IBM Institute for Business Value

Accelerating economic growth and vitality through smarter public safety management

Law enforcement agencies, firefighters, emergency and disaster management entities, and other first responders all protect the general public from danger, harm or damage. Public safety plays a critical role in supporting economic growth and vitality by reducing the cost of crime and enhancing the desirability of communities as places to live and locate businesses. It also has a direct impact on the levels of societal trust and interaction.
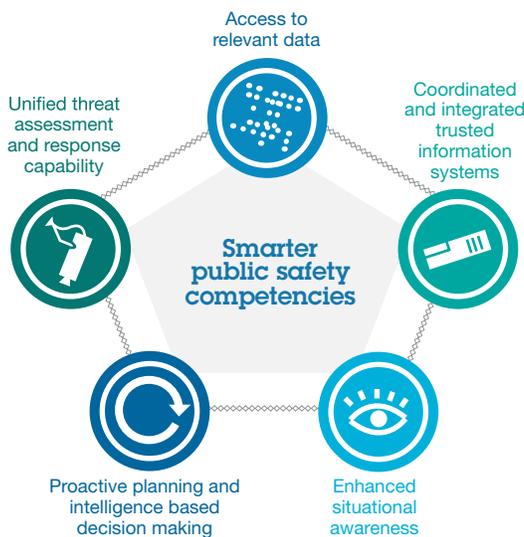
A new approach to public safety challenges

Despite the importance of public safety for economic growth and vitality, many types of crime continue to rise. Crime remains an issue in both growth and mature economies. And borderless crime, such as cybercrime and Internet fraud, is becoming more prevalent. Agencies also face incremental mission requirements from more frequent and intense natural disasters and security threats. In addition, many agencies and systems remain siloed and are unable to cope with today's relentless growth of data. Finally, agencies are not effectively tackling recidivism and are failing to link spend with outcomes.

Overview

Public safety systems affect well-being, quality of life and economic prosperity. Yet, in the face of escalating crime, natural disasters and security threats, many systems are ill-equipped to protect the citizens they were created to serve. These siloed systems are overwhelmed by an ever-increasing volume of data and, as a result, agencies are unable to orchestrate a coordinated approach to public safety issues. Further, agencies are finding it hard to tackle recidivism and link spending with outcomes. A new, smarter approach to public safety is needed, with key competencies ranging from accessing and integrating the right data, to developing a unified response capability. With new competencies, governments and agencies will be better positioned to improve public safety and enable enhanced growth and vitality.

Access to
relevant data

Unified threat
assessment
and response
capability

Coordinated
and integrated
trusted
information
systems

**Smarter
public safety
competencies**

Proactive planning and
intelligence based
decision making

Enhanced
situational
awareness

Source: IBM Corporation.

Figure 1: A smarter approach to public safety management provides the new competencies required to more effectively tackle these challenges.

A smarter approach to public safety management provides new competencies to tackle challenges

Developing competencies in five key areas can help public safety agencies more effectively do their jobs. (see Figure 1).

1. ***Providing access to a wider range of data sources builds a more valuable information foundation:*** Non-digitized data, such as field reports, investigative reports, arrest records and fingerprints, make it difficult to process and share data. This data has to be pooled and expanded to include a wider range of information from new sources, such as digital video and audio, the Internet and social networking. Data quality also needs to be assessed to identify where improvements need to be made in format, consistency and storage. Once existing and new data from a wide variety of sources is collated, it can be processed to optimize its use across organizations.

2. *A coordinated information system turns raw data into reliable insights:* Existing sources are often siloed, with duplicated information and data inconsistencies. Data needs to be processed and presented in formats that enhance usability. Better information needs to be provided more readily to key users in appropriate formats to strengthen their ability to synthesize information into actionable intelligence.

3. ***Situational awareness helps mitigate the impact of incidents: A*** more integrated approach to public safety could enable better situational awareness for first responders, who could then react more quickly and effectively. A centralized and automated system helps expedite data sharing and alerts individuals to changing real-time conditions. Delivering relevant information directly to the first responder is a critical part of this competency.

4. ***Analytics supports planning, decision making and resource deployment:*** The core of investigative and analysis work is finding the correlating clues and information from tremendous amounts of seemingly unrelated data and turning it into operational intelligence. Advanced analytics can help rapidly establish correlations between different entities, uncover hidden connections among and within cases, and map these relationships.

5. ***Collaboration identifies incidents and orchestrates optimal response:*** The final competency is about bringing all competencies together and increasing the level of collaboration among emergency services and other city departments. A city or region can drastically improve its ability to assess, predict, prepare and respond to public safety incidents through a command center, which provides a single, real-time, comprehensive picture of public safety and emerging and actual emergencies. It provides the functionality and capabilities needed to coordinate police, firefighters, emergency medical services and government agencies across a district.

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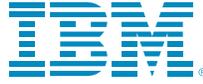## Putting the five new public safety competencies to work

Public safety agencies are charged with an important and difficult mission. Today, however, they face significant challenges that, if unaddressed, will impede their ability to deliver against this mission. By focusing on the five competencies outlined in this report, organizations have the potential to greatly improve public safety, meet the expectations of those they serve and help build more prosperous communities.

How can IBM help?

- Determine information needs and create access to an increasingly diverse universe of structured and unstructured data by linking existing sources of information across agencies and developing new ones.

- Strengthen confidence in information sources through establishing a trusted layer of data where linkages and duplications are identified and exposed.

- Improve situational awareness and generate investigative leads through access to a common operational picture and visual analytical intelligence tools.

- Leverage powerful analytics disciplines on "big data" to uncover patterns and trends, identify threats earlier and build predictive modeling capabilities that can increase the effectiveness of resource deployment.

- Improve response to crime and emergencies by providing better, more relevant information and deeper insights directly to first responders.

- Enhance cross-agency and inter-jurisdictional collaboration to optimize preparation, mitigation, response and recovery.

- Focus the leading private sector multidisciplinary research organization on the emerging issues and challenges for the missions of public safety.

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