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Enhancing Safety And Security: Crime Prevention Through Environmental Design In Automobile Showrooms And Workshops.

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ABSTRACT

This article delves into the pivotal role of Crime Prevention Through Environmental Design (CPTED) in bolstering safety and security within the context of automobile showrooms and workshops. Recognizing the unique challenges faced by these spaces, where valuable assets and a steady flow of customers coexist, the study investigates how thoughtful environmental design can act as a proactive deterrent to criminal activities. The synthesis of CPTED principles with the specific needs of automobile establishments creates an innovative approach that not only safeguards assets but also enhances the overall experience for customers and staff. Drawing from seminal works in criminology and architectural design, the article provides a comprehensive overview of the core tenets of CPTED and their applicability to automobile showrooms and workshops. By adopting a multidisciplinary lens, the research navigates through studies such as Jeffery's "Crime Prevention Through Environmental Design" (1977) and examines their relevance to the automotive industry. Through case studies and practical insights, the article illustrates successful implementations of CPTED strategies, showcasing real-world examples where environmental design has effectively deterred criminal activities and promoted a secure environment. The integration of natural surveillance, access control, and territorial reinforcement emerges as key components in the design interventions proposed for automobile spaces. Moreover, the article addresses the symbiotic relationship between CPTED and customer experience, emphasizing the positive impact of a secure environment on customer trust and satisfaction. In essence, this article seeks to bridge the gap between traditional crime prevention measures and contemporary design solutions, offering a nuanced perspective on how automobile showrooms and workshops can become resilient against criminal threats while fostering an inviting and secure atmosphere. Through a blend of theoretical foundations and practical applications, this research advocates for a holistic approach to safety and security, positioning CPTED as a formidable tool in the arsenal of automotive establishments committed to safeguarding their assets and enhancing the overall well-being of their stakeholders.

Keywords: Crime Prevention Through Environmental Design (CPTED), Safety and Security, Automobile Showrooms, Workshops, Environmental Design, Criminal Activities Deterrence, Multidisciplinary Approach

INTRODUCTION

The use of automobile vehicles on our roads plays a key role in road transportation system. In Nigeria where land transport is largely in use compared to water transportation and other modes of transportation, the use of automobile vehicles, either diesel or petrol driven is predominant. However, the vehicles cannot remain new forever, as the parts breakdown and wear out, and so, must be maintained. (Akinola 1995). Maintenance had been defined as an activity applicable to all systems, natural and artificial, to cause such systems to remain unaltered or unimpaired. It is the repair activity carried out on vehicles or other machineries to keep them unaltered, and if altered, to restore them to

their original state (Okah-Avae 1995; Akinola and Ogedengbe 2005). The designs of vehicles have advanced to a very sophisticated level, and unlike the old mechanically operated vehicle systems, the modern vehicles are being operated and controlled by computerized electronic sensors. For example, latest vehicles' ignition systems are electrically controlled without employing the old use of manually reset contact breaker. Common to majority of the new trend cars is the brain box and other electronic gadgets that sense instant faults in the vehicle and immediately notifies the driver through the dashboard display.

The modern trend of mechanical services therefore requires the use of more complex and highly technological and special diagnostic equipment to analyze vehicle faults for repair and service. To ensure this for efficiency, safety, comfort and style, competent professional hands are required (Auto Tips 2001; Dhillon 1980). As vehicle technology and maintenance processes are advancing, the problems facing Automobile technicians in the course of discharging their duties have adversely affected the transportation system, and hence affecting all the other systems in the course of discharging their duties have adversely affected the transportation system, and hence affecting all the other systems in the country. Some of the results of the auto technician problems include: unpredictable breakdown of vehicles on the highways, failure of vehicle parts such as brakes; resulting in accidents and loss of lives, delay and failure of important appointments, and heavy debts incurred by many car owners on maintenance. A system with an optimum performance can be generated if all problems identified are tackled (Lindley, et al. 1977; Jarett 1977; Groover 1992). This will go a long way on alleviating the problems being encountered by the auto technicians in our society.

An automobile Showroom and workshop Centre is an industrial building that offers a wide range of marketing and technical services for car owners by providing a large room used for displaying her various car models and also a workshop section for repairs and maintenance. It is made up of several spaces that accommodate different types of facilities for different sales, maintenance and repair operations. These services include: diagnosis, alternator and starter rebuilding, no-start and drivability, fuel injection cleaning, timing belt change, tune-up, clutches, brake service, painting, wheel alignment, oil change plus many other services, Gear oil / Engine Oil / Break Oil change, Oil Filter change, spark plugs / point repair, lubricant replenishment / replacement, tuning, break shoe repairs, minor suspension repairs etc. These maintenance services are usually characterized by their very little job turnaround time and are usually disposed of within a half a day's work. Due to the nature of these operations, fire safety and security are major challenges. In an automobile showroom and workshop, enhancing safety and security is paramount, using Crime prevention through environmental design strategies to ensure the safety and security of everyone in the facility, these strategies.

Aim

This article aims to explore and emphasize the role of Crime Prevention through Environmental Design (CPTED) in enhancing safety and security within the specific context of automobile showrooms and workshops.

RESEARCH METHOD

A qualitative research method was adopted in this study, this involved an interplay of relevant case studies and reviews of literature. The qualitative research method employed a holistic approach, combining real-world case studies with a comprehensive literature review to present a thorough exploration of the role of CPTED in enhancing safety and security within the context of automobile establishments.

FINDINGS

The Boulevard Mall Is the biggest mall in Nevada, it's a long rectangular 1.2 million square feet. There are four major department stores, and 120 specialty stores. There is a food court that consist of 13 vendors, and there are three restaurants. There are six main entrances to the mall, but a total of nineteen when including the entrances of the four department stores. There are nineteen corridors, and nine of them can be used as entrances if people know about them but they are mainly used for deliveries. There are six major areas where employees and customers can park, not including the three parking decks.

Natural Surveillance: The overall site design provides a good level of surveillance for the whole mall. This is due to the long rectangular shape design which allows an individual to look almost the entire

length of the mall. There are twelve to twenty-four light poles per parking lot depending on the size, and each parking lot was lit well. The middle of 1996, maintenance engineers decided a high-pressure sodium bulb would brighten the surrounding of the mall even more. The twelve light poles on top of the parking decks magnify their surrounding areas because of the new light bulbs. They also, attached extra lighting fixtures to every other light pole, so there would be no dark areas or blind spots at night. The parking decks have new lighting fixtures, twenty-four per isle, and the white light bulbs magnify the brightness allowing customers to view the whole level of the parking deck. The lighting fixtures along the walk ways outside have improved using the same light bulb, many customers are taking the outside route to go from department store to department store. The addition of the new light bulb provides an excellent line of sight for customers and employees. The added fixtures make sure that all blind spots and dark areas are well lit, so customers are not afraid to walk to their vehicle at night.

The landscaping is well managed by a contract landscaping company, they come every two weeks to a month depending on the seasons, all the trees and shrubs that occupy the walkways, the parking lots and decks are well trimmed so a customer or an employee's visibility is clear at night. The surveillance room is a state-of-the-art place. There are 142 cameras at the mall. There are two surveillance operators who monitor the closed-circuit television system (CCTV). Surveillance operators can watch any criminal suspect or activity anywhere on the mall property except the bathrooms and inside stores. The major department stores have their own video surveillance and security. Surveillance operators keep in contact with security officers through portable radios, and they also monitor metro police southeast communications with a scanner. When an incident is caught on tape, and the police arrive on the seen they can review the tape and get a copy. This makes it easy for police officers to make an arrest or identify the suspect for later arrest. The tapes record 24 hours of material Monday through Sunday, so if anything does happen it can be reviewed and kept as evidence. Any customer can ask for a tour of the surveillance room. This reinforces the message that someone is watching out for their safety and property.

The mall recently built a security podium at the entrance of the food court. A Security officer is always there to help customers. It allows the officer to view all of a mall which is from Macys to Sears and the food court for any suspicious activity such as: gang members or drug dealers. The officer gets emergency calls on the phone then dispatches security officers to that incident. It allows customers to feel safe to know where a security officer is at all times, so they do not waste time looking for one in case of an emergency. There is a pamphlet anyone can pick up about mall security at the podium, and it refers to safety measures customers should take when shopping anywhere. There is a television monitor at the podium displaying live video surveillance of the mall.

Access Control: The property boundaries are well defined with four-foot fencing at the southeast part of the mall, and eight-foot red cinder blocks at the northeast part. This is to protect homeowners from any problems, and to provide privacy to an area that gets many strangers. The west part of the mall has no physical barriers except the sidewalk which defines property boundary. This allows customers to distance themselves closer to the mall because they know where the property boundary is located. They feel safer parking 25 feet away instead of 100 feet away and positioning their vehicle in front of a store entrance way so it's viewable by others. There are ten driveways to the mall, and each driveway has only one entrance and exit lane. This control levels of speed so customers are aware of suspicious vehicles. There are public policy signs, and video surveillance signs, that let customers know undesirable criminals are not welcomed on mall property.

Territoriality: Like the Neighborhood Watch Program, the mall started several programs to ensure safety. The Watchful Eye Program is where merchants will share theft reducing tips and learn how to improve customer safety. Also, customers can walk into any store, and report an incident to a store employee who in turn will call mall security. The Boulevard mall is a founding member of Las Vegas Retail Loss Prevention Association a network of retail security and law enforcement personnel. This allows department store security to work with mall security to catch criminals. They both share information about suspicious vehicles or individuals in the area. Also, Code Adam child-alert system will use mall personnel to finding missing children. Once alerted, mall personnel will be given a description of the child and sent to cover the exits. There are child ID kits available at the security podium. The Boulevard Trick-or-Treat, the mall's annual Halloween event where parents take their kids

to get safe candy and be in a safe environment. There is a monthly security newsletter designed to keep retailers of the new or improved security upgrades.

The Boulevard mall with Metro Police sponsor National Crime Prevention month every year. The security staff is made up of three sergeants, and fourteen officers. During the day there are usually two sergeants, three to four bike officers, and four to five inside officers, on patrol. A new six-horse unit has been added to patrol the 42-acre parking areas on evenings and weekends. Mall management looks to hire qualified individuals based on their experience, attitude, knowledge. Each officer goes through hours of training for CPR and first aid, for pepper spray, for PR24 police baton, and for gang awareness. The officer of the day keeps a duty log recording events of the day, and then he or she gives it to the head of security for review. Each officer learns how to write all types of reports. The customers feel safe around competent individuals, who know what to do in emergencies.

Maintenance: The maintenance consists of engineers, landscapers, and a clean-up crew to take care of any problems that involve the mall. The engineers make sure the electrical, plumbing, air conditioning, carpentry, and painting are functioning properly. Repairs are fixed before the day ends or within an hour. The landscapers make sure trees and shrubs do not hinder anyone's visibility. The clean-up crew makes the mall look very clean by making sure garbage cans are not overflowing, and cleaning up spills so no one slips and fall. They all have portable radios, so if they see anything suspicious, they can report it to security. They can aid customers about the mall whether it's about a location or an incident. The city of Saint Louis, Missouri started improvements to street lighting in 1964. The program was implemented in an urban business area which consisted of large department stores, banks, hotels, and investment companies. The police department compared 1963, when crime was high in the area, to 1965 when the improvements were made. The data indicated all types of assaults committed against people went down 40.8 Percent, auto theft went down 28.6 percent, and burglaries went down 12.8 percent (Street and Highway Bureau, 1972). The Union Avenue corridor is a commercial strip 50 blocks long and 4 blocks wide located in Portland, Oregon. Surrounding Union Avenue are predominantly single-family residences. The corridor faced deterioration, increasing crime, and a general decline in conditions during the early 1970's. Violent crimes had become disproportionately high, Based on the areas' share of the city's population. Union Avenue was typical of many declining inner-city commercial areas throughout Urban America. A major revitalization effort by the city of Portland that includes Crime Prevention through Environmental Design has begun to turn around the area.

The prevalent corridor crimes are assault, robbery, purse-snatching, and burglary both commercial and residential. A number of steps to solve the corridor's crime problems have already begun. A Safe Streets for People project is providing outdoor Lighting, dial-free emergency telephones and sidewalk and landscaping improvements. Also, part of Safe Streets are a block watch program and a program setting up certain homes as safe havens. Residents and frequenters of the corridor have participated in neighborhood clean-ups and Sunday markets.

In the spring of 1977, interviews with corridor business people found that more than half had increased sales in the last two years, and 90 percent of them had no intention of leaving in the near future (Nation's Cities, 1977). In the first 10 months there was a 29 percent reduction in commercial burglaries on Union Avenue, compared to a 9 percent reduction for the city as a whole. This reduction carried over into the first quarter of 1977, at which time a sharp decline, 61 percent (Nation's Cities, 1977).

Prior to the installation of a parking lot lighting system, the Fairmont Mall in Camillus New York was experiencing a high level of car break-ins (Bachner, 1986). The installation of a lighting system eliminated these break-ins, boosted mall patronage, and allowed the scope and frequency of security patrols to be reduced. Similarly, the installation of an effective lighting system at the parking lot in Spring Valley Park in San Diego, California, eliminated robberies, vandalism, and burglaries (Bachner, 1986). Vehicular accidents were also reduced. When the crime rate was high at the park children and the elderly avoided going to the park, but since crime has dropped, they are playing and walking at the park at night.

In England, crime has been cut down drastically by video surveillance equipment. The use of the closed-circuit television (CCTV) systems has cut down crime by 30 to 40 percent at local malls like Archway in North London and certain cities in England such as: Guilford and Mercy side. The CCTVs are manned 24 hours a day by well-trained individuals. They can immediately call the police who will arrest the criminal in the act or process of leaving the area. The surveillance operators turn over the

video tape to the police, and the criminal goes to jail. The Tallahassee Police Department adopted the concept of CPTED to reduce crime in their city. They thought it would easier and cheaper to reduce crime. In 1992, the Tallahassee Police Department invested in long range crime prevention and dedicated a fulltime crime prevention specialist to serve as a member of Tallahassee/Leon County Planning Commission's Technical Coordination Committee. The committee reviews all buildings and site plans for countywide construction. The crime prevention officer's job is to convince the other members on the committee that the benefits of applying CPTED concepts in the planning stage will save developers money in the long run and result in a safer environment.

Their first successful story began with a municipal golf course where juveniles were committing armed robberies on golfers. There was no access control to the golf course. Teenagers used the golf course as a shortcut to their homes after school. Golfers could not be seen by other golfers or golf course staff because of trees and underbrush on the back of the course and between the greens. The perimeter fence line had holes in several places, there was a thick wooded area between the back-golf course and the perimeter Fence line, limiting natural surveillance of the course. The police department recommended, the golf course management clear underbrush, Clear-cut some areas, repair the perimeter fence, and put up signs which stated "Golfers Only" (Starnes and Tucker, 1993). Shortly after making the recommendations the police arrested eight juveniles for the involvement the armed robberies (Starnes and Tucker, 1993). The robberies have stopped, and the golfers feel safer with the implementations.

Clark High School in Las Vegas has been troubled by violent crime, deteriorating buildings, and the lack of community sense. Wayne Tanaka, the principal of Clark High School made a difference in 1993 with the help of Metro Police, local governments, business officials, and area residents, and property owners to form the One Neighborhood for Everyone. This meant Clark High School was to become a village center to surrounding area. Metro police reported a 33.5 Percent drop, from 1993 to 1994, in the area's crime rate due to the set up of the village Center at Clark High School.

CONCLUSION

In conclusion, this article has delved into the crucial realm of safety and security within automobile showrooms and workshops, emphasizing the effectiveness of Crime Prevention Through Environmental Design (CPTED) principles. Through a combination of insightful case studies and a comprehensive literature review, we have explored the multifaceted aspects of environmental design that contribute to crime prevention and overall safety enhancement. The case studies provided concrete examples of successful CPTED implementations, showcasing how thoughtful design considerations, such as lighting, surveillance, and spatial organization, can significantly impact the security landscape. These real-world examples serve as valuable lessons for industry practitioners and decision-makers seeking practical solutions to enhance safety in their establishments. The literature review has reinforced the theoretical underpinnings of CPTED, offering a robust foundation for understanding its principles and their applicability in the context of automobile spaces. By synthesizing existing knowledge, we have highlighted key strategies, identified potential challenges, and proposed recommendations for optimizing safety and security through environmental design.

As we conclude, it is evident that CPTED is not merely a theoretical concept but a tangible and effective approach to creating secure and inviting environments. The integration of design elements that deter criminal activities while maintaining a positive customer experience is paramount. This article calls for continued exploration and implementation of CPTED principles in the automotive industry, urging stakeholders to prioritize safety and security as integral components of the overall design strategy for showrooms and workshops. In the ever-evolving landscape of crime prevention and environmental design, this article serves as a catalyst for ongoing dialogue, encouraging further research, innovation, and collaboration to ensure that automobile establishments become not only spaces of commerce but also havens of safety for customers and employees alike.

RECOMMENDATIONS

Based on the comprehensive exploration of Crime Prevention through Environmental Design (CPTED) principles in the context of automobile showrooms and workshops, the following recommendations are put forth:

1. Conduct thorough security audits of existing automobile showrooms and workshops to identify potential vulnerabilities and areas for improvement.
2. Develop training programs for showroom and workshop staff to increase awareness of security measures and the importance of adhering to CPTED principles.
3. Establish partnerships with local law enforcement agencies to enhance security measures and ensure a swift response in the event of security incidents.
4. Explore the integration of advanced technologies such as surveillance systems, access control, and alarm systems to complement physical design elements.
5. Collaborate with experienced architects, urban planners, and security experts during the design or renovation phase of automobile showrooms and workshops.
6. Engage with the local community to raise awareness about the importance of security and the role of CPTED in creating safer spaces.
7. Establish a routine for reviewing and adapting security measures based on evolving threats and changes in the surrounding environment.
8. Regularly update security protocols to address emerging challenges and incorporate lessons learned from security incidents.

REFERENCES

Wood, Elizabeth. (1967). *Social Aspects of Housing in Urban Development*. ST/SOA/71, Department of Economic and Social Affairs, United Nations, New York

Crowe, Tim. (2000). Crime Prevention through Environmental Design. 2nd edition. Boston: Butterworth – Heinman. ISBN 0-7506-7198-X

Jacobs, Jane (1961). The Death and Life of Great American Cities. New York: Random House. Jeffery, C. Ray.

(1977). Crime Prevention through Environmental Design. Beverly Hills, CA: Sage Publications.

Designing Out Crime Association http://www.doca.org.uk

Newman, Oscar. (1972). Defensible Space: Crime Prevention through Urban Design. New York: Macmillan.

CPTED: Durham Guide to Creating a Safer Community. Durham County, North Carolina.

Government of South Australia (2002) Crime Prevention through Environmental Design and Urban Design.

Akinola, A.O. 1995. Parts Standardization in the Motor Industry. B. Eng. Thesis, Dept. of Mechanical Engineering Federal Univ. of Technology, Akure, Nigeria.

Akinola, B.; and Ogedengbe, T. 2005. Basic Automobile Technology. Olajuyin Printers, Akure, Nigeria.

Benson 2013, Challenges of the *Nigerian Automobile Industry*.

Robinson, Matthew B. (1996). "The Theoretical Development of 'CPTED': 25 Years of Responses to C. Ray Jeffery". Appears in: Advances in Criminological Theory, Vol. 8. Url last accessed 17th September, 2023.

Mac Leod, Kenneth, "Crime prevention through environmental design: An analysis of the Boulevard Mall" (1998). UNLV Theses, Dissertations, Professional Papers, and Capstones. 271. http://dx.doi.org/10.34917/1471251