



**THROUGH THE USE OF TECHNOLOGY CITIES
CAN SUBSTANTIALLY IMPROVE THE
QUALITY OF LIFE OF ITS CITIZENS
BE SAFER, THE ESSENCE OF BEST CITIES.**





Infusing technology into almost every aspect of the operation of a city is an effort that hundreds of cities around the globe are going through these days. Implementing infrastructure, adopting applications and solving day-to-day problems represents the essence of what an aspiring smart city should do.

After a decade of trial and error, municipal leaders are realizing that the best strategies of the cities include a plan, appropriate people and reliable partners. It is not just installing digital interfaces in traditional infrastructure or streamlining city operations. It is about after a structured plan, using technology and data purposefully to make better decisions and deliver a better quality of life. Most importantly allowing citizens to feel protected and safer where they live.

WHAT MAKES THIS POSSIBLE?

Smart cities put data and digital technology to work with the goal of improving the quality of life. More comprehensive, real-time data gives agencies the ability to watch events as they unfold, understand how demand patterns are changing, and respond with faster and lower cost solutions.

Essentially there are 3 layers that can work together to obtain the best result:

1. Technology base

- Includes a critical mass of devices connected by high-speed communication networks as well as open data portals
- Sensors take constant readings of variables such as traffic flow, energy consumption, air quality, and many other aspects of daily life and put information at the fingertips of those who need it.

2. Specific applications

- Right tools are needed to translate raw data into alerts, insight and actions.

3. Public usage

- The investment and infrastructure needs to be widely adopted representing a change in behavior. Many of them put the users in the driver's seat giving them transparent information that allows for better decision making

Smart cities use data and technology to make better decisions.

30-300

lives saved each
year in a city of
5 million

30-40%

fewer crime
incidents

8-15%

lower disease
burden

15-30

minutes shaved
off the daily
commute

25-80

liters of water
saved per person
per day

20-35%

faster emergency
response times

The result? A more efficient, responsive, and sustainable city... that delivers better outcomes for the people who call it home.
McKinsey Global Institute, Research, jul 2018.

IN THE MIDST OF ALL THE BENEFITS THAT MOST PREPARED CITIES BRING, WHY IS BEING SAFE SO CRUCIAL

TECHNOLOGY CREATES A GREATER STATE OF SAFETY

As city populations rise, so does the risk to public safety. Citizens are more anonymous and criminals more opportunistic. High threat targets, such as high rises and transportation hubs, are clustered and numerous. Criminals are increasingly sophisticated and tech-connected.

Not only are urban targets more attractive, but the range of challenges is intensifying. Cross-border migration, cyberattacks, improved criminal communication and potential terrorism add fuel to the fire.

Technology produces an environment where citizens trust police and local government, economic development can flourish and communities thrive. For agencies, this means leveraging existing technology, interconnecting it more effectively and improving their engagement with the public. From citizens using smartphones to document protests to private companies sharing video with public agencies, city leaders must translate this fusion of information into critical intelligence.

When local governments connect their technology together, it enhances real-time situational awareness, shortens response times and improves outcomes. Cities become safer, citizens more engaged and agencies more empowered. Safer cities are the engine for success, driving economies to flourish and communities to thrive.

While public safety encompasses everything from emergency response to effective safety inspections, anxiety about crime may be the foremost issue for residents of cities with high levels of violence. Technology is not a quick fix for crime, but agencies can use data to deploy scarce resources and personnel more effectively.

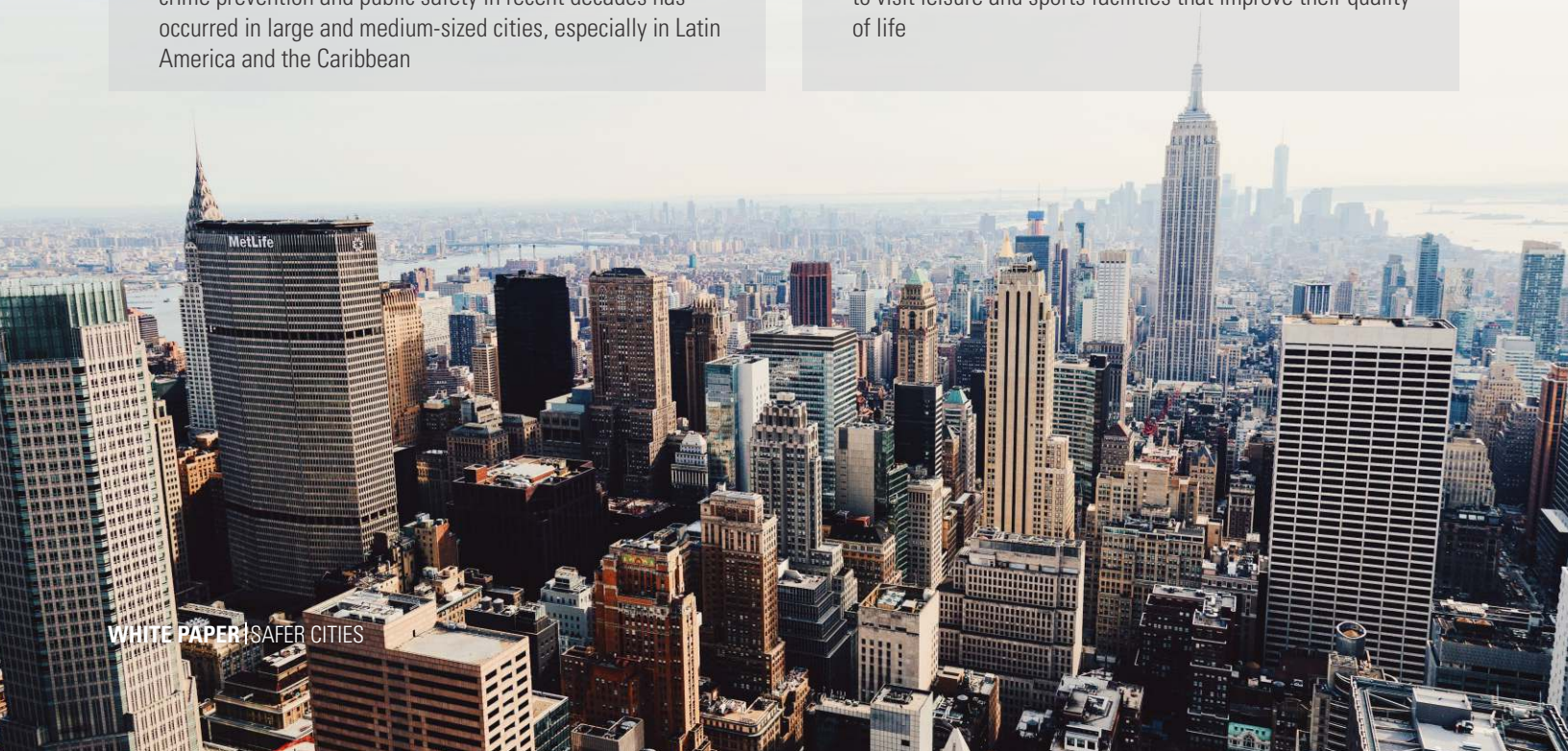
In addition to that, other public safety related issues can also be positively affected such as reduction of fatalities from homicide, road traffic, car theft and other robbery-like issues, gunshot detection. The result: freedom of movement, peace of mind and safety to the overall population.

Why cities?

- Cities are the “epicenter” where policy and practice of citizen security take place.
- Cities are where state and national policies are put into practice
- Cities are natural laboratories of policy innovation to prevent and reduce crime
- Some of the most remarkable progress in homicide reduction, crime prevention and public safety in recent decades has occurred in large and medium-sized cities, especially in Latin America and the Caribbean

Why safer?

- A safer city retains and attracts investment, employment, tourism and a diverse economy
- A safer city strengthens democratic institutions and confidence in elected officials
- Safety generates confidence, reduces cost burdens, and frees resources for other services
- A safer city increases retail spending; citizens are more likely to visit leisure and sports facilities that improve their quality of life



TECHNOLOGY COME TO THE RESCUE

Public safety has a great ally now, unthinkable years ago: smart technology. With an array of advanced apps in their mobile devices connected to well-equipped command centers, law enforcement can effectively protect communities and improve citizens' quality of life.

RELEVANT APPS FOR CITIES THROUGH 2025

- Predictive policing
- Real-time crime mapping
- Gunshot detection
- Smart surveillance
- Emergency response optimization
- Body-worn cameras
- Disaster early-warning systems
- Personal alert apps
- Home security systems
- Data-driven building inspections
- Crowd management

Source: McKinsey Research July 2018

CRIME AND POLICING

Digital tools are revolutionizing urban policing. Real-time crime mapping, for instance, utilizes statistical analysis to highlight patterns, while predictive policing goes a step further, anticipating crime to head off incidents before they occur. When incidents do occur, applications such as gunshot detection, smart surveillance, and home security systems can accelerate law enforcement response. But smart technologies in policing have to be deployed in a way that protects civil liberties and avoids criminalizing specific neighborhoods or demographic groups.

EMERGENCY RESPONSE

Seconds count when lives are at stake, making it critical to speed first responders to the scene of emergencies. Smart systems can optimize call centers and field operations, while traffic signal preemption gives emergency vehicles a clear driving path. A city with an already low response time of eight minutes could shave off almost two minutes. A city starting with an average response time of 50 minutes might be able to trim that by more than 17 minutes.

6 TRENDS THAT ARE TRANSFORMING PUBLIC SAFETY COMMUNICATIONS



TREND 1 – STRONGER INVOLVEMENT BY CITIZENS

More and more agencies are trying to optimize the relationship with citizens through the use of data. Social Media and tools such as Twitter and Facebook are included in the mix of tools used to strengthen the connection with the community. SMS messages to 911 call centers are also part of the strategy to increase the involvement of the public, which not only help the agencies to better do their jobs better but also increase the level of trust in city officials by the community.



TREND 2 – ACCESS TO REAL TIME DATA IN THE FIELD

70% of agencies believe that it is critical for first responders to access real time data in the field. For that to become a reality, agencies need to creatively utilize available resources and integrate technologies despite bigger challenges, such as lack of funding and technical support.



TREND 3 – ACHIEVING INTEROPERABILITY

The ability to communicate and connect with neighboring jurisdictions is key in order to instantaneously expand coverage and reach, thus being able to count on other agencies at moments that matter. Sharing connectivity has never been as critical as now so different agencies can coordinate efforts regardless of their equipment and location.



TREND 4 – COLLABORATING TECHNOLOGIES

When agencies can count on multiple networks, responding to mission critical events becomes a lot more effective. In the past only a small percentage of agencies invested in a LMR network and having an LTE data network represented a dream. Today reality has completely shifted and most agencies are now considering investing in both.



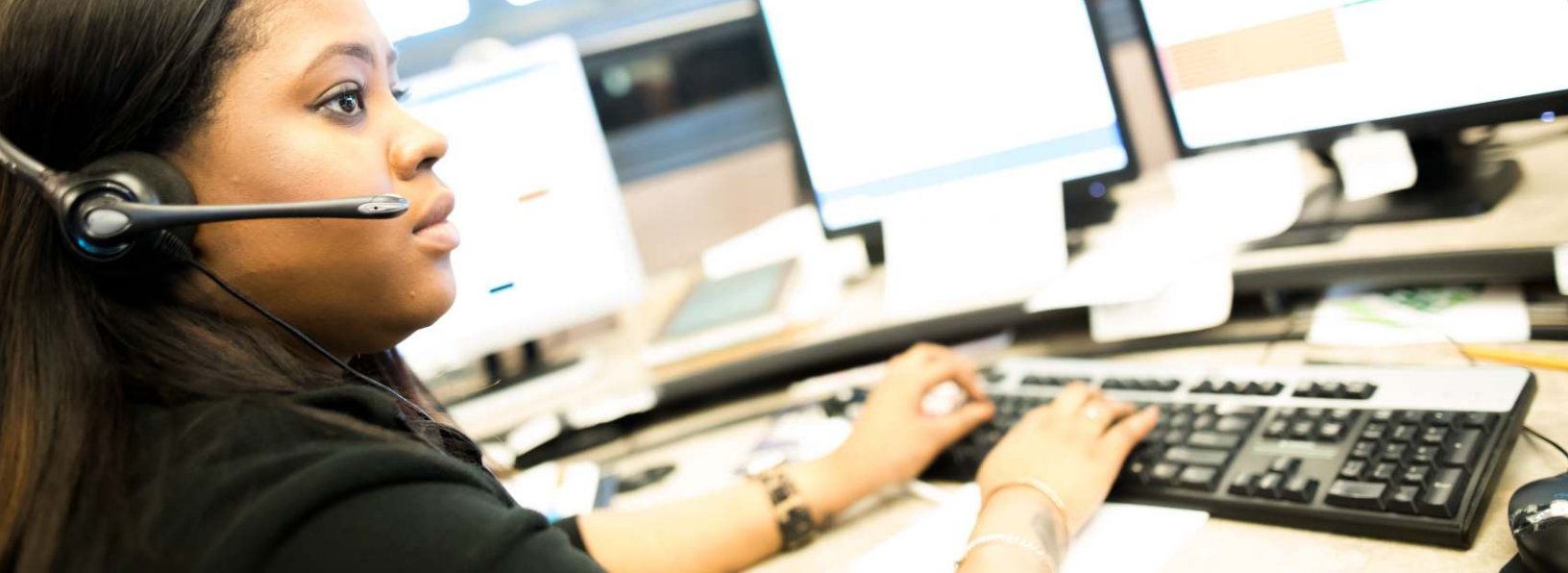
TREND 5 – TAPPING INTO SOLUTIONS THAT ARE TRIED AND TRUE

When resources are scarce and social/political roadblocks are a reality, the construction of a safer city can be significantly challenging. In that case, partnering with the private sector can many times be the answer as synergies can be identified and experience and infrastructure can be leveraged.



TREND 6 – PRIORITIZING TECHNOLOGY INVESTMENT AS A WAY TO FIGHT CRIME

In regions such as Latin America where the need to fight crime is ever present in the minds of public safety agencies, technology investment begun to be a priority. Technology alone won't prevent or eliminate all the violence-related issues but if citizens and officials are united in making it a part of the agenda to representatives and the government in general, the more power to influence decisions they will have.



HOW TO BECOME A SAFER CITY

Combine smart technology and planning with asset development

Safer city technologies help cities get more out of their assets, whether they have extensive legacy systems or are building from scratch. There is no getting around the need to invest in physical assets and maintenance, but smart technologies can add new capabilities as core components are upgraded.

Infrastructure investment once locked cities into capital-intensive and extremely long-term plans based on a static snapshot of how they expected demand to evolve. Now, using the right combination of traditional construction and smart solutions, they can respond more dynamically to how demand is changing.

EMBRACE OPEN SYSTEMS TO SUPPORT INNOVATION AND INVESTMENT

City government does not have to be the sole funder and operator of every type of service and infrastructure system. While implementing most of the applications we examined would fall to the public sector, the majority of the initial investment could come from private actors. Public financing may be reserved for only those public goods that must be provided by the government. Furthermore, more than half of the initial investment that needs to be made by the public sector would generate a positive financial return, which opens the door to partnerships.

PUT PEOPLE AT THE CENTER OF EVERYTHING

Technology can change the relationship between municipal governments and the people they serve. Constituents can engage in two-way conversations with public officials and agencies via social media and interactive mobile apps. Cities can use technology to take the pulse of public opinion on a wide range of issues, using public feedback as the basis for making continuous improvements to the system. To that end,

safer city efforts need to be transparent and accountable to the public. Engaging residents from the outset, not just after specific applications suddenly appear, can secure community buy-in.

INNOVATE ACROSS THE AGENCIES

Getting safer doesn't happen by itself. Cities need to give their agencies the leeway to innovate. Adding civic tech talent, at least in selective areas, is a top priority for municipal governments. Even if they rely on external providers, they have to be able to understand and direct the programs in detail. Many places have started by adding new roles such as chief digital officer or establishing cross-disciplinary smart city units.

GET CYBERSMART TO PREPARE FOR NEW TYPES OF PRIVACY AND SECURITY RISKS

Experts worldwide are concerned about cybersecurity vulnerabilities in smart cities. The Internet of Things provides extensive "surface area" for hackers to attack. Compromised security systems, medical monitors, and self-driving cars could pose life-and-death risks, and the consequences could be severe if bad actors shut down a city's power grid or water supply.

Cities need to prioritize their most sensitive assets and surround them with the most rigorous defense mechanisms. Mission-critical IoT applications should have high levels of security before they are adopted on a large scale. Cities will have to develop cybersecurity expertise, and stay abreast of the constantly evolving threat environment. They will need to prepare for how to respond to breaches—including not only technical remediation but how they will maintain calm and how they will communicate.

MOTOROLA HELPS CITIES TO CONNECT

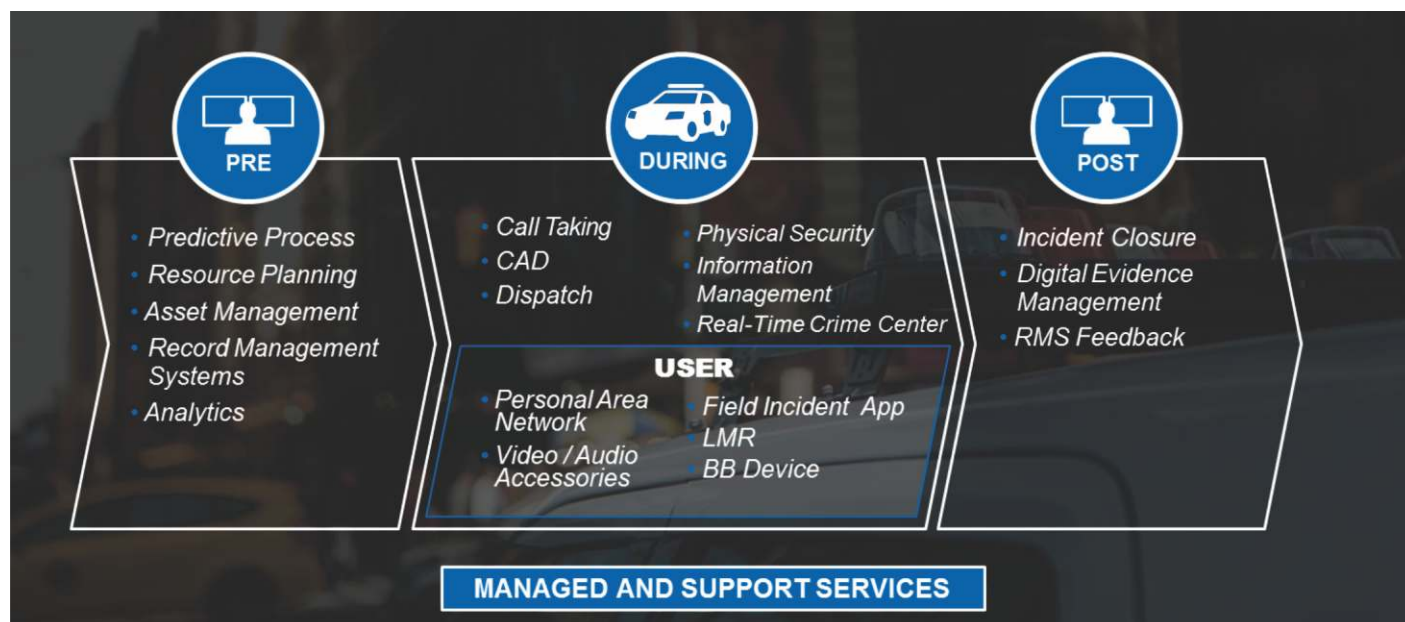
Motorola Solutions can help cities unify and improve the effectiveness of their security workflows.

We help cities...

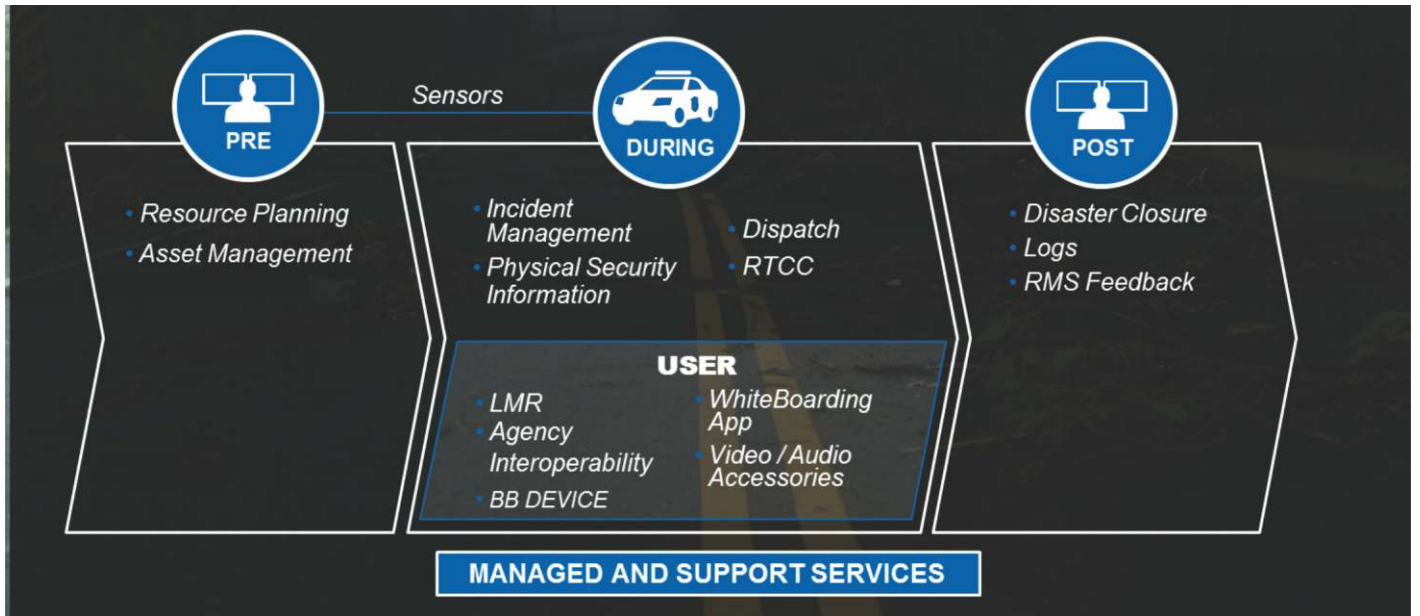


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SOLUTIONS FOR CRIME CONTROL



DISASTER RESPONSE MANAGEMENT



SOLUTIONS FOR COMMUNITY SERVICES





MAKE THE CITY SAFER FOR EVERYONE

Technology is leading the way for unprecedented improvements in situational awareness, response time and decision-making. By sharing tools, integrating networks and fully leveraging data, local governments can improve their multi-agency collaboration and operational efficiency, and make the city safer for everyone. See how Motorola Solutions is delivering Smart Public Safety Solutions to help them do it.

For more information on how Motorola is helping public safety agencies work better, smarter and faster through next generation technology, visit www.motorolasolutions.com