MEGACITY MAYHEM?

Jon Hill *looks to the future as he explores the many security benefits provided by smart interconnected cities*

By 2030, it's estimated half the world's population will live in urban areas. There's even projected to be 41 megacities each with over 10-million inhabitants. Our urban centres are evolving and there's no doubt this kind of population density needs management.

Urban planners, municipal governments and businesses welcoming this influx have to make important decisions about safety and security. Safe cities attract businesses, foster innovation and provide countless opportunities. By working collaboratively, public and private sectors can contribute to a foundation for the success of these cities.

But how do we construct and manage cities so that everything, flows smoothly? In short, how can we ensure that our cities continue to succeed as they grow? A key indicator of success is a city's resilience. We know that the ability to get back to normal as quickly as possible

following an incident, unplanned event or emergency is essential as it makes citizens feel safe and allows businesses to continue to thrive. And, since cities are seen as hubs of commerce and leisure, heightened levels of crime – or even fear of it – can call the nature of life into question.

The challenge then is how do we put systems and processes in place that will keep our cities safe while allowing them to adapt and grow as populations increase and technology advances? How do we ensure cities continue to be resilient even as their make-up changes? After all, a city that works is a city you want to live in.

The solution? Smart cities: a living organism defined by the European Commission as: "a place where traditional networks and services are made more efficient with the use of digital solutions for inhabitants and business."

This technology can take many forms, including sensors, data analytics, machine learning and artificial

intelligence, and can be used to collect and analyse data on everything from traffic patterns to air quality to public health. It can be implemented in many different ways and careful consideration must be paid to how privacy and cybersecurity are baked into the very core of the system.

In my opinion, top-down approaches that begin with technology are doomed to fail. Instead, municipal leaders should start smaller. They should focus on specific challenges to be resolved. For example, high rates of crime or poor traffic flow. Then look to technology to help.

Increasingly, the resilience of cities depends on the open communication and connection between a variety of systems and organisations. Gone are the days when urban safety was the sole responsibility of law enforcement. Businesses, traffic control, public works, schools, transit authorities, hospital administrations, *etc*. all have important roles to play and can add input into response plans.

For example, the earthquake and Tsunami that struck Japan in 2011 destroyed one of the country's main highways. Within six days, as part of the country's emergency plan, it was completely repaired. This facilitated the movement of supplies and work crews into and citizens out of the area, increasing their resilience. The Japanese government and other organisations were able to determine the best course of action required to address very real, but not obvious problems through advanced communication and preparation.

In many cities, however, and for a variety of different reasons, we see stakeholders who are not collaborating with one another. Business leaders, city planners, municipal infrastructure leaders, fire departments and law enforcement can end up working in silos, ultimately leading to breakdowns in communication, missed opportunities and lapses in city security. This is felt most acutely during an emergency when silos turn into blind-spots and a lack of cooperation can create opportunities for criminal activity, making a city and its people more vulnerable.

SHARING AND CARING

A good example of this is video surveillance cameras. Over 99 percent of camera systems are in private ownership. A mugging happening on the street is most likely to be captured on the cameras of a local business, meaning police regularly need to negotiate access before they can proceed with an investigation. Nobody would suggest the police should have 24/7 access to private systems. But most would agree the process of a business choosing to release this footage when it is in their civic interest to do so should be seamless. Yet, the reality is it is still often painful. It doesn't have to be that way. Cloud-based digital evidence management platforms which allow footage to be shared when the owner decides to do so are the way forward.

As we've seen in Detroit with its Project Greenlight initiative, breaking down "data silos" in physical security is crucial. The city had identified that the vast majority of crime was taking place after 10pm in the proximity of petrol stations. It subsequently launched a programme that involved these businesses deploying HD video cameras that could live stream into the police control at the push of a button.

The resulting deterrent effect was of immediate benefit to the police who had better coverage of these high crime areas. It was also valuable to the petrol stations themselves

who now found citizens felt safer and were more willing to visit them. Ultimately it benefitted all taxpayers who were left with a safer community and an appreciation that should an incident unfold, the police were now better equipped to respond rapidly.

Our task is to establish strong foundations that support and maintain the efficient flow of people, assets and ideas in our cities. These foundations must allow our city and community stakeholders to communicate effectively both now and in the future. Because, when given the opportunity to share technology, resources and information, cities can significantly improve the way they meet challenges and solve problems – making an ordinary 'everyday' possible via extraordinary technologies and collaboration.

CAMERAS THAT MONITOR PUBLIC SPACES CAN HELP TO IDENTIFY AREAS WHERE CRIME IS HIGH

Advances in IP technology have brought us better video surveillance, access control, automatic licence plate recognition (ALPR) and powerful analytics. These elements can work together to deliver physical security that helps cities to protect urban areas.

Today's technology can provide security professionals and law enforcement with greater situational awareness. When it comes to ensuring public safety, and maintaining a secure environment, having a complete picture can make all the difference. Smart cities rely on solutions that can allow public organisations to work closely with law enforcement to develop an emergency response plan where video surveillance streams and other data from IP sensors can be correlated, analysed and shared quickly with relevant parties.

Comprehensive unified security solutions offer smart cities the tools they can use to improve overall public safety. And if they choose a provider that enables smarter collaboration between different stakeholders then it has a much better chance of proving effective. A comprehensive security platform that combines video surveillance, access control, ALPR, communications, intrusion and analytics enables cities to work smarter by providing that emergency preparedness, enhanced situational awareness and improved operational efficiency that is so desperately needed.

Specifically, these unified systems can deliver the capability to improve traffic and mobility operations. Traffic systems combined with video surveillance and incident response solutions can help law enforcement identify incidents, communicate detours and coordinate responses faster, resulting in smoother traffic flow and happier citizens.

Improved technology in physical security systems can also deliver the opportunity for collaborative investigation management, which is a boon to law enforcement. By using a safe city-focused security platform, police officers, investigators and security managers can gather and have access to digital evidence from a variety of sources and easily store, manage, review, and share it from within a single application. Incorporating a smart security solution that breaks

Detroit's Project Greenlight involved businesses deploying HD video cameras that could live stream to the police at the push of a button

down walls and freely shares information (only with those approved to have such access, of course) provides comprehensive response coordination that can literally save lives. An effective public safety strategy requires more collaboration and connectivity between agencies, cities and the private sector. Using physical security components that include video surveillance, ALPR and access control gathering and consolidating data from a multitude of sensors can provide a dynamic

BREAKING DOWN DATA SILOS IN PHYSICAL SECURITY IS CRUCIAL TO MOVING FORWARD

– and unified – view to dispatchers and emergency responders so they can make insight-driven decisions during a mission.

Interconnected surveillance, which can include sensors, cameras and other forms of data collection, can provide a wealth of information to city officials and decision-makers that can help inform policy decisions. Such vast amounts of data can help smart cities make informed policy decisions by providing real-time data on various aspects of urban life. For example, cities are moving towards curb management to improve parking and mobility policies. With the high demand for the curb, managing it has become critical, but many cities lack the essential data needed to make informed policy decisions. Advanced parking management systems can collect and correlate data from multiple sources, generating actionable information that can be used to implement more effective parking and mobility policies in almost real-time. Curb management uses data to help cities make informed decisions on how to improve overall curb space efficiency and compliance.

Interconnected surveillance can also help smart cities identify areas of concern that may require policy interventions. For example, cameras that monitor public spaces can help identify areas where crime or safety concerns are high, allowing officials to allocate resources to address those issues. Similarly, sensors that monitor water quality or temperature can identify areas where environmental concerns may be present, allowing officials to take action to mitigate those concerns.

Another benefit of interconnected surveillance is that it can help smart cities monitor the effectiveness of policy interventions. For example, if a city implements a new policy to reduce traffic congestion, a city could use ALPR and its parking management system to produce weekly occupancy surveys. The data collected in these surveys would allow officials to accurately determine whether or not its free parking initiative is encouraging people to visit the city's core. In the future, city officials could continue to use this data to make other informed decisions around parking to support businesses and tourism with the goal of improving overall access and revenue.

The growth of urbanisation has led to a need for efficient management of the cities, and smart cities have emerged as a solution. In order to ensure that smart cities can safely and securely accommodate the increasing number of residents seen in urban areas across the globe, it's essential for community stakeholders – government, law enforcement, businesses – to leverage advances in physical security systems. Technology plays a crucial role in enabling cities to improve their physical security, with comprehensive unified security solutions such as video surveillance, access control, ALPR, intrusion and analytics forming a powerful solution that can improve public safety, emergency preparedness, situational awareness and operational efficiency. The key is collaboration and balance. Ultimately, cities that embrace new technologies and collaboration can yield stronger, safer communities that citizens want to live in and do business with ●

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Lack of cooperation between stakeholders can create opportunities for criminal activity, making a city and its people more vulnerable.

Picture credit: Eric Seals