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Designing out crime

Architects and city planners around the world are coming up with solutions that could make communities more secure — although challenges remain

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Although the UAE is considered a safe country, the fast-changing regional dynamics amid its strategic importance as a business hub are making experts look at community safety in a more holistic sense.

Every country is subject to different kinds of threats, which determine what levels of safety and security measures it needs to take.

"Monitoring public spaces and most areas within a property helps control minor crimes such as burglary and theft. However, the downside is loss of privacy," says Tobias Lindemann, a German architect and designer.

So architects and city planners around the world are being challenged to come up with designs that could translate into safe and secure places to live in, without compromising privacy. A lot of measures are being taken in the design stage itself to deal with safety and security issues in a community development. So how can design be used on a number of levels to prevent crime?

Chris Johnson, Managing Principal and Creative Director for Gensler Europe, Middle East and Africa (EMEA), says in the UAE, just like anywhere else in the world, all buildings should be designed to prevent crime, and architecture is just one element of a multi-layered approach to prevention. "Architects are taught that while the criminal threats of the 21st century are changing, the principles used to solve them remain the same. First, you must understand the type of crime you are trying to prevent, to be able to provide an appropriate solution," he says.

For example, measures to deter burglars would differ from earthquake protection.

Johnson suggests the simplest way to do it is through creating highly visible open spaces where there is heavy pedestrian footfall. This makes people feel safer and acts as a fundamental deterrent for would-be criminals. "Getting the layout and basic organisation correct, with clear lines of sight in lobbies, solid materials at the base of buildings, good lighting and fewer entry points, the aim is to reduce the potential for criminals to see a target, and you can lessen the risk of crime," he says.

And then additional features such as cameras, motion detectors and security systems do two things — they monitor potential areas of risk, and reduce possible design flaws that criminals could exploit.

Architects and designers outline the importance of creating designs that offer good visibility and build natural barriers. Janus Rostock, Regional Design Director at Atkins, says, "As part of the design, you can create invisible boundaries that make people realise they are now going into a private property. You can start to create differentiation of place — you can go from the public to the semi-public, to the semi-private to the private."

Government guidelines

The UAE government has started giving greater emphasis on formulating proper safety and security guidelines that look into design aspect as well. Abu Dhabi's move to release Safety and Security Planning Manual in 2013 is one such example. The authorities say this will guide developers, property owners and a wide range of professionals, including urban planners, designers, transport engineers and safety and security specialists, towards creating solid foundations for safe and sustainable communities. Commissioned by the Abu Dhabi Urban Planning Council (UPC), the manual notes that good planning and design of the built environment are central to community safety and protective security, yet crime and security issues rarely receive sufficient attention early in the development process.

Though Dubai is still to come up with any such manual, the industry players say the current rules in place take this into consideration. "A lot of the developments that we are doing do get the approvals of civil defence as well as police. So it's something that is being looked at but it's not the number one driver and I don't think it should be," says Rostock.

Union Properties reports that Dubai doesn't have a governing body dictating a set of rules to control security and prevent crime, aside from Dubai Police regulations and CCTV, which is limited to the malls, hotels, and hospitals. Isam Ababneh, Director of Projects at Union Properties, says, "However, a series of regulations that impacts any design is governed by Dubai Municipality and Dubai Civil Defence, but mostly it is more on a project-to-project basis and developer preferences. On the contrary, in Abu Dhabi this is governed by the Safety and Security Planning Manual issued by the UPC."

Rostock says developers are giving importance to safety issues regardless. "We are very fortunate to be working with some of the biggest developers in the region and it's obvious to us that they are taking the design of their community very seriously. They are looking to create the highest quality safe environments for people," he adds.

Simon Shaw, Principal Director of Design and Planning at AECOM, agrees. "Crime prevention via environmental design principles covers a range of aspects including lighting, passive surveillance, sightlines, wall heights and window orientation, all of which affect people's behaviours, safety and the quality of the spaces we create for communities. We apply these principles in our urban planning work and for conducting design reviews."

Given recent events and global acts of terror, industry experts say, the Emirates seem to be prepared and safety is of paramount importance. "Even in early design stages, safety is one of the main parameters to qualify building quality and sustainability.

"For our Makkah project master plan with six million sq m gross floor area, we worked from the first sketch on various design and engineering levels to optimise access and increase overall safety of the property," says Lindemann.

For the Makkah project, Lindemann's company, White Sky Group, together with BMW Designworks, invented an integrated solution that allows seamless mobility within the 91-hectare property, while offering high-end security systems.

Edward Agostinho, who is responsible for all technical and sales consultancy for Cisco's Physical Security product portfolio in the EMEA region, says countries that do have such guidelines and laws in place are being followed by developers and planners. "However, these regulations only offer specifications on type of equipment to use and are not prescriptive on solutions to improve community safety. This is left to the building owner or agency to decide how to best implement safety and security solutions, which in most cases are left to security consultants to advise," he says, adding that being too prescriptive on safety and security solutions may restrict innovative solutions.

Gated versus open

The region of late has seen increase in the number of gated community developments, which many consider safer in comparison to open communities. But gated communities come with their own set of disadvantages. In the wider UAE, gated communities could be an answer to solving community-based safety issues, but this depends on what the individual needs extra security from. "If you're looking for an extra level of comfort for your family or want to protect the risk of your child's involvement in a traffic episode, then family compounds do instil that extra level of basic safety and control. These kind of communities are great for new expats, families and those who fear the unknown, but ultimately they meet the needs of only a few and may be a short-term or temporary solution," says Johnson.

Rostock agrees gated communities have certain advantages, but the disadvantages with certain gated communities, of course, is that they kind of turn their back on the rest of the city and turn these areas into a no man's land, which is probably not encouraging from a safety point of view. "I think to look at the gated communities that we have here in Dubai, they are not as fringed as those you see in other parts of the region and that's a real positive. But they do prevent basic crimes such as burglaries to a large degree," he adds.

Lindemann believes gated communities can make you feel safer in a way but their appearances are often deceiving. "Nowadays, criminals utilise and misuse a lot of technology and gadgets. Since Abu Dhabi and Dubai are global hubs today, they have developed into preferred places to live, work and visit. As Dubai aspires to be a city of happy, creative and empowered people, we need open spaces and urban transparency to reach this goal," he adds.

However, towers and open communities act very differently in ensuring residents' safety. Towers could be perceived as vertical gated communities that provide the same level of comfort, security and control found in their outdoor equivalent. Open communities, on the other hand, rely on a foundation of teamwork, trust and respect. "These types of communities need to embrace a balanced level of community spirit and self-awareness in order to enhance safety in their area, then they will help self-police to reduce crime," says Johnson.

High tech

Technology has always been a major component of community security but architects are trying to integrate its usage with designs in a more sophisticated manner. Industry architects say many technologies are already inherent in the access controls that buildings have in the region. The use of keys is no longer a must. There are different ways that one can get access and that side of the development will increase in the future — whether it's iris recognition, fingerprint access control, or lots of different ways of ensuring that one can keep things separated.

Agostinho feels technology is ever evolving and developers or architects are encouraged to continuously keep abreast of new solutions available in the market to improve community safety, efficiency among security personnel, collaboration and reduce response times.

His company has developed the Smart+Connected City Safety and Security solution that helps protect cities from crime, terrorism, and civil unrest. "It helps law enforcement monitor public areas, analyse patterns, and track incidents and suspects, enabling quicker response. By combining information from video surveillance cameras, social media, citizen reports, and other sensors, the solution provides a richer view of urban safety," he says.

In terms of latest technologies that are in demand besides the ones already in use are outdoor sensors and active protection. Both residential and commercial markets are using more outdoor sensors these days.

In many cases, criminals get into houses when occupants are at home and the system is disarmed: this is the reason for the development of home-jacking and car-jacking system.

Nicolas Vial, International Sales Manager at AVS Electronics, says, "The manufacturers are developing more and more sensors to detect the intruders first time to be in the house. The alert is given by an outdoor sounder, the activation of the irrigation, simultaneously with the garden lights, which usually will stop the thieves. But this gives also the time to the occupants to react and call the police. The most important element for the final user is the quality of the product and the low rates of false alarms."

In terms of emulating any global best practice, Vial gives example of a Dutch initiative called No-Crime Day held on December 11.

This event has gone on for two years and statistics show that robberies decrease on the day. "The idea is obviously to show the community that they can behave every day like that and constantly reduce the crime. The Belgium police decided to copy this initiative after the success of their Dutch counterparts. The UAE police could do the same." ∎

✦ White Sky Group's six-million-sq-m Makkah project has factored safety into its first sketches and offers embedded high-end security systems

Courtesy of Lindemann Architects

Tobias Lindemann
Architect and Designer, Lindemann Architects

Nicolas Vial
International Sales Manager, AVS Electronics

✦ AVS Electronics develops sensor-driven home security systems

Courtesy of AVS Electronics

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