



TIME TO GET SMART

Paul Dodds explains how collaboration can give cities of the future the advantage when it comes to security

Cities everywhere are growing at an exponential rate. More than half of the world's population lives in cities. By 2030, it is predicted two out of three people will be living in an urban area. To manage this influx of residents, city agencies are looking to evolve the urban landscape and make daily life more efficient. They want to boost productivity, encourage economic growth, attract businesses, deliver better public services, streamline transportation, and do it all in a way which is both sustainable and affordable.

There's one catch – all of this is contingent upon security. After all, a smart city is one that is safe. To

create an urban environment where everything flows smoothly, city agencies must be able to quickly spot and handle any situation. This effective response ensures that everyday life can go on with little interruption.

This is where technology comes into play. Cities are evolving to become smarter by adding a growing number of connected sensors such as cameras, in-ground systems, street lights, etc. to their networks. These added 'sensors' and systems are made possible by the Internet of Things (IoT), which is proliferating in tandem with other advancements, such as cloud services and artificial intelligence. These innovations enable cities to not only expand connectivity across systems and devices, but also foster greater levels of

Open-architecture and advanced IP systems help cities nurture stronger partnerships between public agencies and private companies

collaboration between all entities that make up the city. Using these technologies, every part of the city from law enforcement and transit authorities to small businesses and schools can dismantle long-standing siloes, share intelligence and pool resources to collectively become more efficient. The evolutionary collaborative model allows smarter, safer and more sustainable cities to progress.

ESSENTIAL OBJECTIVES

These technological advances and collaborations do not happen overnight. Cities and municipalities must map out a long-term strategy that incorporates many steps. This article will discuss essential objectives that cities need to agree on, to take full advantage of new cutting-edge technologies. It will also show how large and small cities can use collaborative models to build smarter, safer, and more sustainable spaces.

If a city wants to evolve to become a smart city, officials need to understand that city-wide security is no longer the sole responsibility of just law enforcement. Ensuring that residents and businesses feel safe and secure in their growing cities requires a collective effort from multiple city stakeholders, including local Government, community groups, city planners and private businesses.

THERE ARE ABOUT 100 SMART CITY PROJECTS UNDERWAY NOW ACROSS THE GLOBE

The process begins by assembling all stakeholders at the same table. While bureaucratic red tape and a 'We've always done it this way' mentality can hinder these crucial meetings, it is imperative for these groups to sit down to discuss the necessary investment in more collaborative and connected technologies. Only then, will the city arbiters begin to realise that there are in fact many common objectives between them, and with the right technologies they can all expect to benefit. This includes distributing the costs between city departments and even building partnerships with private businesses to help fund security investments.

For example, when there is a big sports or cultural event taking place in the city stadium, many entities get involved. The stadium security team is on high alert. Security staff are stationed in control rooms and around the venue, monitoring everything from the car parks to the supply chain of vendors servicing the stadium and the entrances, exits and seats. It is also very common for police to setup their own remote monitoring stations outside the venues to keep an eye out for suspicious activity. Transit authorities also maximise all their resources to prepare for the influx and movement of visitors and local citizens alike, to ensure everyone has a quick and stress-free journey to and from the event venue. This is one simple scenario where all three entities can share access to video surveillance cameras and work together to streamline and secure an event affecting all parts of a city. By sharing the same views, each entity can effectively do their job, while staying on the same page to coordinate fast response in the event of an unplanned incident.

To enable this level of collaboration, cities must invest in the right technologies. Sharing information requires advanced, open-architecture IP-connected platforms. These solutions provide immense flexibility, allowing agencies to re-use existing investments and migrate to newer technologies over time. This means they are free to build a solution that meets their needs and budgets now, and in years to come. Cities can add IoT devices and custom technology of their choice, unify other systems such as video, access control, analytics, intrusion, or intercom in one platform and stay open to new innovations as they come to market.

These new, advanced solutions also provide cutting-edge capabilities that enable sharing of information, on a permanent or 'as-needed' basis. This facilitates partnerships between city agencies, as described in the scenario above, and even helps establish more collaborative relationships with private businesses. For instance, a local business could grant law enforcement access to specific cameras. In the event of criminal actions or other emergency, police officers can access video in real-time. This allows them to have visual accuracy to see what is happening and dispatch first responders to the situations in a way that is faster, more effective, and safer for officers.

Investigations can also be simplified. Officers no longer need to spend hours driving around to collect video evidence or store sensitive information on USB drives. Instead, new cloud-enabled solutions allow organisations such as schools, hospitals or retailers to build digital case files and selectively and securely share evidence with law enforcement officers, attorneys, insurance adjusters, or private citizens (in compliance to local 'Access to Information' laws) via email, so they can close cases faster.

UNDERSTANDING THE ENVIRONMENT

There is much more to these innovative technologies that cities are adapting than the fundamental monitoring of public spaces and physical security sensors alone. Cities can leverage the data collected by advanced solutions to better understand their urban environment. By using these platforms to harness intelligence and take a more data-oriented approach, cities can develop new infrastructure improvements or make critical adjustments to facilitate the flow of city dwellers, traffic and commerce. With access to information, city planners might identify a need to widen bike lanes or add an additional exit to enter or exit a motorway. Or, they might discover that there is enough on-street parking to satisfy demand and decide to convert an existing parking garage into green space to help improve liveability and reduce carbon dioxide emissions.

Cities are committed to installing smart technologies to enhance safety and liability to emerge a modern 'smart city'. In fact, some reports estimate that there are about 100 smart city projects underway now, in countries all over the world.

One of the most impressive and publicly showcased projects is from the city of Detroit, Michigan in the United States and its successful Project Green Light.

Several studies show that violent crimes tend to be clustered around venues which are open late.

In Detroit specifically, a quarter of violent crimes reported between 10pm and 8am occurred within a 500-foot radius of a gas station or convenience market. To reclaim their city at night, leaders and law enforcement officers appealed to local businesses to get involved with the public-private Project Green Light. Businesses that wanted to participate agreed to purchase and install the cloud-based video surveillance system, Genetec Stratocast. The solution is ideally suited for small businesses, allowing owners to easily monitor video from anywhere. Under Project Green Light, business owners could also opt to share their video streams with officers at the Detroit Real Time Crime Center (RTCC).

REDUCTION IN CRIME

Since the program launched in January 2016, violent crime has gone down by up to 50 percent in some active areas. Police officers no longer spend hours or days trying to retrieve video from older, sometimes faulty digital video recording (DVR) systems, interviewing witnesses and collecting information that lead to arrests. Instead, if there is an issue at one of the Green Light locations, the police department is immediately notified and can pull up real-time video at the location. RTCC operators can then dispatch a patrol car and use a high-definition video to share details of what's happening with responding officers. Overall, it helps the city solve crimes faster. In many cases, this project also helps to deter crime when participating businesses install a green strobe light outside their location to showcase their partnership with Project Green Light.

Another notable example is Dacorum Borough Council in the United Kingdom. Previously, the Borough's CCTV team was working with many old analogue systems that were very limited and ran separately on different computers. After upgrading to an IP security platform, they were able to manage

170 cameras through a 200km² area from a single central location. However, only half of those cameras are borough-owned. The capabilities of the system allowed the team to additionally securely monitor cameras from other independent entities such as a senior's residence, homeless shelter, recycling depot, caravan carpark, and retailers.

More than that, the team collaborates with local police much more effectively. When required, Dacorum Borough Council shares access to the video with the Hertfordshire Constabulary. Having access to the cameras from the police headquarters proved invaluable when Her Majesty Queen Elizabeth II visited the borough. Five temporary wireless cameras were added to Her Majesty's route, and all relevant cameras were federated back to police headquarters to strengthen collaboration.

As more people move into urban centres, cities have the obligation to seek out new ways to become

CLOUD SOLUTIONS MAKE IT POSSIBLE TO SECURELY SHARE EVIDENCE WITH ENFORCEMENT OFFICERS

safer and efficient. The first step is getting everyone to the same table to identify common objectives and invest in modern technologies that facilitate sharing and collaboration. Open-architecture and advanced IP systems help cities nurture stronger partnerships between public agencies and private companies. These newer solutions allow them to evolve their operations over time by staying open to future advancements and make valuable improvements by gaining a better understanding of their environment. All of this helps cities build smarter, safer and more sustainable communities, where businesses, residents and visitors can thrive and enjoy life ●

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Picture credit: Genetec

RTCC operators can share video with responding officers