**A lack of understanding**
People in the local design community don't understand the importance of CPTED

# BUILDING FOR SECURITY

*Big Project ME* speaks to leading experts to find out why the regional construction and real estate industry needs to take security design seriously

In the times that we live in, with international hyper-awareness about security and safety, one of the key aspects that building owners, architects, engineers, contractors and all other stakeholders on a project must consider is: how secure are their buildings? As recent tragic events have shown, there is an urgent need for buildings and public spaces to be designed in ways that keep their occupants safe from harm, whether it's an active shooter situation or a hostile vehicle on the loose.

One key principle that can help to achieve this is Crime Prevention Through Environmental Design (CPTED), which can be best described as designing a physical space with security principles in mind. In order to do so, it is crucial for designers and architects to bring in security design professionals at an early stage if they are serious about improving security, a leading group of industry professionals told **Big Project ME** during a roundtable hosted by Safety Design in Buildings, an initiative co-founded by Intersec and Messe Frankfurt.

"From a design perspective, I don't think people in the design community understand what CPTED is," says Steve Velegrinis, head of Master Planning and director of Operations at AECOM. "We run into a lot of problems from a cultural perspective, and there are a lot of assumptions where they don't know what the answer is. For example, in an Emirati housing community, the automatic response is to put up a two-metre wall around the entire property. That means you can't look in, and you can't look out.

"I think most of the ideas around environmental design driven crime prevention is around the idea of eyes on the street.

That means making sure that the lighting is right, that windows look out to those places, and the attention is on the assumption that everyone wants complete privacy, in the form of a high wall. If you try to argue away from that, people don't want to hear, so there is a tension there."

Furthermore, he explains that from a design perspective, there is a much broader idea of safety and security, centred around the idea of the building being resilient. This attitude means that specialist security consultants aren't generally considered, with clients preferring to have a system in place that serves as an answer to many problems.

"Resilience takes into account terrorism, social ills, unemployment, environmental risks, etc. Risks are now being conflated into one giant basket of issues. Few have all the answers to all aspects of these problems, so there's a mixing between all of these issues into one basket, and there are people that can help with different aspects. The problems are all so interwoven that it requires a very complex solution, and few people can help."

John Cowling, director – Middle East for Acutech, adds that another reason clients don't want to use security consultants is that they add to the price of the project.

"Security is seen as a cost that no one really wants to bear or hear about. For example, I was once with a client – a five-star hotel in Erbil – and he didn't want to put in hydraulic blockers at his entrance. He asked if he could put in tyre spikes, and I said that it doesn't do the same job. Eventually, I explained that this meant that he would be the weak link among all the hotels in the area, and that would make him a target. Then he thought about it.

"Another time, I was working at a newspaper that was installing a new digital printing press and it had protestors because they were replacing the old manual printing press. The newspaper asked, 'How do we stop them from getting in?' They had never designed gates into their construction – to retrofit them, we had to rip things down.

"Developers and designers see security professionals as a blocker, when what they want is to work out all the parameters and then help the designers build and operate with the intended function from the outset. Often at this level, we will give all the advice, but if it doesn't conform to the architect's vision, they'll just

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try and push you away," he asserts.

Having security consultants come in at the last minute often causes additional challenges, says Attila Tamas, senior security consultant at Jensen Hughes. He explains that coming in late on a project can limit a security consultant's ability to integrate security elements with the architect's design vision or provide a holistic approach that might minimise conflicting aspects.

"You can look at it and say, 'Well, the only thing we can do here is to install hydraulic vehicle barriers and put up cameras, and that's it.' This is because you've already passed the point of designing and building something aesthetically pleasing that will act as a hostile vehicle mitigation measure, instead of the usual ugly hydraulic barriers. Or, we have passed the point where we can design and build a hedge of bushes and maybe install the concrete bollards inside, so they are hidden from view. Hence, you're leaving us only with the options that often impact

**Security starts at the beginning**
Attila Tamas says that security design must start right at the beginning of the planning process for a building, as once something has been built, it will be too late to incorporate proper protective measures.

negatively on the aesthetics of the project."

Because of this, Tamas says security consultants are often looked at as the enemy of beautiful design. However, he insists that the key is early involvement.

"What I try to do, every time I meet with a planner, architect or designer, is to say, 'Involve us at an early stage, at least for a discussion.' Then we can look at if there are conflicting environmental, security and safety issues. Even though safety and security are often considered the same thing, security can be about locking things down in case of an emergency event, while safety needs to open things up in case of an evacuation and give access to emergency response services. Since these aspects may be in conflict they need to be resolved, and it is possible, provided you work together early."

Velegrinis adds that the lack of planning and haphazard nature of sharing information in the region can cause complications during

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**Bridging the knowledge gap**
John Cowling says there are often knowledge gaps on projects due to a lack of information sharing, which leads to security being compromised.

the construction process. While he agrees that early involvement would be beneficial, he cites an example from a recent project, where a security consultant was brought in to do a threat and risk assessment, but the client couldn't give an answer.

As such, he suggests that a national strategy be implemented and adopted by government-backed developers, where they lead the way when it comes to sharing and disclosing information that is pertinent to the success of projects. By doing so, he hopes that smaller developers and the rest of the construction industry will follow suit.

Tamas points out that addressing the culture in the region is a major challenge, especially since the type of security issues prevalent in other markets aren't so common here. Cowling adds that there is often a disconnect between what is shown and the reality. In the GCC, he explains, there is often no access to government data, and often that is not shared with the companies building the projects, which in turn leads to gaps in knowledge, gaps that can be exploited.

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"Typically, when you're working for a master developer,

not share anything with you. They expect you to tell them the answers – what are the risks and threats? They'll take your reports, but very rarely will they comment on them, about whether we're on the right track or not," he explains, but stresses that this is also common in other countries, such as Australia.

"So you've just got to make these assumptions and move forwards. Interestingly enough, one of my former employers had what was called a risk assessment map for 226 countries, where they broke countries down into regions and gave them a threat rating based upon various criteria. Now, it was great for geopolitics, but it was too high-level to get down into specific neighbourhoods and areas, and that's where this security kind of stuff is needed.

"For example, I was talking to a mall operator in Fujairah, and they had brought us in late. We were talking about their engineering and I asked about the design, which had massive roller doors. They said that they have a mall in Bahrain where protestors had moved into, with police following and fights breaking out. They said that they needed to be able to lock down the place.

"I had to say, 'But this is Fujairah. You don't have social unrest in the UAE. Looking at your demographics, which align to the police statistics, you're never going to have massive social unrest in Fujairah. You can take the roller doors out.' But of course, by then it was too late, as they had already bought them."

From a master planning point of view, Velegrinis says the question often asked is: "Do you secure the whole project? Or do you make the security point at the entrance to a building?"

they say, 'Well, I'm going to sell every one of these buildings. I don't want to pay for it. Make people put security in the separate building entry points.'

"At other times, we've had master developers who have just pushed it down the track, saying, 'Well, we don't know

what the building will be. Let's just make the security point at the building itself.'

"But, particularly from a CPTED point of view, the entry should actually be in the public realm, so that you make that safe and have half your job done. Thankfully, attitudes



**Greater involvement from master developers**
Steven Velegrinis says that master developers need to be more involved when it comes to designing security systems for the entirety of their projects, rather than leaving it to individual building or project developers.

seem to be changing. A lot of the work that we've done recently for government developers in places like Dubai – they have been starting to talk about it and starting to voluntarily look into the public realm."

All three agree that there needs to be better connection between developers and city planners, if security issues are to be resolved. The current planning model of having mega developments operate as islands within cities is one that needs to be urgently looked at, they stress.

"The planning model here is that there are a lot of islands, and no one has looked at the gaps between these projects. That gets done by the planning authority," Velegrinis says.

"The Urban Planning Council in Abu Dhabi has adopted that role so that you don't get the sort of very harsh clashes between these isolated developments, but there will come a time, and we're getting close to it in Dubai, where there will be lots of opportunities to improve things." ∎