaction between and within communities and low levels of place attachment.”*(Forrest & Kearns, 2001: 2128)

The mechanism of crime prevention through better social integration and communication within the community leads to the involvement and commitment of individual house owners and their neighbours acting in concert to safeguard the community.

#### b) Surveillance

Within the confines of their boundary fences and walls, gated community housing and commercial areas receive round-the-clock surveillance by security personnel (Lemanski et al., 2008:134). Even with intercom and CCTV facilities installed, patrols by security guards in

housing areas are still essential (Blandy, 2006:15). Patrols enable security personnel to check and observe the area under surveillance, including blind spots that CCTV cameras could miss. Usually, security guards take turns to perform their rounds of patrol, commonly once every three hours to ensure security is under control. Patrolling security personnel can also attend immediately to urgent calls for assistance in situations such as robberies or burglaries. Such patrol routines are especially useful during holidays in conjunction with various festivals or school vacation when many residents leave their homes empty. Because many burglaries occur during such periods, patrol frequencies are normally stepped up.

### c) Management and Maintenance

Closely tied to surveillance and territoriality in the CPTED model is the concept of public image and physical environment. A high standard of maintenance in the physical environment is important to convey the message that the physical environment is fully functional, and that in turn presents a positive impression to the community (Cozens, 2009:164). Ekblom, (2011:22). Good management of the natural environment in the gated housing scheme can go a long way to thwart all manner of crimes that could otherwise take place. Common failures of management include extensive walled-in areas that over-stretch security resources of the community, while poor organization in security logistics would result in poor co-ordination of resources. Outright incompetency in management would, of course, present opportunities for criminal activities to occur (Wortley, 2008).

Maintenance of assets, an integral part of management, includes routine inspection, repair and upgrading of physical barriers (Ekblom, 2011:22). Good maintenance also projects a positive image of the community and its security infrastructure, reinforcing the impression that its security is well under control. Even a brief lapse in the security shield can allow criminal activity to slip through and mar the image and reputation of the gated community. Hence, good management and maintenance of physical assets is important not only to ensure that security is sound, but also to give the all-important perception that security in the community is tight (Painter and Farrington, 1997).

## **METHOD OF STUDY**

To obtain an understanding of the criteria and elements of physical security in the development of gated housing communities and guarded neighbourhoods, primary data were collected by the researchers through questionnaires, interviews and observations in the field. Our survey was based on the perception of 1580 respondents, comprising a Gated and Guarded Community in Johor Bahru to determine the elements of security are requisite for crime prevention in gated housing communities. The study was also employed a qualitative approach that involved interviews with five respondents, comprising housing developer and subject matter experts (SMEs) in the field of security. To analyse the effectiveness of the element of physical security in a gated community, each item was scored on a Likert scale between 1 and 5 as follows. 1: Ineffective or unimportant; 2: Mainly ineffective or mainly unimportant; 3: Moderately effective or moderately important; 4: Effective or important; 5: Very effective or very important. The relative effectiveness of the different elements of security was scored on a scale proposed by Pallant (2007) where mean scores were categorized into three classes: A mean falling between 1 and 2.33 was 'low', a mean between 2.34 and 3.66 was 'moderate', while a mean between 3.67 and 5 was 'high'.

## FINDINGS AND DISCUSSION

The data were analysed as soon as they were obtained from the field. A descriptive analysis of the responses was obtained from questionnaires and interviews. The results were then presented in tables, figures, and summarised for comparative analyses.

### i. Perception of Effectiveness of CPTED in the Context of Smart Living

Effective and sustainable physical security in a gated housing community and guarded neighbourhood is important as a means to combat crime.

#### Effectiveness of the CPTED Physical Security Element

Adequate planning of physical security in the development of a gated community involves different components that interact with one another. These elements include CCTV system, fences and walls, guardhouses, planned housing, entry and exit gates, an hierarchal system of roads, pedestrian walkways, adequate lighting, patrols by security personnel, planned and planted landscape and separate entry/exit points for pedestrian and vehicular traffic. All of the eleven elements of physical security examined showed mean scores that fell between 3.15 and 3.66 (Table 3). The overall mean was 3.40. These components of security were therefore deemed 'moderate' in their effectiveness.

#### Demand for CPTED Measures to Combat Crime

Arising from the Safe City concept and strategies to prevent crime through environmental design, there is growing demand for CPTED measures involving aspects of physical security and judiciously landscaped surroundings to be implemented in gated communities. Security features installed in a safe environment would encourage the development of a committed community that is proactive towards efforts to combat crime.

Table 3: Effectiveness of physical security elements in gated housing communities and neighbourhoods

Element of Physical Security	N	Mean Score	Level of Effectiveness
CCTV System	464	3.15	Moderate
Fence/ Wall	464	3.48	Moderate
Guardhouse	464	3.57	Moderate
Planned Housing	464	3.30	Moderate
Entry/exit gates	464	3.56	Moderate
Hierarchal System of Roads	464	3.36	Moderate
Pedestrian Walkway	464	3.24	Moderate
Adequate Lighting at Night	464	3.45	Moderate
Security Guard Patrols	464	3.39	Moderate
Planned and Planted Landscape	464	3.28	Moderate
Separate Entry / Exit Points for Pedestrian and Vehicular Traffic	464	3.66	Moderate

In this study, we also evaluated the perceived importance of various CPTED strategies in gated communities for crime prevention that are under review by the Johor Bahru Town Council (*MajlisBandaraya Johor Bahru*). Our survey was based on the perception of 464 respondents to the CPTED measures on security. Questionnaire items were scored on a scale ranging from 1 (indicating unimportant) to 5 (indicating very important). The respondents' mean scores on the returned questionnaires ranged from 3.66 to 4.68. Hence, the majority of respondents felt that



the steps taken to control crime were ‘important’, while their perception of the same procedures were ‘high’ (Table 4).

It can be seen from Table 4 that increasing surveillance through more frequent patrols by security personnel was perceived as the most important means under CPTED by which security could be improved (mean score of 4.68). Among the respondents, 77.6% thought this strategy to be ‘very important’ while 16.4% considered it ‘important’. The results of this study showed that almost three quarters of the respondents believed that adopting this CPTED step would lead to improved security in gated communities. Lighting was another important item under the security element of CPTED. Increase in lighting was the second most important item that respondents thought could reduce crime (mean score of 4.65), with 75.2% of the opinion that it was ‘very important’, and 15.5% thinking it was ‘important’. Again, almost three quarters of the respondents believed that adopting this step would improve security in the gated community. Additional lighting is especially important for back lanes, dark and secluded areas, pedestrian walkways and around residences at night. Lighting should be adequate to enable face recognition from 10 meters and facilitate clear recording by CCTV.

The other important procedures under CPTED that should be adopted to increase the perception of security were the installation of security alarms (mean score of 4.52), deployment of security personnel (4.48), implementation of environmental design (4.34), and the installation of safety mirrors (4.09). Safety mirrors enable views of otherwise blind spots and secluded location such as back lanes where incidences of criminal activities commonly initiate. A safety alarm system enables the house dweller in a gated community to push an emergency button that sets off the alarm to alert security personnel stationed at the nearest guardhouse.

The need for separate entry/exit points for pedestrian and vehicular traffic and signboards aimed at deterring crime appeared to be the least important security issues in a guarded community, with minimum scores of 3.66 and 3.88 respectively on the Likert scale (Table 4). Regarding separate entry/exits for pedestrian and vehicular traffic, 40.1% of the respondents felt such an arrangement ‘important’, whereas 28.2% thought it moderately important. The proportion of respondent who found signboards to deter crime important was only 30.6% while 23.7% considered the strategy only moderately important.

Table 4 : Perception towards crime prevention through environmental design (CPTED) in gated communities and guarded neighbourhoods

Element of Physical Security	Mean Score	Level of respondent's perception/ Level of importance
Designate separate entry/exit points for pedestrian and vehicular traffic	3.66	Moderate /Important
Implement environmental design	4.34	High / Important
Deploy security personnel	4.49	High / Important
Install safety mirrors	4.09	High / Important
Erect sign boards aimed at deterring crime	3.88	Moderate /Important
Install security alarms	4.52	High/Very Important
Increase patrols by security personnel	4.68	High/Very Important
Install close-circuit TV (CCTV) cameras	4.63	High/Very Important
Increase lighting in the housing area	4.65	High/Very Important

When a gated housing scheme is initiated, the housing developer normally engages a security company to deter acts of vandalism, theft and other criminal activities. The security service normally extends into the period when the housing scheme is completed and populated. A good environmental design would form the basis of a planned healthy community amidst comfortable surroundings.

The results of this study showed that residents from the gated community found the overall level of readiness in physical security in their housing scheme to be moderate. The

implication here was that residents in guarded communities considered physical security important as they aspired for a higher quality of living. What this community was enjoying at the time of the study resonates with the thinking of present and future generations that expect a quality lifestyle with all its amenities in the midst of competent security management that part and parcel of Smart Living.

## **Relationship between CPTED Elements and the Smart City**

### **Linking the safety element to the SMART CITY**

In the planning and design of gated communities, various elements of CPTED such as the emphasis on security should be incorporated into the living space to raise the quality of life in Smart Living. Several developers are already offering their views on how security might be improved. Examples of such improvements are by increasing the force size of security guards and the frequency of their patrols, improving lighting in housing areas, and installing more CCTV cameras, safety alarms, safety mirrors. The environment design could also be upgraded while sign boards at strategic locations and better regulated entry and exit points would also be useful. These CPTED protocols are the trends for the future when Smart Living in the Smart City becomes the norm.

## **CONCLUSION**

Security within a housing area is requisite to the sought-for quality of life where comfort and wellbeing are assured. The provision of security control is a major component besides adequate exclusive amenities that make for Smart Living. This study presents new evidence supporting an association between perceptions of safety from crime and the importance of various measures to deter crime. The results showed that various safety elements and measures should be prioritized according to their relative importance to control crime in urban housing, and especially in gated communities. The findings from this study show that various security measures stipulated under CPTED should be part and parcel of the ideals of Smart Living that promise quality living and the perception of security in city living.

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