ENHANCING PUBLIC SAFETY

Considerations for building
Safer, Smarter Cities

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As we look to a future where the rate of change will only increase, cities seek improved ways to guide the everyday flow of information, commerce, and—most importantly—people. Genetec and Intel work with cities, law enforcement, emergency management, and local governments to help protect our everyday lives.

Bob Carter

**COMMERCIAL HEAD, JUSTICE & PUBLIC SAFETY AND CITIES
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Public safety in cities is on the cusp of quantum improvement with the support of disruptive new digital technologies. Genetec and Intel have the cutting-edge toolkit to support the effort to improve the safety and security of citizens across the globe.

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⊡ **Smart City IoT Solutions From Intel**

⊡ **Genetec for Cities**

OVERVIEW

Today, greater than half of the world's population reside in urban areas, including densely populated cities. In fact, the proportion of the world's population living in urban areas is expected to increase from 55% in 2018 to 68% in 2050.[1] Looking back to our recent past, only 30% of the global population was living in urban areas as of 1950.[2] This boom in urbanization is changing the ways that we live, conduct business, access education and require public services. The sheer rate of unplanned migration can be a strain on aging infrastructure and the people who work to keep citizens safe in cities.

Impacts for Public Safety

The importance of public safety is evolving as cities continue to grow. Today's public safety agencies are required to do more than just react to situations-in-progress; they play an active role in creating a safe, welcoming environment for citizens. In response to communities' evolving needs, public safety agencies are taking a proactive approach to developing strategies for managing everyday operations, public events, and emergency situations.

World urban and rural population to 2050

Source: OWID based on UN World Urbanization Prospects 2018 and historical sources

To enhance public safety and build trust with the community, forward-thinking city leaders are seeking improved ways to protect people, critical infrastructure, assets, and facilities while improving operational efficiency across multiple departments and gaining insights to be more responsive to community needs. As more than half of the world's cities with a population of more than 300,000 people face a high risk of exposure to at least one natural disaster, cities are also looking at how to become more prepared for—and more resilient after—adverse events.[3] Forward thinking leaders are striving to evolve to smarter, safer cities and ultimately improve the quality of life of their citizens.

What Are Smarter, Safer Cities?

To live, work, play, socialize, and raise families in today's large and complex cities, citizens should feel safe and secure. 'Smarter' cities are equipped with the tools required to address the issues that are important to citizens today, while ensuring resiliency through increased capacity to recover quickly from negative events or natural disasters. Safer cities attract business, foster innovation, and provide unmatched opportunities to create stability for sustained growth. The hallmark of a smarter, safer city is a well-connected area that uses available data to improve government services and the overall quality of life for citizens. City leaders worldwide are adopting technologies and best practices to improve communications between departments, gain greater access to available data sources, monitor high-crime areas, improve emergency preparedness, and enhance resilience.

A confluence of technological advancements is enabling city leaders to modernize infrastructure, including Information & Communication Technologies (ICT), Internet of Things (IoT), Machine Learning (ML), computer vision, 5G networking, and cybersecurity. Smart technologies also can enhance urban disaster resilience by significantly improving preparedness and the capacity to quickly recover from the impacts of natural hazards. These advances in technology can ultimately allow public safety and city officials to tap into the wisdom of residents, visitors, and businesses through a variety of existing channels, including 911
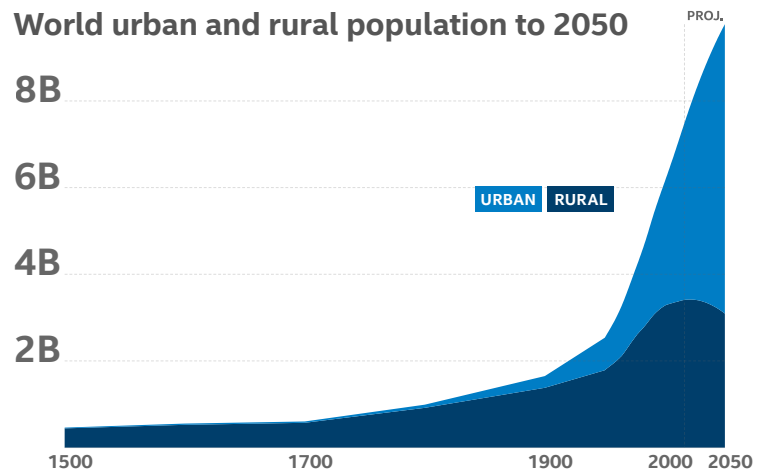
1 United Nations, World Urbanization Prospects, 2018 Revision
2 United Nations Economic and Social Counsel, 2018.
3 National Academy of Engineering. The Promise of Smart and Resilient Cities, 2018.

calls, social media, and privately owned cameras. The shared data can help public safety and city leaders as they drive to improve emergency response and quality of life for citizens. With city populations on the rise, urban planners, municipal governments, and businesses have important decisions to make regarding safety and security. Intel and Genetec have a combined portfolio of cutting-edge technologies and solutions that are the forefront of public safety.

With decades of experience delivering state-of-the-art technology, Intel and Genetec power every area of law enforcement, emergency management, critical infrastructure, and city government—from sensors at the Edge, to the network, to the cloud, to insights. Intel, Genetec, and a vast set of ecosystem partners are working together to improve public safety and help cities get smarter and more connected to enhance the daily lives of citizens.

This booklet provides an overview for how city and public safety leaders can develop smarter, safer city strategies for public safety. These strategies bring together solutions that help cities improve emergency preparedness, provide first responders and law enforcement with greater situational awareness, and intelligently manage multiple aspects of daily life in the city, including traffic, transportation, and infrastructure. With these advances, cities can achieve the ultimate goal of being a safer place where citizens can thrive.

OPPORTUNITY FOR SAFER, SMARTER CITIES

Today's city leaders are embracing the concept of a smarter, safer city through efforts and initiatives that provide security, improve traffic flow, and enhance sustainability while helping to smooth operations and positively impact quality of life in modern urban centers. This builds on the concept of a smarter city which includes data gathering, analysis, and cross-agency collaboration being key components of city management.[4] Safer and smarter cities attract and retain residents who otherwise might opt to commute from a nearby suburb, live and work in a different city, or reside in a rural community. Achieving this vision requires planning, communication, and collaboration by government officials, agencies, municipal service providers, and community leaders. Opening lines of communication and breaking down department silos helps city/agency administrators gain access to valuable data that influences planning. Community leaders can share concerns and learn how their data will be used—and how their privacy will be protected across three key areas as discussed in the following section.

LAW ENFORCEMENT

Public spaces & campuses

Public events & crowd management

Transit safety (rail, subway, air, bus, ferry)

Transportation safety (Airports, ports, intelligent road safety)

EMERGENCY MANAGEMENT

Emergency preparedness

Climate change (natural disasters in urban areas)

Terrorism

CITY GOVERNMENT

Cross-dept and community connection

Cities, parishes, mayors, aldermen communities

Agencies, hospitals, schools

Public health

Reimagining Law Enforcement

Community policing requires cooperation among police, citizens, and decision-makers in order to forge public-private partnerships that combat criminal activity. By making better use of data and technology to increase transparency and break down informational barriers between law enforcement and citizens, communities can collaborate to identify needs and establish best practices to maintain public safety. Patrol officers can be seen walking in public spaces

Safer working conditions

Reduced paperwork

More time in community

Greater job satisfaction

where large groups gather, on campuses, and around mass transit locations to create a sense of support and protection. Foot and bike patrols allow officers to engage with citizens in non-emergency situations, building trust and gaining insight into the community. Law enforcement also provides security for public events and engages in crowd management to ensure the safety of attendees.

Law enforcement agencies can use technological innovations such as 5G, IoT, and ML to modernize their core technology and infrastructure, leading to safer working conditions for law officers and improved

4 IHS Markit. The Safe City: Assessing Opportunities and Challenges in a Budding Security Concept. 12 Dec 2018.

results, such as spending more time on the streets with members of the community. For example, a public safety system can alert an officer responding to a call to be cautious because a dangerous person lives at the address, or that drug activity has been recorded there previously. This base knowledge can reduce the risk of potential escalations, improving safety for both the responding officers and area residents. IoT technology can be used to improve basic police procedures such as arrests and booking, reducing time spent on paperwork. This has the capacity to increase both job satisfaction for the officers and to improve community relationships and promote collaboration with the police force.

CUSTOMER SPOTLIGHT

City of St. Louis

Challenge: St. Louis Real Time Crime Center chose Genetec to unify their RTCC operation, bringing sensors (video, LPR, gunshot) and data (CAD/RMS) in to one common operating picture to improve decision making and support. This strategic decision support system, Genetec Citigraf*, is also integrated in to St. Louis's digital evidence management system, Genetec Clearance*, creating a cohesive end to end solution for improve operating efficiency.

Solution: St. Louis RTCC chose Genetec* Security Center, the unified security platform from Genetec which includes ALPR, video surveillance, decision support and evidence management systems. They also use Genetec Citigraf*, a core software that can aggregate and analyze real-time and archived data from multiple systems, including gunshot detection, Computer Aided Dispatch systems (CAD), ALPR (Automated License Plate Recognition) and video management systems (VMS).

Results: Between June 2015 and November 2019, the St. Louis RTCC assisted police officers in making 1830 arrests which resulted in 4500 criminal charges, and helped officers recover over 1000 stolen cars and seize 500 illegal firearms. "This technology has become a force multiplier for our department, helping us increase situational awareness, both from an investigative standpoint and in real time." –Captain Feig, St. Louis PD.

Enhancing Emergency Management

To protect our communities, emergency management leaders seek to keep their response teams well informed about situations-in-progress. By coordinating first responders through a common framework and deploying tools that efficiently gather, analyze, and associate critical information in a timely manner, public safety agencies can optimize response times and help protect first responders. Today's city leaders are looking to ensure emergency response coordination across city departments and agencies to keep citizens safe from a range of risks, including public emergencies, natural disasters, crime, and terrorism. In addition, climate change has increased the frequency and impact of natural disasters in urban areas worldwide, as cities are often located in proximity to bodies of water or rivers which are now more susceptible to flooding.

Safer working conditions
Improve response time
Dispatch based on need, not call order

Improved resource planning can reduce crime rates and improve emergency response times in public spaces, in crowds, and on campuses. A common framework can incorporate citizen reports from 911 calls, social media, and other resources to provide additional context to first responders during a situation in progress. For example, warning first responders about hazardous materials in a building, or providing detailed information regarding the location of 911 callers within a building, enabling them to provide assistance faster. Incoming calls can be triaged based on severity and location, dispatching ambulances to urgent calls and routing them to a specific healthcare facility. Non-emergency calls may be directed to use a ride-hailing service instead of an ambulance.

Transforming City Governments

Maintaining public safety is a top priority for city government. To ensure the safety and happiness of citizens, municipal governments must implement solutions that connect devices and coordinate communication across multiple agencies. With a common operating picture, city government officials can achieve a comprehensive understanding of daily operations, increase situational awareness, and optimize strategies to improve emergency preparedness.

Deeper understanding of citizens' needs

Improved operational efficiency

Increased productivity

Collaboration plays a key role in meeting residents' needs. Smarter, safer city governments work with both internal agencies and external stakeholders, such as hospitals and schools, to identify the broader needs of the general public and develop appropriate solutions. Localized public health issues, for example, a flu outbreak, also require significant coordination between agencies to ensure care is available, the public is kept informed, and steps are taken to eradicate—or at minimum, reduce—the threat to residents.

By building a deeper, data-driven understanding of what is happening in a city or parish, government officials can develop more effective public safety strategies, improving operational efficiency and increasing productivity. Systems can pull data from citizen reporting (e.g., social media and 911 calls) to identify potential issues and take preventive measures. Coordination between cities and private organizations, such as full system access to private cameras or lockdown facilities also help complete the picture. This full view empowers governments to make better decisions with limited budgets, assigning resources where they will provide the greatest benefit and impact on the city and its citizens. It also enhances the city's ability to prepare and plan for, recover from, and more successfully adapt to adverse events like natural disasters.

CUSTOMER SPOTLIGHT

City of New Orleans

Challenge: Home to 400,000 residents and host of 1.2 million visitors during Mardi Gras, the city of New Orleans is the most populous city in Louisiana, United States. With outdated and limited coverage camera systems in the city, and two shootings that garnered national attention, the mayor decided it was time to launch a Citywide Public Safety Improvement Plan.

Solution: The city of New Orleans teamed up with Genetec to deploy a new citywide public safety system and the construction of a near real-time Crime Center (RTCC). Powered by Genetec* Security Center and OmniCast* video management solution, the RTCC helps speed up emergency response times and communications to improve overall public safety.

Results: With the goal of protecting its citizens at peak times, the city now can analyze evidence from more than 325 cameras and 100 Automatic License Plate Recognition (ALPR) cameras, which can be viewed and extracted from the RTCC. Information from 911 calls automatically triggers nearby cameras to provide an operator more information, faster. The solution has helped detectives and police in 70% of cases by providing relevant video and information and saving the department more than 2,000 hours of manual labor.

TECHNOLOGY TRENDS

By connecting people, process, data, and things with today's innovative technologies, cities can take advantage of a tremendous opportunity to enhance public safety. Deep learning, IoT, Edge computing, crowdsourcing, and 5G networking can fundamentally change law enforcement, emergency management, and city government operations. These technologies open new possibilities for connecting agencies in the most challenging areas of operation and enhancing situational awareness and response capabilities across the city.

Deep Learning

Deep learning helps reduce crime by assisting law enforcement in assessing situations and enhancing public safety. Optical sensor technology can help enable public safety officials with situational awareness and positive response in multiple scenarios including crowd control, traffic and transportation, civil unrest, identifying missing persons, and for emergencies in crowds or at large events. Additionally, deep learning can also be used as a forensic tool to review video footage or evidence. Deep learning systems typically include optical sensors, DL inference, and VMS for incident management, visualization, analytics, and search.

IoT Sensors

Running headfirst into a blazing fire is a total assault on the senses like no other—it is extremely difficult to see what's in front of you, hear over the roar of flames, and breathe with all the smoke. Yet, firefighters do just that every day. And the more time they spend in the middle of a blaze, the higher susceptibility they have to health problems. Wearable devices with embedded sensors can collect and analyze on-scene data like temperature, gases, and other hazardous environmental factors firefighters might not independently recognize in an effort to fight fires more efficiently and reduce exposure to extremely harmful environments. The sensor data can be used to make intelligent recommendations specific to roles within the firefighting team and offer suggestions and patterns on how to efficiently use resources during such a dangerous and stressful incident. This has enormous potential to help save firefighters' lives and reduce the amount of time they are in a high-risk and precarious environment. Wearables can also help law enforcement and emergency medical services teams stay mobile, going wherever emergencies take them.

Crowdsourcing

With crowdsourcing, cities can tap into the collective intelligence of the public to complete a task or solve a problem, creating a means for collaboration between cities and citizens. While social media and texting apps let citizens report crimes and other issues related to public safety, they may not always provide features needed to make a report. New platforms including voice-to-text capabilities can improve communications, and even incentivize citizens to report incidents. When agencies respond back to acknowledge receipt, it further incentivizes citizens to engage because it builds a trust that their contributions result in action.

Cybersecurity

Adopting IoT sensors and applications helps cities enhance public safety and improve city services in many ways, but IoT deployments must be secure from the sensor to the cloud, including all hardware and software. City leaders, chief information officers (CIO), and chief security officers (CSO) are also seeking the right technology to help meet evolving requirements governing IoT cybersecurity measures. The strongest foundation for a secure IoT is integrating security capability at the outset. IoT and Edge solutions should prioritize security as their foundational element, with cryptography built into chips to enable strong identity and data protection. On top of security in the compute device itself, IoT and Edge solutions should employ advanced hardware and software security to prevent harmful applications from being activated on the device or from taking down the network. Each component of a city's public safety solution should

meet the latest cybersecurity standards and enforce best practices out of the box to ensure a standardized level of protection. Cities should also use hardening tools to help rapidly secure units in the field against new vulnerabilities. Integrating these multiple layers of security at the outset enables trusted data necessary for successful IoT deployments.

5G Technology

Compared to 4G, 5G-transformed networks will deliver 10X less latency, 50X more speed, and 1000X more capacity.[5] In an emergency situation, seconds save lives. The better emergency services can understand events as they unfold, the faster they can coordinate and respond. Using data gathered by sensors in city-wide infrastructure, and then shared over 5G networks, those in charge of public safety will be able to access near

real-time information on situations around the city. Using augmented reality to bring together and enhance video, sensor and data feeds, emergency response leaders will be able to improve decision making, and better coordinate fire, ambulance, and police services on the ground. 5G-transformed networks with gigabit speeds and Edge computing will make cities run smoother, safer, and smarter with near real-time, data-backed insight.

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5 https://thepmgco.com/guide/ces-2019-5g-trends/

CUSTOMER SPOTLIGHT

Watertown Police Department

Challenge: The city of Watertown, Massachusetts, has seen a large increase in population. At only 4.2 square miles, the town has 32,000 citizens. To keep up with the population increase, the Watertown Police Department had to scale. With 90 people employed, the department purchased a new, all-inclusive public safety building. When selecting and configuring a security solution for this large of a building, the department required a robust platform to meet high-intensity and legally dictated requirements and operate flawlessly when placed under duress.

Solution: The department worked with system integrator SIGNET Electronic Systems to install the Genetec unified security platform, Genetec* Security Center, which combines the Omnicast* video surveillance and Synergis* access control into one solution. The system connected to 42 video cameras and 72 access-controlled points, resulting in 24/7 monitoring of prisoners and interview rooms to keep employees safe, and threats to a minimum. The Synergis* access control system within Security Center manages access to dispatch, administrative offices, public spaces, the booking area, and the evidence room.

Results: The implementation of Security Center has been a win for the Watertown Police Department: security personnel and admins can now monitor foot traffic in and outside the building, provision stronger security permissions, and easily access data that is relevant to them. Beyond security, Watertown Police Department has utilized Security Center to develop integrated solutions and address other challenges the department faces, such as revamping interview recording procedures.

SOLUTIONS

In order to create and maintain a thriving city, urban planners, deputy mayors, city managers, city CIOs, chiefs of police, security experts, aldermen, and community leaders must work together to achieve true public safety. And a cornerstone of this open and collaborative approach is the development and implementation of multipurpose technology. Forward-thinking technology can provide a platform that facilitates communication and collaboration to improve public safety and support the advancement of the city and its interests. Tools and solutions from Intel and Genetec extend beyond physical security to contribute to the betterment of the daily lives of citizens.

Intel® Vision Products

With Intel® Vision Products, a portfolio of acceleration tools designed specifically for ML at the Edge, smarter cities can take advantage of hardware and software to help them make better decisions in a timely manner. Intel® technologies enable smarter cities to innovate ML models and DL inferencing that are high performance, low power, and easy to scale. Intel now offers the industry's broadest portfolio of assets to cover ML use cases from the camera to the cloud:

- **Intel® Xeon® scalable processors:** powerfully designed to handle the broadest range of ML workloads including vision and deep learning with new DL Boost acceleration.

- **Intel® Core™ processors:** offer unprecedented responsiveness with superior CPU and media performance, powerful security, and a range of power options to boost edge-to-cloud IoT designs.

- **Intel® FPGA:** near real-time, programmable acceleration for deep learning inference workloads.

- **Intel® Movidius™ Myriad™ VPU:** cutting-edge vision processing units (VPUs) for deploying on-device neural networks and computer vision applications at ultra-low power.

- **Intel® Vision Accelerator Design products:** to meet the demands of deep learning and computer vision applications at the Edge and to enable solution providers and their customers to scale performance, power, and price to better meet the solution requirements. Based on Intel® Movidius™ VPUs and Intel® Arria® 10 FPGAs, the Intel® Vision Accelerator Design products provide powerful deep neural network inference for fast, accurate video analytics.

- **Intel® Distribution of OpenVINO™ Toolkit:** comprehensive toolkit for quickly developing multiplatform applications and solutions that emulate human vision.

- **Intel® DevCloud for the Edge:** One comprehensive toolkit for deep learning and traditional computer vision that developers can use for quickly developing applications and solutions across the Intel Vision portfolio that emulate human vision.
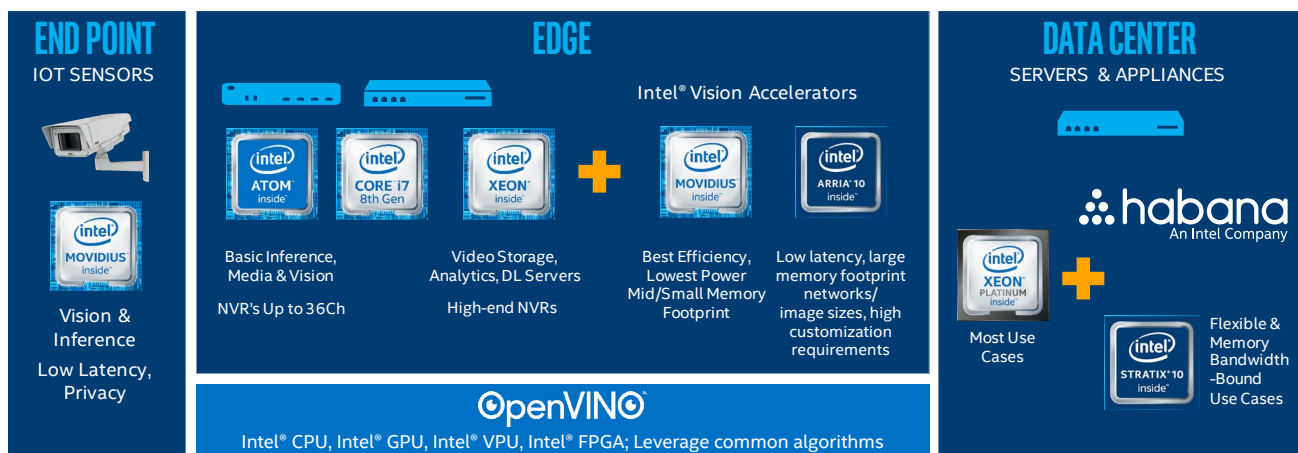
Intel: Taking ML to the Network Edge

As smarter, safer cities connect more devices to the internet and the need for near real-time intelligence grows, more ML will move to the Edge of the network to avoid the need for data transfer to the cloud. Intel offers hardware and software tools to help smarter cities deploy ML on Edge devices, including:

Intel® Distribution of OpenVINO™ Toolkit is software designed for deploying neural networks for video across multiple types of Intel® hardware, from data centers to devices at the Edge.

Intel® Movidius™ VPU push the boundaries of what's possible with ML at the Edge with extreme low-power deep neural network (DNN) inferencing on the device.

For more information on solutions for AI and ML at the Edge, visit Intel® AI in Production.
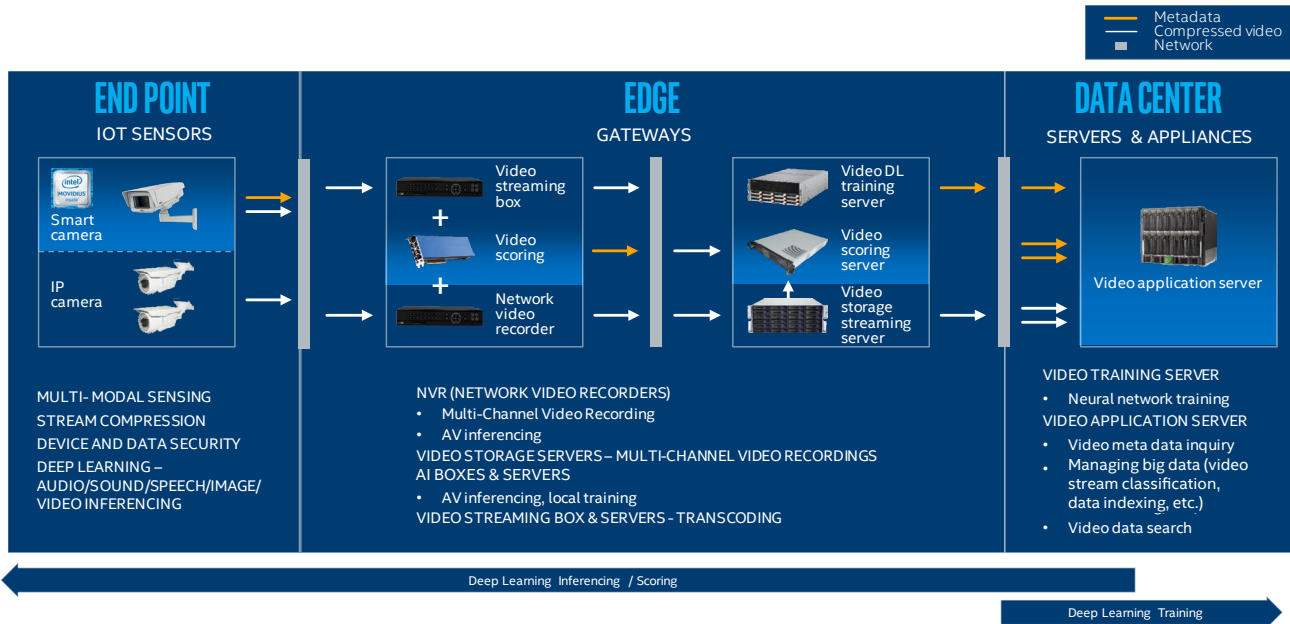
Intel 5G

With the move to 5G, Intel-powered networks will help smarter cities become ML ready—with the compute power to handle networking, cloud, and ML workloads. The **Open Network Edge Services Software (OpenNESS) Toolkit*** offers cloud and IoT developers an easy-to-use toolkit to develop and deploy applications at the network Edge or on-premises Edge locations. With OpenNESS, cities can build and deploy public safety and other Edge applications in 5G with ease. These applications will offer immediate access to data for law enforcement and emergency responders in the field.

Los Angeles Police Department

Challenge: Los Angeles, California, was chosen to host the 2015 Special Olympics World Games. Participants included 6,500 athletes and 2,000 coaches representing 165 countries. It was also estimated that more than 500,000 spectators and 30,000 volunteers attended the games. All events were open to the public and anyone could freely move around throughout the venues of the University of California Los Angeles (UCLA), and the University of Southern California (USC), among others. This created unique security challenges as the Los Angeles Police Department (LAPD) had to rely heavily on cameras and ground officers for situational awareness. They needed a solution that would provide them a single feed across all venues.

Solution: The Los Angeles PD had to build a centralized command post in a vacant police headquarters in LA based on guidelines of a national program called Incident Command Structure (ICS). The only solution on the market that could meet their needs was the combination of Genetec* Security Center, their video surveillance solution OmniCast*, and the Genetec* Federation*-as-a-Service (FaaS). The LAPD leveraged FaaS to connect multiple Security Center systems across venues and monitor more than 400 video cameras. A communication center was also set up at each venue, where the Los Angeles PD worked alongside local security and fire teams to ensure a safe and positive experience for athletes and spectators.

Results: The goal at any Special Olympics event is to keep track and protect the athletes. Genetec* Security Center allowed for operators to quickly pull up relevant camera feeds and conduct forensic searches with ease. The Los Angeles PD could leverage video and rely less on radio, which had its limitations. Key partnerships were formed by maintaining the privacy of certain cameras and regulating the controlled access to systems. Because of the success at the Special Olympics in 2015, the LAPD is looking to expand this process for other key initiatives across Los Angeles as they continue to upgrade their infrastructure.

Genetec

At Genetec, we believe that, in order to create and maintain thriving public spaces, groups, including urban planners, city managers, security experts, enterprise executives, and community leaders, must work together to achieve true public safety. A cornerstone of this open and collaborative approach is the development and implementation of multipurpose technology.

Genetec Unified Platform

Protect people, critical infrastructure, assets, and facilities with the Genetec* Security Center. This unified security platform builds a complete operating picture that provides public safety agencies with enhanced situational awareness, collaborative command and control, and cloud connectivity. the platform combines optical sensing, access control, automatic license plate recognition (ALPR), SIP communications, and smart video analytics within one solution.

- **Security Center Omnicast*** is an IP VMS that provides clear picture of events and empowers quick reaction to threats.

- **Security Center Automatic License Plate Recognition*** (ALPR) is a camera solution that helps law enforcement and commercial and municipal organizations optimize traffic flow and identify vehicles of interest. Powered by Intel® Movidius™ Myriad™ X VPU (Vision processing unit), the Genetec* AutoVu* SharpZ3 camera is among the first specialized in-vehicle ALPR systems in the world to use Intel's latest deep learning. The deep learning capabilities in the AutoVu* SharpZ3 system will enable advanced levels of innovation in in-vehicle analytics, situational awareness, and accuracy.

- **Security Center Synergis* Access Control** is an IP access control system (ACS) that heightens city security and increases readiness to respond to incidents and threats, while leveraging any existing network and security equipment investments.
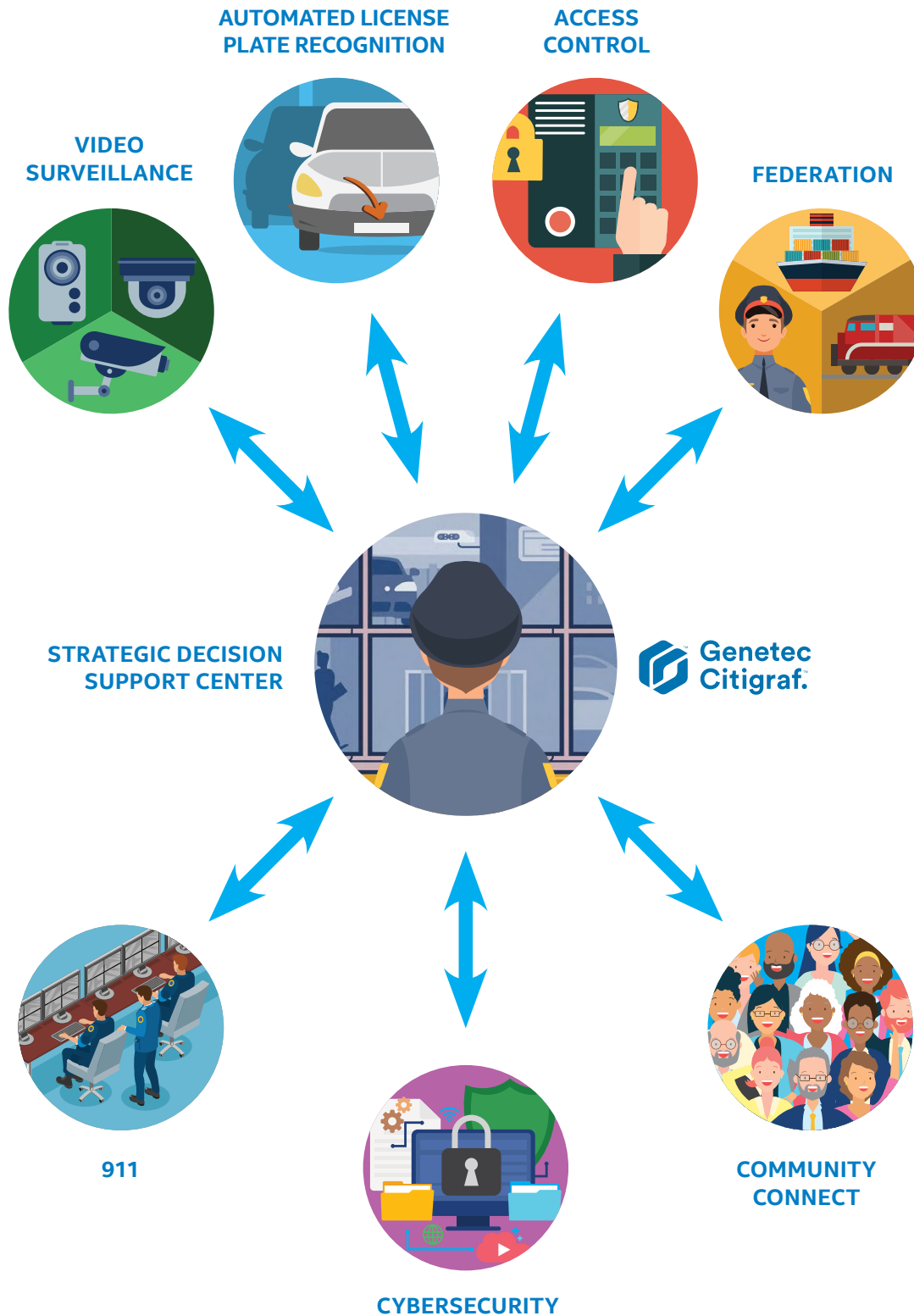
Genetec Collaboration

Simplify collaboration and sharing to promote cooperation between public safety agencies, without sacrificing privacy.

- **Security Center Federation*** helps secure distributed sites by facilitating the centralization of monitoring, reporting, and alarm management operations across distinct systems or organizations.

- **Community Connect*** helps facilitate public-private collaboration with a framework that reinforces community policing and allows law enforcement, citizens, and decision-makers to work together to achieve public safety, economic growth, and operational efficiency.

- **StreamVault***, powered by Intel® Distribution of OpenVINO™ toolkit, is a complete line of secure, ready-to-deploy security infrastructure solutions that help cities design a system that meets their unique project requirements. Streamvault* has a large range of processing power based on Intel® Core™ processor and up to Intel® Xeon® Scalable Processors.

Genetec Public Safety

Safeguard our communities by improving operational efficiency and responsive time with the **Strategic Decision Support Center**. Strategic Decision Support Center is a crime-fighting nerve center that facilitates decision-making through increased intelligence and better understanding:

VIDEO SURVEILLANCE

AUTOMATED LICENSE PLATE RECOGNITION

ACCESS CONTROL

FEDERATION

STRATEGIC DECISION SUPPORT CENTER

Genetec
Citigraf.

911

CYBERSECURITY

COMMUNITY CONNECT

- **Genetec Citigraf*** enables comprehensive response coordination through a decision support system to address the emerging need for increased connectivity between the security and tactical systems of multiple agencies, as well as for timely and correlated information.

- **Genetec Clearance*** provides collaborative investigation management to increase the effectiveness of investigative processes in a cost-effective manner. Genetec Clearance* helps cities manage the chain of custody while ensuring the privacy and integrity of information is maintained, by facilitating secure collaboration between departments, outside agencies, and the public.

- **Crime Intelligence** technology helps to solve law enforcement cases by uncovering patterns and gathering supporting evidence quicker by accessing data from multiple sources and formats in minutes instead of days, dramatically decreasing the time-consuming process of manually collecting and analyzing data.
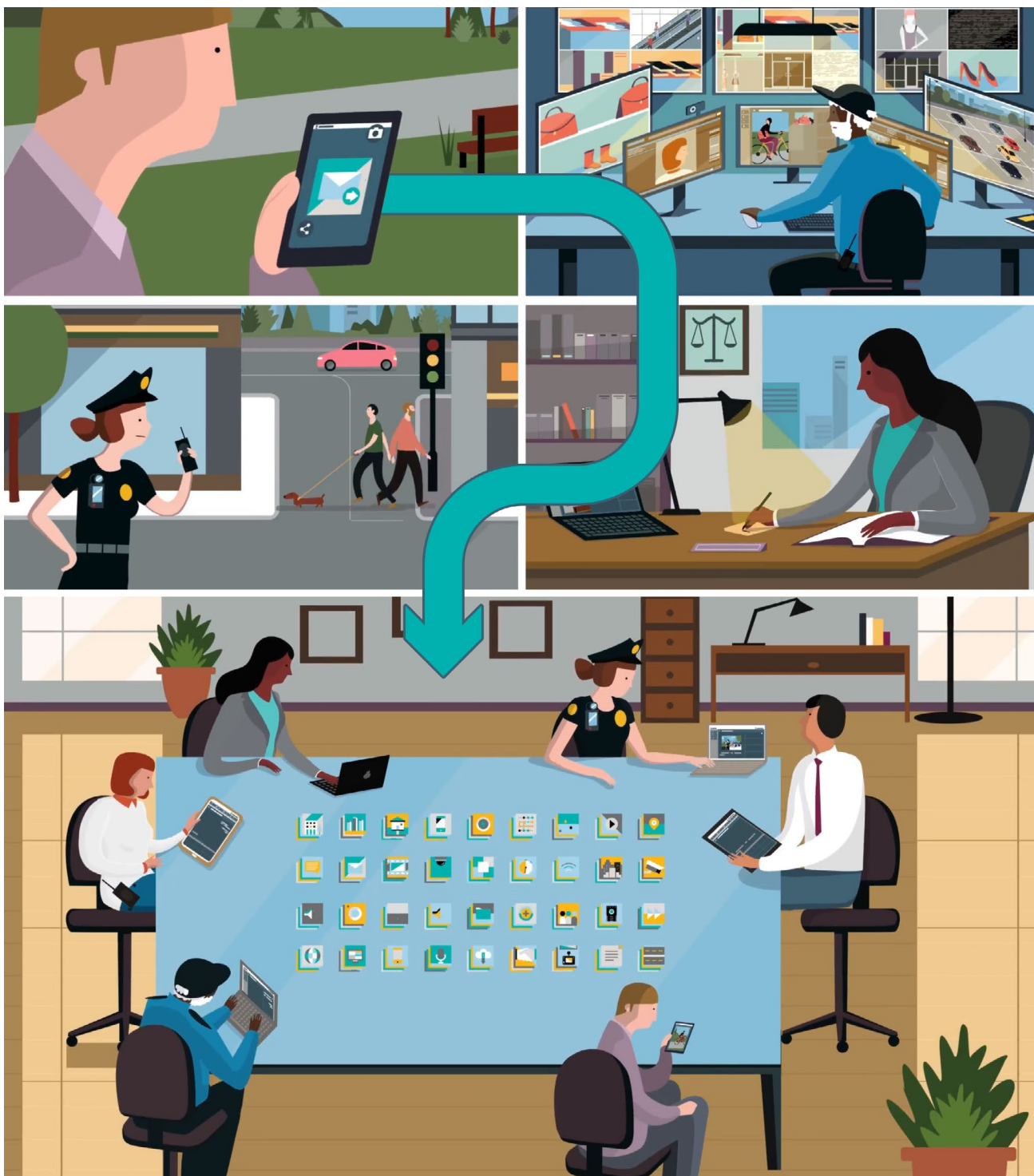
> *Since rolling out Genetec Citigraf, response times from dispatch to 'on-scene' arrival time, have been reduced by 39% and 24% respectively, in our two most at-risk districts. Shootings are down 22% in these districts compared to 2016, and the technology and process will be expanding to more districts. Citigraf is now deployed in our Strategic Decision Support Centers, located in each corresponding police district facilities, and has helped us send a strong message to the community that crime and gun violence get a swift response.*

Jonathan Lewin
CHIEF OF TECHNICAL SERVICES FOR THE CHICAGO POLICE DEPARTMENT, CITY OF CHICAGO

CUSTOMER SPOTLIGHT

Chicago Police Department

Challenge: The Chicago Police Department (Chicago PD) is the second largest in the country, with 22 districts in the city and 12,600 sworn officers across police and other specialized units. They are also home to the largest municipal camera platform with almost 30,000 cameras ranging from gunshot detection to near real-time GPS. With multiple data sources storing information, the department had to access multiple platforms to obtain what they were looking for. This resulted in slower-than-desired response times to crimes and delayed execution. In 2016, the city saw record highs in shootings and murders, prompting the mayor and superintendent to take action.

Solution: To help Chicago PD address these challenges, Genetec prototyped the newest expansion of their product line, Genetec Citigraf*, which unified data into a single platform for collection and management.

Results: Genetec Citigraf* enabled increased accessibility to data and helped eliminate information silos between districts. This resulted in cross-district collaboration and increased efficiency. With information more readily available, the Chicago PD was able to reduce the average response time in their two most at-risk districts by 39% and 24% respectively. Shootings are also significantly lower compared to 2016, down 22%. The investment in new tools and technology had a positive internal effect, as officer productivity and morale increased knowing the city was helping making their jobs safer and lives easier.

WE'RE HERE TO HELP YOU GET STARTED

Leading a city through strategic innovation and transformation is a continual journey and critical to the future of economic growth, citizen engagement, and effective delivery of city services. Defining and executing a smarter, safer city strategy is neither straightforward nor without risks. However, city and public safety leaders can realize significant benefits by transforming their community into a smarter, safer city.

Using experience working with many governments and cities worldwide, Intel and Genetec bring together the right organizations and companies to create the necessary building blocks that city and public safety leaders can use to initiate smarter cities planning. Stakeholder participation and defining clear priorities are essential starting points for building your plan. But to succeed in improving public safety, improving transportation, and protecting privacy of citizens, you will also need a well-supported set of policies and good governance. Effective methods for implementing smart programs, assessing performance, and ensuring continuous improvement can also contribute to success.

The journey to a smarter, safer city can begin with small steps. For example, reaching out to like-minded leaders in your city, and/or public safety agencies and identifying common goals is one way to get started. Another way to begin is with a citywide assessment to identify infrastructure projects that will move your city forward, leveraging smarter city solutions.

This is only a starting point for your journey to a smarter, safer city. At Intel and Genetec, we believe public safety and city leaders can successfully transform their cities by establishing clear priorities, encouraging active stakeholder participation, and ensuring methodical technology infrastructure planning while enabling the right policy and governance. With our Edge-to-Core-to-Cloud solutions and strong partner ecosystem, Intel and Genetec can help bring your Smarter City vision to life.

Take the Next Step

Intel and Genetec are dedicated to helping you achieve your public safety goals. To that end, our companies have partnered to work directly with customers. Our experts are available to meet with your team to discuss public safety technology for law enforcement, emergency management, and city government in a workshop setting.

Contact Kasia Hanson (kasia.l.hanson@intel.com) and Beverly Wilks (bwilks@genetec.com) for more information and to schedule your workshop.

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