BUILDING SAFER, MORE SUSTAINABLE CITIES
CLARITY IN AN ERA OF PERPETUAL UNCERTAINTY

As cities adapt to new global conditions and local circumstances, sustainable safety and security play a key role. Cities must be proactive and implement longer-term, holistic approaches to mitigate risks. These may include programs that divert young people away from crime, encourage restorative justice, use knowledge-based safety strategies, and create cross-agency missions. Such initiatives require new technologies that increase transparency, accountability, efficiency, communication, and collaboration.

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EXECUTIVE SUMMARY
SOLUTIONS TO TODAY'S URBAN SAFETY AND SECURITY CHALLENGES

Cities can be engines of innovation, economic growth, and social change. Cities are our future in which we all share the same global destiny. By bringing people together from a wide range of backgrounds, cities can promote tolerance and understanding.

But cities are also magnets for violence, drug abuse, and crime. They can be targets for terrorism and some of the worst offenders in climate change. All too often, the problems cities face far outstrip the resources on hand.

Today's cities face a broad range of safety and security challenges. In addition to new initiatives that target the specific plights of their poorest residents, cities must develop strate-gies to mitigate climate change, which saps scarce resources and increases the risk of natural disasters. They must deal with global market forces and new economic uncertainties. They must fight crime and terrorism on many new fronts.

Today's challenges call for greater coordination among national, regional, and local authorities and among the businesses, groups, and individuals that these agencies serve (see Figure 1).

They also require new, citizen-centric models for service delivery. To meet these challenges, cities need advanced technology that can handle greater operational complexity and provide the real-time, accurate information and analysis for strategic insight and advan-taged decision making. This technology must also inspire collaboration and the innovation cities need to meet the challenges of tomorrow.
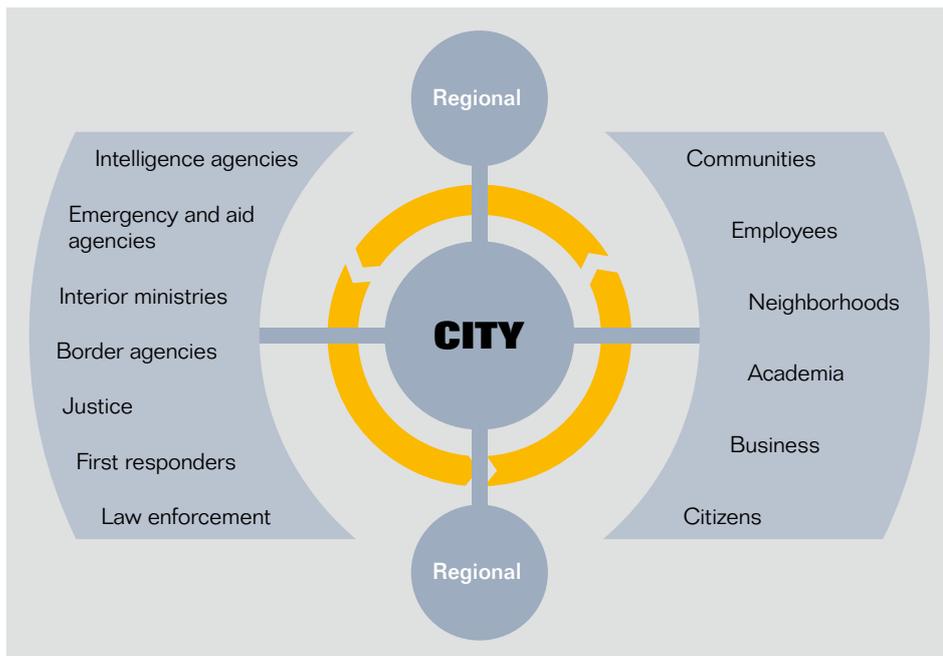
Figure 1: Collaborative Environment Driving Sound Safety and Security Strategies

CENTURY OF THE CITIES
EXPANDING URBAN POPULATIONS

This century has been deemed by some as the "century of the cities." With more than half the world's population now urbanized – and 60% likely to live in cities by 2030 – cities will remain at the forefront of economic, social, political, and environmental changes at the global, national, and local levels. By the middle of this century, even developing nations will be largely urban.[1]

Although developing nations account for most of the recent growth in urban populations, their growth patterns vary widely. Urban populations in Africa tend to be concentrated in capital cities, while populations in Asia are expanding into suburban and satellite locations. Latin America has seen an increase in smaller urban areas. In Europe, some urban populations are declining as competition, mobility, and suburbanization favor certain cities over others. Populations continue to urbanize in most of North America.

Centers of Progress and Instability

Throughout the globe, cities are national economic powerhouses. In an increasingly interdependent world, cities are at the cutting edge of change, trade, social mobility, innovation, and cultural diversity. They must compete globally for ideas, talent, investment, skills, sustainability, and business revenue. They include highly complex sets of communities, ecosystems, businesses, and public services. They are also major consumers of energy and producers of carbon emissions.

Not all of the world's cities are thriving, however. While geography can be key to a city's prosperity, "national policies that include pro-urban approaches to economic development play a critical role in the growth of cities," according to a recent report by UN-HABITAT.[2] The most important of these policies encourage investments in transportation infrastructure, the creation of special economic zones, and development of information- and services-related sectors.

Without such policies, growth can be threatened by economic and social inequalities, which are increasing in many urban areas. The highly destabilizing effect of these inequalities can discourage investment and divert resources that might be used to improve the infrastructure and productivity of programs that maintain safety and security.

A New, Increased Role for Safety and Security

Cities remain on the front lines of crime, violence, and child safety. They continue to face huge challenges around border immigration, terrorism, and organized crime, along with a broad spectrum of other risks ranging from epidemics and cyber attacks to threats to their food supplies and schools.

As cities become more densely populated, their critical infrastructure and supply chains more optimized, and their populations more culturally diverse, it is increasingly difficult for urban areas to remain harmonious, socially inclusive, and economically successful.

As major producers of the world's greenhouse gases, urban areas must also respond to climate change. Climate change is both depleting resources that are already scarce in many areas and increasing the risk of natural disasters, especially in poorer countries and urban areas. In fact, the risk of natural disasters has grown worldwide with the increased urbanization of developing countries.

As cities adapt to new global conditions and local circumstances, sustainable safety and security play a key role that extends beyond traditional criminality to all types of risks, hazards, and threats. Instead of simply reacting to immediate dangers, cities must become more proactive and implement longer-term, more holistic approaches. These may include programs that divert young people away from crime, encourage restorative justice, use knowledge-based safety strategies, and create cross-agency missions for service delivery. Such initiatives require new technologies that increase transparency, accountability, efficiency, communication, and collaboration.

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1. United Nations Human Settlements Programme, "State of the World's Cities 2008/2009," (London: Earthscan, 2008), x.
2. Ibid, xi.

CHALLENGES TO THE STATUS QUO
SIX DRIVERS FOR PUBLIC SERVICE RENEWAL

To serve city residents, communities, and businesses, the agencies responsible for urban safety and security – along with other public services – must recognize six key drivers for change (see Figure 2). These drivers include:
- New economic realities
- Increasing "glocalization"
- Heightened strategic uncertainty
- Greater operational complexity
- Expanded citizen participation
- Collaborative innovation

New Economic Realities

The final months of 2008 sparked a global financial crisis in which stock markets plummeted, banks were effectively nationalized, and cash liquidity evaporated. For urban businesses, communities, and workers, the ongoing recession has been fast, broad, and deep.

As efforts to stimulate the economy target a new generation of public services, sustainable safety and security has been a key theme. This has meant encouraging the transformation of service delivery, improvements in performance, and the renewal of financial, social, and technological infrastructures. As citizens reevaluate government agencies and the services they provide, there is a mandate for greater transparency, accountability, and agility. As economic, social, and environmental renewal becomes more interdependent and fundamental to long-term success, there is also greater demand for citizen-centric services that are more far-reaching and collaborative.
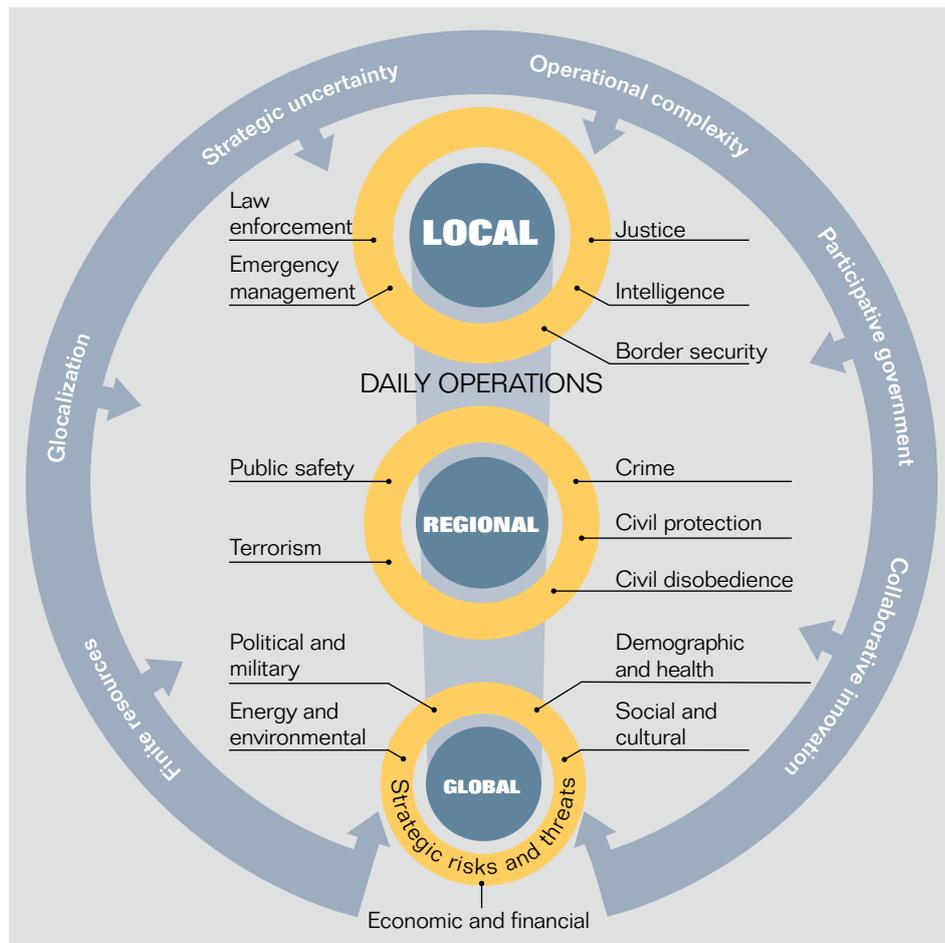

Figure 2: Drivers for Change in the Public Sector

Such collaboration must also exist between cities and national governments. Because cities account for more than 80% of global economic growth,[3] a greater dependence among national economies means that urban economies face greater risk when one or more national markets fails. As national governments seek ways to avert further economic crises, they must work with urban leaders to analyze and reduce the effects of these crises on city residents.

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3. The Cities Alliance, "Guide to City Development Strategies: Improving Urban Performance," (Washington, DC: The Cities Alliance, 2006), 1.

Increasing Glocalization

Many of the hazards that cities need to plan for start halfway around the world. The recent outbreak of H1N1 flu in a single Mexican city, for example, had very quick and dramatic impacts on the health, economies, and social interactions of cities around the globe. Other examples of such "glocalization" – meaning the impact of global trends at the local level – include threats to world energy pipelines, food supplies, and technology networks. There are also more traditional areas of transnational threats involving drugs, terrorism, and organized crime.

In addition, cities must consider the impact of human-made disasters related to climate change or infrastructure failure. Environmental damage, energy consumption, and resource utilization in one part of the world increasingly affect other areas. If we do not tackle sustainability for cities, which are both the biggest contributors to and victims of these disasters, then all communities face serious consequences.

Urban leaders must also address the many ways in which global developments in technology are changing the relationships between a city and its citizens. The shift to a more informed, interactive, information-rich, individualized, and Internet-based society requires a fundamental change in the way safety and security agencies communicate and interact with city residents.

As global influences on local communities expand, many cities are emphasizing a broader security lifecycle, initiating cross-agency missions, and establishing more sophisticated measures of success for their security campaigns. Unfortunately, most cities lack either a complete picture of their public security programs or the full situational awareness they need for operational effectiveness.

As citizens reevaluate government agencies and the services they provide, there is a mandate for greater transparency, accountability, and agility. As economic, social, and environmental renewal becomes more interdependent and fundamental to long-term success, there is also greater demand for citizen-centric services that are more far-reaching and collaborative.

Heightened Strategic Uncertainty

In public security there is no more normal, and expecting the unexpected has become much more difficult. To address a new reality of uncertainty, cities must prepare for a much broader range of issues. These include:
- Crime and civil disorder
- Climate and human-made disasters
- Technological threats
- Social unrest and fear
- Cultural adaptations
- Demographic changes
- Health threats
- Innovation
- Energy scarcities
- Environmental hazards
- Financial and economic instability
- Political and military threats
- Poverty
- Infrastructure deterioration
- Terrorism

Even though the federal and regional agencies charged with urban security and safety play lead roles in addressing such risks, cities also have a part in reducing strategic uncertainty. They must factor in the pace, complexity, scale, and interdependency of various threats. They must determine whether existing approaches and resources are sufficient for today's hazards. Where traditional models are found lacking, they must develop new strategies, skills, capabilities, technologies, processes, intelligence assets, and cultures.

To be fully prepared, cities need broad-based intelligence and real-time situational awareness built on sophisticated analysis that is both actionable and predictive. They need a clear information picture that quickly identifies trends, patterns, and targets and makes decision making more timely and effective.

Greater Operational Complexity

Today cities face greater operational complexity, both in the day-to-day delivery of services and in periods of heightened security and safety risks. Increased operational complexity may

result from high levels of bureaucracy and regulation or the misalignment of organizational capabilities and objectives with actual hazards. It may also result from disjointed systems and siloed policies. All too often, those who threaten a city's safety and security use operational complexity to avoid detection.

Meanwhile, city residents increasingly demand coordinated service delivery, accountability, and compliance with established policies and procedures, such as protection of their personal data.

To thrive, cities must trim their bureaucracies and minimize administrative tasks by optimizing and streamlining key processes, architectures, and infrastructures. This requires greater process transparency and a better alignment of agency strategies with available people, technology, skills, roles, budgets, and assets.

Expanded Citizen Participation

As cities become more complex and diverse, they must find new ways to engage the citizens, communities, and businesses they serve. Such engagement helps to retain trust and confidence and avoids a breakdown of social cohesion, disengagement of key parts of the community, and creeping urban decay.

Engaging citizens in risk management, policy development, priority setting, prevention, preparedness, and response and recovery is the only way a city can achieve a holistic, inclusive, and sustainable environment.

Collaborative Innovation

The blurring and merging of traditional models for business, competition, and services is also having a dramatic impact on city governments and other public agencies. Business process outsourcing, shared services, and government on demand are examples of how public and private partnerships have enhanced service delivery. Once focused on back-office services, these partnerships have extended into the core and operational areas of government.

New partnerships and the rapid integration of new technologies and processes across government are also shaping the environment in which system integrators, technology companies, and service providers operate. Cities must adapt to this new environment, which includes:
- Greater mobility
- Richer content
- Secure information sharing
- Flexible working methods
- Location-independent service delivery
- "Smart" devices and sensors with built-in intelligence
- Predictive analysis
- Greater user sophistication

Technology can also address the desires of today's citizens for greater choice, access, convenience, speed, and transparency. Those who interact with government agencies online expect rich, highly personalized services. The advent of Web 2.0 (and soon Web 3.0), coupled with advances in communications technology, has put pressure on public safety and security agencies to create more intimacy in government services delivery.

While many urban agencies are using technology to foster collaborative innovation, they must deploy the new models quickly and maximize their value. To meet citizen expectations, these agencies need faster and easier integration of and better time to benefit for new platforms, solutions, partnerships, and ideas. In addition to reduced costs for information and communication, the new technologies offer greater transparency and strategic agility.

VULNERABILITY, RISK, AND THREATS
AN ALL-HAZARDS APPROACH TO SAFETY AND SECURITY

Establishing a holistic approach to sustainable safety and security means taking an all-hazards perspective around vulnerability and determining which risks and threats are more probable and have the greatest consequences for city stakeholders. Key areas in this all-hazards approach include:
- Urban crime, fear, and violence
- Drugs and organized crime
- Terrorism
- Border protection and illegal immigration
- Major disasters and emergencies
- Health threats

Urban Crime, Fear, and Violence

Crime is high on the agenda of cities across the globe. In cities held hostage by crime, communities and businesses suffer along with victims and their families. Deteriorating neighborhoods can often link their decline with high rates of fear, crime, and urban violence.

Rising costs for justice and their drain on public resources have been key factors in justice reform. Cities where crime has stabilized or abated tend to emphasize prevention, managing the risk of crime more effectively, and to use long-term, holistic approaches.

Tackling violent crime, for example, means addressing violence against women and children (including bullying). Also effective is the targeting of high-risk offenders and victims – namely, young men between 15 and 24 years. In addition, many cities have increased their focus on safety at schools, public places, and major events and redoubled efforts to reduce urban gangs. They have built programs that divert risk groups from crime and foster prison reform and alternatives to prison — offering better approaches to rehabilitation and focusing on cross-agency collaboration and community restoration.

A 2007 international conference on the state of safety in world cities sponsored by UN-HABITAT reported that "urban safety is a multi-dimensional and complex issue" that must be viewed "through a human and urban development lens." Since urban crime and violence emerge from social, economic, and political causes, "a comprehensive approach to urban safety that addresses issues such as inequality, marginalization, and poverty" and includes "all relevant stakeholders" should be applied.[7]

The effective coordination of urban safety and security programs through increased integration and strategic planning requires a common set of goals. It also needs a free and secure flow of information among the interested parties through the channels that best suit their needs.

As cities take a more holistic and strategic approach toward safety and security, they are expanding definitions of the dangers for which they must prepare and respond. They are also expanding the infrastructure, skills, and knowledge base they use to address this larger list of concerns. With this support, they can then:
- Identify, assess, and analyze potential risks, threats, and hazards
- Develop and implement strategies for minimizing those concerns
- Monitor recent safety and security trends
- Execute safety and security plans
- Monitor and evaluate the success of these plans

On the Rise

Between 1980 and 2000, total recorded crimes for every 100,000 people rose from 2,300 to 3,000, according to the United Nations Human Settlements Programme.[4] Both total crime rates and rates of violent crimes have risen most sharply in Africa, Latin America, the Caribbean, and Eastern Europe. Crime has actually declined in North America and Western Europe, where law enforcement resources are more plentiful. Even in a developed nation like Great Britain, however, 55% of citizens surveyed say that crime is the most important issue facing their country today.[5]

A report by the United Nations Human Settlements Programme notes that "poverty, unemployment, and inter-generational transmission of violence" along with "poor urban planning, design, and management" play key roles in crime and violence.[6] Gangs and easy access to firearms and drugs are also important drivers.

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4. United Nations Center for Human Settlements, "Enhancing Urban Safety and Security: Global Report on Human Settlements 2007," (London: Earthscan, 2007), xxvii.
5. Cabinet Office, "Engaging Communities in Fighting Crime," (London: Cabinet Office, 2008), 9.
6. United Nations Center for Human Settlements, "Enhancing Urban Safety and Security," xxiii.
7. International Conference on the State of Safety in World Cities, "Conference Recommendations," October 2007.

As criminality evolves, cities must adapt rapidly, institute new means of detection, share quality information among all stakeholders, profile new crime trends and threats, and predict potential incidents with greater accuracy. Criminal data must be shared quickly to identify subjects and profile criminal activities. Law enforcement agencies must be able to correlate information and monitor investigative performance.

For successful investigation of crimes and criminals, government officials must synchronize information from the beginning of a case through its full investigation. This includes information that comes from nontraditional sources such as electronic, video, or audio files. Such coordination requires complete visibility into the full investigative process that lets officials audit, analyze, categorize, and prioritize a wide variety of case details and identify, track, and trace case exhibits. In addition, crime-fighting units must find new ways to share information with other internal or external agencies without compromising security.

Crime prevention in the last decade has become ever more effective and sophisticated. The adoption of a holistic approach to address situational, social, economic, and environmental crime risks has led to a range of strategies and tools through which agencies and communities work together to deter crime. Building more sophisticated approaches to justice and offender management is also part of this holistic approach. Designing out crime, targeting high-risk groups, and developing

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community resilience are also seen as key pillars of effective crime prevention.

A well-defined approach to tackling crime prevention relies on better information, intelligence, and analysis of the crime and threat picture. Using stronger cross-agency and community approaches requires greater information sharing.

Drugs and Organized Crime

Illegal drug use and organized crime provide complex challenges for cities. Although significant strides have been made in recent decades, abuse of cocaine and a wide range of synthetic drugs is on the rise. After a period of stability, drug abuse may again be growing in developing nations, according to the United Nations Office on Drugs and Crime.[8] As local authorities target traditional routes for drug trafficking, new routes have been created.

"Even if the world's entire supply of cannabis, coca, and opium was eliminated and all drugs in circulation were

seized, 25 million drug users would still be looking for ways to satisfy their addiction," notes the United Nations Office on Drugs and Crime. "So the key to drug policy is reducing demand for drugs and treating addiction." That, the agency says, "means putting more resources into prevention and treatment, as well as research to better understand what makes people vulnerable to addiction."[9]

Fueling the demand for drugs is a well-entrenched supply network supported by a fluid and highly adaptive network of criminal organizations involved with drugs, illegal immigration, trafficking, identify fraud, and counterfeiting. Such organizations are highly prevalent in cities, where local associations are established with urban gangs and criminals.

As globalization changes the nature, form, and structure of legitimate organizations, criminal networks and associations are shifting from traditional hierarchical structures to loose, agile networks that use technology to avoid

8. United Nations Office on Drugs and Crime, "Annual Report 2009," 11.
9. Ibid, 19.

detection. Tackling the production, supply, and demand of drugs – as well as other activities of organized crime – requires well-coordinated, cross-border action at the global, national, regional, and local levels.

Many regional initiatives have been launched to address trafficking and organized crime in a unified way. Law enforcement agencies should also cooperate with the pharmaceutical industry to reduce supplies of illicit synthetic drugs. To support these efforts, cities need knowledge management systems that facilitate the sharing and analysis of local and regional data. They also need support for designing their role in regional drug elimination efforts.

Terrorism

Terrorism has also historically targeted major cities with their densely populated areas, vulnerable public spaces, and large concentrations of critical infrastructure. Just a few recent examples are Mumbai, India; Madrid, Spain; New York; and London. With a diverse and international blend of communities, cities can be home for sections of the population that are willing to support or participate in certain types of terrorist activity.

Both national and city-based antiterrorism solutions must be multifaceted. They must target hard-core extremists and those who feel disengaged or excluded from the broader city community. Strong intelligence and surveillance tools and the ability to identify key local issues are vital to this multifaceted approach.

Cities must place greater emphasis on protecting critical infrastructure that is particularly vulnerable to terrorist attack. Developing common risk assessments, building continuity capabilities, and engaging all stakeholders in prevention, preparedness, and resilience building are vital to sustainable safety and security.

Cities must identify their capacities to bring together the resources they would require in the event of a terrorist attack and address continuity issues that would result from such an attack. They must determine how they would reconstitute and recover key response systems. This requires extended information-sharing capabilities, particularly with respect to the national and international agencies that fight terrorism. By working with financial institutions to identify money-laundering activity, cities can flush out and eliminate locally based terrorist groups.

Border Protection and Illegal Immigration

Halting drug use, organized crime, and terrorism requires greater control over national borders and illegal immigration. Enhanced travel by air, land, and sea has made border control an increasingly important issue for both national and city agencies. Certainly the influx of immigrants from neighboring countries can diversify city communities and enhance urban workforces. But loose border control also encourages human trafficking as well as an influx of drugs, criminals fleeing prosecution in their own countries, and terrorists seeking opportunities to further their agendas.

Effective programs for urban safety and security must include coordination with national authorities to identify criminal elements who live in cities illegally. They must also seek to eliminate cultural ghettos that can be magnets for these elements through education and economic initiatives that help to integrate immigrants who arrive legally.

In addition to aligning processes for incident and resource management, an integrated environment makes it easier to coordinate emergency resources and programs. It helps ensure that all processes operate in a decentralized manner when necessary. Even if primary sources for data include multiple systems, databases, applications, and safety sensors, a well-integrated solution framework can serve as the operational hub that helps a city effectively prepare for and respond to any emergency or disaster.

Here too cities need actionable intelligence drawn from government and nongovernment sources to locate and prosecute illegal immigrants who pose a safety or security threat. They need electronic identification cards that make it easier to identify legitimate residents and visitors as well as improved technology for baggage and freight screening. They also need analytics for recognizing and handling border threats and collaborative processes for working with security agencies in other parts of the world.

Natural Disasters and Other Emergencies

In the last few years, many regions of the world have experienced the devastating impacts that climate-related disasters can have upon life, property, and communities. The fires in Australia and Greece, tsunamis in the Pacific Rim, hurricanes in the United States, and floods in Europe are just a few examples. While improved warning systems and aid mechanisms have reduced the number of lives lost from natural disasters, their impact on humans and communities remains a major concern.

At the heart of urban emergency management is the ability to plan for and respond quickly to a variety of sudden threats, whether they result from climate change, a failure of technology, or other factors. All stakeholders need timely access to information related to requests for resources, emerging

events at the incident site, the needs of personnel handling the incident, and actions taken to manage the incident.

To maintain appropriate command and control of an emergency situation, stakeholders must fully understand the nature of the situation and the risks involved. They must understand possible response strategies, segmented by incident, command level, and organization. Stakeholders also need accurate and complete contact information for each other.

In addition, stakeholders must be able to activate preplanned responses involving multiple organizations both rapidly and effectively. Helping each organization understand its particular

A Growing Threat

"More than 7,000 major [natural] disasters have been recorded since 1970," according to the United Nations Department of Economic and Social Affairs, "causing at least $2 trillion in damage, killing at least 2.5 million people, and adversely affecting the lives of countless others."[10] Largely due to climate change, annual global damages from natural disasters between 2000 and 2006 were seven times as great as in the 1970s.[11]

responsibilities can minimize the chaos period of an emergency or disaster and facilitate effective and coordinated control. It also makes sense to coordinate strategies for disaster management with land-use planning and the design of disaster-resistant infrastructure. Here, the challenge is to find effective ways to leverage the technical expertise that planners have developed.

The IT solutions that cities use for emergency management must provide fully integrated, comprehensive support for call handling and resolution, rostering, and resource management. They must also support geographic information systems, mobile systems, knowledge management, and analytics. The solutions should provide a centralized

Cities are particularly vulnerable to natural disasters due to their high population densities, concentration of economic activity, environmental modifications, and location near coastal zones. Of the 33 cities where populations are expected to reach eight million or more by 2015, 21 are located in coastal areas. Put another way, about 40% of the world's population lives within reach of severe coastal storms. Meanwhile, urban landscapes themselves are probably exacerbating the impact of climate change. Cities with inadequate building codes are especially susceptible to loss of life and property.[12]

10. United Nations Department of Economic and Social Affairs, "World Economic and Social Survey 2008: Overcoming Economic Insecurity,'" (New York: United Nations, 2008), xiii.
11. United Nations Department of Economic and Social Affairs, "Policy Brief No. 6," September 2008, 1.
12. United Nations Center for Human Settlements, "Enhancing Urban Safety and Security," xxxi.

view of all resources and their readiness status and support a highly flexible, fully integrated framework for organizational management.

In addition to aligning an organization's processes for incident and resource management, an integrated environment makes it easier to coordinate emergency resources and programs for a diverse range of organizations and geographies. It helps ensure that all processes operate in a decentralized manner when necessary. Even if primary sources for data include multiple systems, databases, applications, and safety sensors, a well-integrated solution framework can serve as the operational hub that helps a city effectively prepare for and respond to any emergency or disaster.

A broad range of technologies is evolving to buttress urban emergency management programs. Interactive mapping can help agencies plan and deploy their strategies together. Support for resource requests and tracking can help ensure that sufficient supplies are on hand and arrive where they are needed. Journal recording can provide a time-stamped record of events. Instant messaging can allow secure communication between responders in real time. Cities also need access to top-line weather forecasting data, Doppler radar, and weather alerts.

Health Threats

Health security is an emerging concept with global resonance. It addresses acute health events that endanger global communities, irrespective of their geographical boundaries.

With billions of passengers annually traveling through a global transport network, diseases can spread much more quickly than at any other time in our history. For example, consider the speed at which our connected world enabled the H1N1 flu to spread from Mexico to virtually every country.

Along with H1N1, we have seen the outbreak of severe acute respiratory syndrome (SARS), the Ebola virus, and avian influenza in recent years – additional evidence that our world faces increasing frequency of new infectious diseases. This new health security reality requires a coordinated approach to awareness, surveillance, prevention, and containment.

Cities are also at the forefront of accidental and terrorist-driven health threats, such as the anthrax contagion in the United States. In addition, they face risks around radio-nuclear leaks, toxic spills, food contamination, chemical spills, and heat waves.

With the right technology, cities can design and implement forward-looking safety and security programs. They can assess their risks, measure the outcome of new initiatives, and operate these programs more efficiently. They can improve communication within organizations, between members of a safety and security partnership, and between the partnership and city residents.

GETTING IT DONE
TECHNOLOGY'S ROLE IN ADDRESSING NEW REALITIES

In developing a deep and intimate understanding of cities' needs, SAP has created applications that make safety and security agencies more transparent, accountable, lean, and agile. Based on the knowledge and experience of our customers and their stakeholders, SAP solutions foster collaboration and a holistic, citizen-centered service approach.

Cities will be defined in the 21st century by their ability to adapt to new realities that require shared destinies, responsibilities, and solutions. While international, federal, and regional organizations will retain key roles in shaping a new landscape, agencies in cities and surrounding metropolitan areas will likely be the thought leaders and change agents for safety, security, and sustainability.

With the right technology, cities can design and implement forward-looking safety and security programs. They can assess their risks, measure the outcome of new initiatives, and operate these programs more efficiently. They can improve communication within organizations, between members of a safety and security partnership, and between the partnership and city residents.

In too many cases, however, city agencies cannot capture, consolidate, analyze, and securely share data within their own ranks – let alone share information and intelligence with other agencies, the private sector, or their citizens.

Key information, along with key processes, is typically siloed among multiple applications with no central data repository. Achieving the holistic, strategically based safety and security programs that cities need requires open technology platforms through which information can be exchanged in any form, through any channel, between all users. This means making the most of Internet-based, Web 2.0 technologies that facilitate communication, information sharing, and collaboration.

At the same time, there is increasing pressure on cities to strike a balance between gathering the data they need and protecting the private information of their citizens. While urban citizens increasingly demand e-government solutions that increase transparency and convenience, they have also become more concerned about identity theft and institutional invasion into their most personal concerns. Cities must thus be discriminating in the information they choose to gather and take steps to help ensure that the transmission of that data is completely secure.

Optimizing city resources and responsiveness requires unified public administration services, such as government financials, human capital management, and procurement. The public administration area is also the logical starting point for governments to deploy shared services across diverse agencies.

Automating the public administrative area is not enough today, however. Cities also need comprehensive processes that support each agency and its individual lines of business. Historically, governments have built in-house systems for these areas or bought isolated best-of-breed solutions.

SAP® SOLUTIONS FOR SAFER, MORE SUSTAINABLE CITIES
A FULLY INTEGRATED AND SCALABLE APPROACH

In developing a deep and intimate understanding of cities' needs, SAP has created applications that make safety and security agencies more transparent, accountable, lean, and agile. Based on the knowledge and experience of our customers and their stakeholders, SAP® solutions foster collaboration and a holistic, citizen-centered service approach. They also support best practices and deliver the forward-looking support cities need for:

- Sustainable and inclusive government
- Service excellence
- Intelligence- and knowledge-led strategies
- Informed and engaged communities
- Collaboration and innovation

Sustainable and Inclusive Government

The financial crisis has changed, perhaps for a generation, the complex relationship among citizens, business, and government. Governments at all levels must now be more transparent and play a greater role in shaping economic, social, and environmental policy. They must make better use of taxpayers' money, become more efficient and effective, and exercise leadership in the sustainable use of available resources and assets. As cities' safety and security agencies play their part in this effort, they must leverage technology in developing adaptive and smart security.

For many years, SAP applications have served as catalysts for transforming safety and security agencies at the city, state, local, and federal levels. Using the SAP Business Suite applications, agencies involved in law enforcement, criminal justice, correctional services, border protection, intelligence, and first response can significantly improve organizational efficiency and effectiveness. Time and again, SAP customers demonstrate clear value to their stakeholders and become leaders within their peer groups.

Service Excellence

Urban citizens, communities, and businesses have high expectations for service delivery from their government. For many, choice, access, convenience, speed, interactivity, and personalization are key to a successful service experience. Those with greater needs or special circumstances may require different, more individualized service involving multiple agencies, stakeholders, and locations. As city agencies transform their operations, they must use technology to integrate a broader range of service outcomes.

SAP applications help public safety and security agencies transform their organizations and deliver new, significantly improved services. The software can foster a high-performing, well-motivated workforce that uses all resources, assets, personnel, and information more effectively.

The SAP Investigative Case Management for Public Sector package, for example, helps city agencies establish a single integrated landscape for handling collaborative services. City agencies can use the software to handle identity, incident, intelligence, case, and service management in a cohesive and comprehensive manner. Citizens benefit from consistent services delivered through multiple channels.

Intelligence- and Knowledge-Led Strategies

As cities adopt an all-hazards approach to safety and security, risk-based decision making becomes vital in choosing the right investments, setting priorities, allocating resources, and installing technology. For a clear understanding of their safety and security risks, cities must be able to capture data and qualitative indicators from a variety of sources and use that information to identify related patterns and trends. They must coordinate city demographics, economic indicators, security risks, and crime statistics with environmental scanning to make strategic policy choices.

In the area of criminal justice, for example, a city must identify offenders and hot spots, analyze underlying causes of crime, and set specific crime reduction goals. It must then turn its knowledge and analysis into executable strategies; effectively manage program delivery; optimize multiple agencies; and orchestrate a common vision, set of objectives, and outcomes.

Using SAP applications, city safety and security agencies can better identify, assess, and mitigate risk. Our customers in justice, intelligence, first responder, border protection, disaster management, and law enforcement sectors have used the applications to repurpose, reshape, sustain, and adapt their organizations to support a more intelligence- and knowledge-led approach.

SAP software enables cities to create a single, fully integrated environment for managing data, information, knowledge, and performance across the safety and security landscape. They can support cross-agency collaboration and deliver knowledge-led services that address risk and facilitate a long-term approach to sustainable security. Cities can use this support to identify areas that are most vulnerable to natural disasters, launch programs to reduce opportunistic crime, and divert high-risk groups away from crime.

Informed and Engaged Communities

Another consequence of the recent financial crisis is that governments must become more open to new ideas, partnerships, and technologies that bring greater transparency, account- ability, and accessibility to their services. While experience shows that effective, ongoing success depends on involving all key participants in long-term, pro- active strategies, this means that city agencies must weigh many different opinions about how to prioritize their resources.

In the area of criminal justice, for example, cities must work with local citizens, communities, and businesses to reduce opportunities for crime, build community-based responses, target early intervention for high-risk groups, and address school violence. They must also be involved in creating more effi- cient courts, using restorative justice, improving offender management, and implementing community-based reso- lution. Similar strategies are useful in handling school safety, urban violence, border protection, counterterrorism, fire safety, drugs abuse, antisocial behavior, gangs, domestic violence, or emergency and disaster management.

SAP offers cities a range of applications for improving governance and transpar- ency. These applications can help cities introduce greater checks and balances in the process of government service delivery, improve governance, manage compliance, reduce fraud, improve data protection, and eliminate waste.

SAP software provides support for extending city outreach and providing multichannel access to government services. A range of functions supports the Web 2.0 technologies that help cities provide rich information and reports to their communities. There is also support for capabilities such as 311, case man- agement, and information management to help agencies provide citizen-centric services.

Collaboration and Innovation

Cities must address the institutional, cultural, and policy challenges associ- ated with coordinated services, shared information, joint operations, common objectives, and service delivery. Tech- nology, while only part of the answer, can change government cultures and bring agencies together to tackle safety and security issues.

Indeed, safety and security agencies are at the forefront of using technology to share information and intelligence securely, develop common cross- agency objectives, manage risk, and improve services. With the advent of the Internet, the smart grid, and other emergency technology innovations, cities can make sure their technology infrastructures are future-proofed.

SAP's emphasis on collaborative inno- vation and a closed-loop innovation cycle means that new technologies can be readily introduced and integrated within city landscapes. The Industry Value Network group for public secur- ity, an integral part of our strong partner ecosystem, gives cities a unique oppor- tunity for collaboration and innovation.

Cities can combine the SAP Netweaver® technology platform with SAP analytical and industry-focused software and SAP partner solutions for ongoing innovation, fast adoption of new technologies, and a lower total cost of ownership.

A COMPREHENSIVE SOFTWARE PORTFOLIO
SUPPORTING KEY SAFETY AND SECURITY PROCESSES

SAP has made a strong, long-term commitment to the public sector and developed an extensive software portfolio for managing the comprehensive processes involved in an effective safety and security program. We support a thriving safety and security ecosystem that includes Industry Value Network members who are at the top of their field. As a leading provider in the public sector and public security markets, SAP offers the proven software and support to help cities achieve best-in-class safety and security outcomes. Software from SAP provides a centralized landscape for managing:

- Intelligence and information sharing
- Emergencies and disasters
- Justice and offenders
- Investigations and cases
- Border security and immigration
- Command and operations
- Public security analytics and risk management
- Strategic IT

Technology's Power to Enable Safe, Secure Cities

Urban planning for safety and security must incorporate or link to initiatives for reducing poverty and economic inequality, improving education, and extending quality health care to all citizens. Technology can help cities integrate these many initiatives into effective holistic strategies.

Central to this effort is a more comprehensive sharing of information for greater transparency – both between members of strategic urban partnerships and between the partnerships and city residents. Also important is enabling information transfer that is secure and sensitive to citizens' privacy concerns and meets the unique requirements of each urban jurisdiction.

In these ways and others, technology can help cities thrive in the face of challenges that have become increasingly broad-ranging and complex. It can help urban agencies optimize both their responsiveness and their resources for greater safety, security, and sustainability.

The Next Step

SAP offers an extensive software portfolio with robust functionality to enable sustainable government through service excellence, intelligence- and knowledge-led strategies, informed and engaged communities, and collaboration and innovation. To learn more about the many ways that SAP software can support your safety and security programs, please contact your SAP sales representative or visit us online at www.sap.com/safer-and-more-sustainable-cities.

www.sap.com/contactsap

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