

# 5 TRENDS TRANSFORMING PUBLIC SAFETY COMMUNICATIONS



## 2015 NATIONWIDE PUBLIC SAFETY INDUSTRY STUDY RESULTS

### SURVEY FINDINGS

Public safety communications are transforming. The 2015 research revealed five key trends that impact agencies of all sizes. These indicators signal fundamental changes in the way agencies interact with their communities, interoperate with each other, access real-time information, migrate to more collaborative multi-networks and devices, and manage data and evolving technologies.

# TREND 1

# INCREASING LEVEL OF COMMUNITY ENGAGEMENT

## FORGING A PUBLIC ALLIANCE



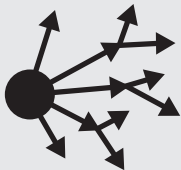
The number of agencies relying on data-driven communications to engage with their communities is growing rapidly. Of respondents, 55% share information with their community via social media, and nearly 30% receive information directly from the public through Facebook and Twitter.



The prevalence of social media in everyday life is driving the need for greater adoption and engagement by public safety agencies. The actions of first responders are routinely recorded by citizens on mobile devices and instantly uploaded to social media sites.<sup>1</sup>



Social media is an essential platform for building community relations. It enables agencies to share information quickly, as events unfold. It helps increase transparency by having an open conversation with the public. It informs citizens on a regular basis and encourages their feedback. This valuable exchange deepens the partnership with local government.



Public safety leaders underscore how essential technology is for building a stronger public alliance. The number one reason for law enforcement agencies to implement new technology is to “improve community confidence and support.”<sup>2</sup>



Citizens expect agencies to use advanced technology to respond rapidly, solve crimes and act with greater accountability and transparency. The use of body-worn video by police is emerging as an important tactic for building community trust. According to a 2014 Police Executive Research Forum (PERF) report, an overwhelming 98% of police officers want access to more sophisticated technology in the field.<sup>3</sup>



While video increases transparency with the public, it also tracks a sequence of events and helps protect first responders from false accusations. The United States spends over \$2 billion annually to settle court cases of alleged police misconduct. The video evidence from body-worn devices can help significantly reduce that case load, and a clearer view into police encounters will further promote community trust.<sup>3</sup>



Recognizing the benefits, many agencies already have in-car or wearable solutions. However, nearly 30% of respondents say they have not yet adopted video, but want that technology to increase their eyes on the street, support field personnel, and build stronger community relationships.

## EXPANDING CITIZEN CONNECTIONS WITH TEXT-TO-9-1-1

In last year's survey, only 7% of 9-1-1 call centers could receive text messages.<sup>4</sup> One year later, this option for citizens has increased by almost 300%. Next Generation 9-1-1 (NG 9-1-1) enables a Public Safety Answering Point (PSAP) to receive text messages today in addition to traditional voice calls, and will include images, video, and data in the future.

Despite the rapid growth year over year, only 30% of agencies can receive text messages from the public at 9-1-1 call centers, and 20% receive data from the public at 9-1-1 call centers through social media. This ability to hear, read, and watch a community's needs have become a mandate, and agencies' demand for it is growing. An increase in ways that citizens can communicate with public safety agencies further fosters trust that community concerns are being heard and addressed.



The data clearly shows a need and desire from both agencies and the public to stay up-to-date and share knowledge in real-time. As communication evolves and continues to permeate daily life, agencies should examine best practices to leverage social media, video streaming, and NG 9-1-1.

## TREND 2

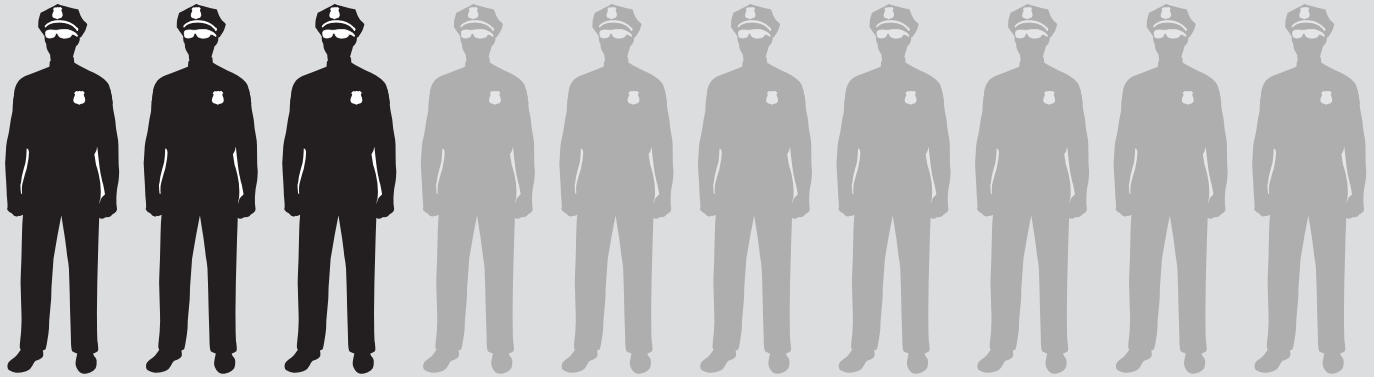
## ACCESSING REAL-TIME DATA IN THE FIELD

### THE NOW FACTOR

Almost 70% of agencies surveyed say it is "critical" or "very important" for first responders to access real-time data in the field. This is consistent year over year, and underscores the necessity of instant, reliable information. As the need for this intensifies, public safety agencies must be creative within given constraints, optimize resources more efficiently, and integrate the technologies already available.

One-third of agencies say that, beyond budget, a lack of resources and technical support is their biggest challenge. This will increase as more data floods into command and dispatch centers from other agencies, jurisdictions and public engagement. The reality is, agencies must prepare to handle all of the data – and turn it into actionable intelligence – before it overwhelms them.

## IN ADDITION TO BUDGET, THE BIGGEST BARRIER TO ACHIEVING COMMUNICATIONS VISION



**33%** LACK OF RESOURCES AND/OR TECHNICAL SUPPORT

### ONCE YOU HAVE DATA, HOW DO YOU HANDLE IT?

The adoption of body-worn cameras for law enforcement officers is rapidly increasing as high-profile incidents occur in communities nationwide. This poses substantial challenges not only for data management - as body-worn video is subject to the same rules of evidence preservation and chain of custody - but also for agency policy and procedures, officer training and system interactions. Once video is recorded, agencies are faced with the questions of how to store, analyze, and manage it.

While cloud storage is popular for managing data, it must be carefully evaluated in terms of long-term costs. Agencies can benefit most from body-worn camera systems that skillfully integrate with their existing systems and workflows, and offer the lowest total cost of ownership. Along with policy and procedural measures on how to manage all the footage collected, 86% of agencies recognize the need to improve how they manage crime data.<sup>2</sup> Beyond video and wearable cameras, other inputs are delivering traditional information in new contexts – such as criminal databases and arrest records in real time.

Agencies increasingly recognize the high volume of data, the expertise required to manage it, as well as the need to adequately prepare for its evolution.

## TREND 3

## INCREASING COMMUNICATION WITH NEIGHBORING AGENCIES

### THE INTEROPERABILITY DIVIDE

Nearly 80% of respondents want to easily communicate with state and local agencies in surrounding areas, a consistent trend year over year. Almost 75% want to connect personnel across different networks and devices. Agencies realize they can achieve greater real-time collaboration by connecting across all platforms – including private, public, P25 and Public Safety (PS) LTE – and all devices, from Land Mobile Radios (LMR) to Mission Critical LTE handhelds to consumer-grade smartphones and tablets. Shared connectivity is more critical than ever to ensure different personnel, from diverse agencies, with disparate devices can interoperate and coordinate together.



## PAVING THE WAY FOR TECHNOLOGY IMPROVEMENTS

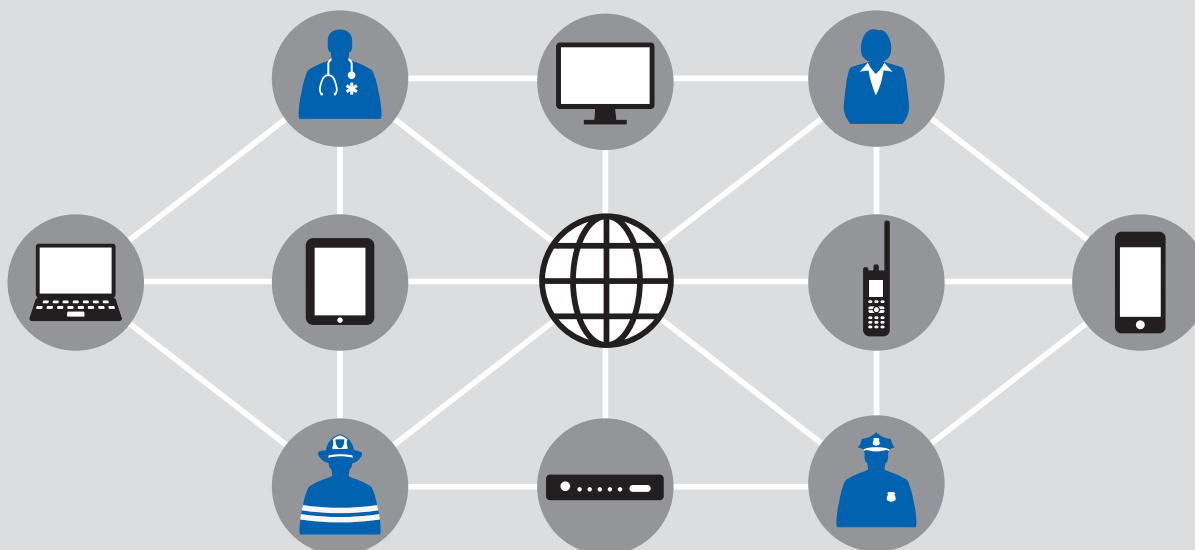
Over 50% of respondents said that “consensus with surrounding agencies” and “a plan supported by local officials” are also top challenges to achieving their communications vision. To strengthen interagency efforts, public safety officials must overcome these hurdles.

By adopting standards-based compatible devices and applications and/or joining larger regional or statewide systems, agencies can more readily achieve interoperability. This means pursuing all-band and multi-band radio technologies and extensible communication platforms that enable coordination with adjacent agencies. Despite known budget and resource constraints, respondents feel that consensus and regional collaboration pave the way for upgrades and advancements in their communications technology.

### TOP COMMUNICATION NEEDS

**78%** TO EASILY INTEROPERATE WITH NEIGHBORING AGENCIES

**73%** TO CONNECT DIFFERENT DEVICES AND NETWORKS TOGETHER



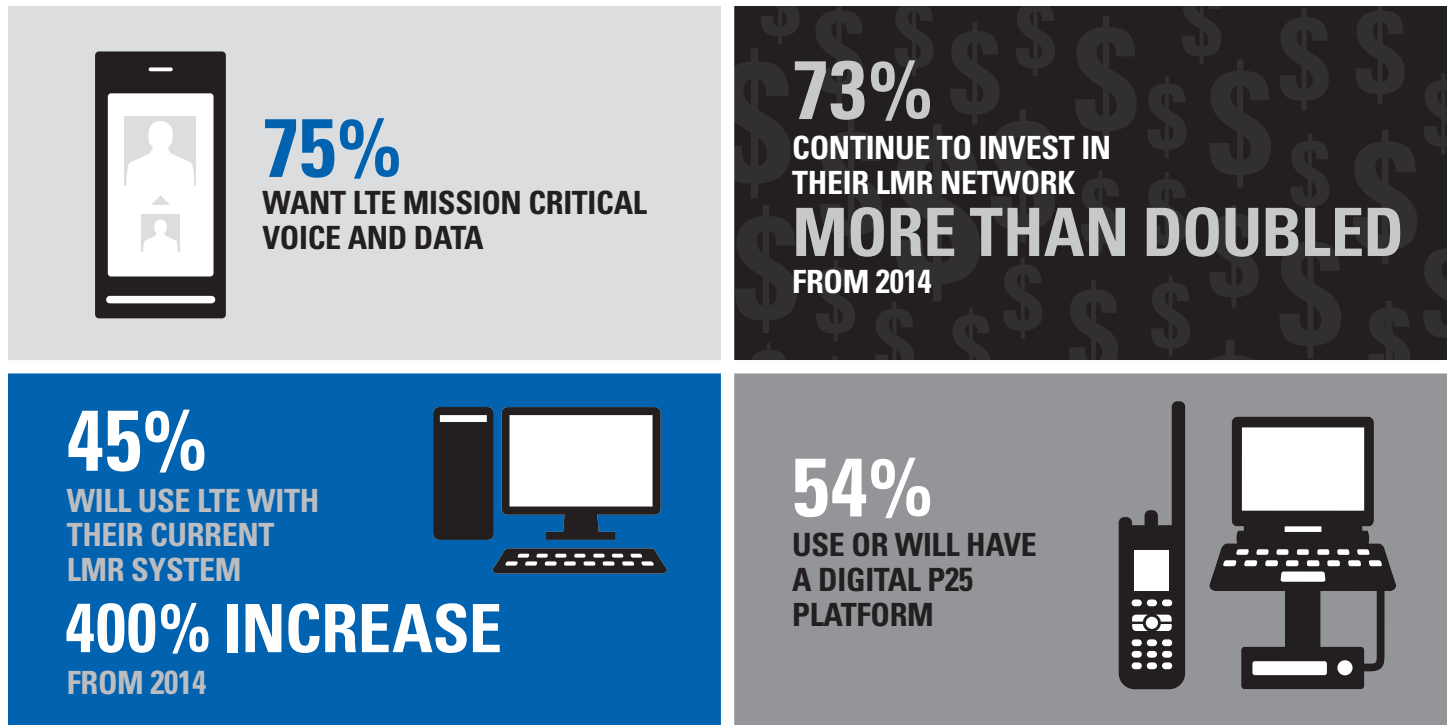
## TREND 4

### USING COLLABORATIVE TECHNOLOGIES TO EXPAND CAPABILITIES

#### MULTIPLE NETWORKS WILL BE THE NEW NORMAL

As more digital content is readily available, responders and their agencies expect immediate access to richer information – from GPS tracking of vehicles and personnel to real-time video and sensors. Text messages, images, video, and data are being used within agencies to share real-time information in addition to voice communication. The dilemma is how to best utilize it all. Agencies will need to have multiple networks in place, along with purpose-built smart devices, secure and prioritized network access, and intuitive applications that deliver the right information at the right time.

Public safety agencies are now entering a world where multiple networks will be the new norm. Last year, only 9% surveyed were investing in an LMR voice network and planning for an LTE data network. This shot up by 400% this year – with 45% of respondents envisioning the use of both. Only 30% were investing in their LMR network in 2014. That has more than doubled in 2015 – with almost two-thirds of agencies continuing LMR investments.



The combination of P25 LMR and LTE opens up a world of possibilities for public safety. P25 LMR networks are the “always available” standard for mission critical voice and essential data applications. LTE complements P25 networks and adds capabilities for accessing and transmitting high-bandwidth data.

These two technologies are just beginning to converge – P25 radios with embedded LTE and applications that connect radios and smartphones – and more will come. Agencies must plan ahead for a world where these complementary technologies work together to help them improve operational efficiency and safety. Until a converged network matures in the decades ahead, devices and applications are the bridge.

## **TREND 5**      **MANAGING THE TECHNOLOGY SKILLS GAP**

### **STAY AT THE FOREFRONT WITH SUPPORT**

Agencies face a difficult challenge: their skilled workforce is growing older and retiring at the same time that newer technologies are rapidly being released. In 2013, 45% of the federal workforce was over 50 years old, while only 7% was under 30 years old, setting an eight-year low.<sup>5</sup>

As agencies migrate to newer digital P25 systems, networks can be more complex, requiring IT skills that communications personnel may not currently possess. If not properly managed, updates or maintenance can result in unforeseen compatibility issues or dependencies in one sub-system that can impact mission critical network availability.

With a relentless rise in cyberattacks and threats against agencies – up 782% between 2006 and 2012 and intensifying – state CIOs acknowledge their growing concerns about cybersecurity. Only 24% are very confident their systems are safe.<sup>6</sup>

## WHITE PAPER

### PUBLIC SAFETY INDUSTRY STUDY RESULTS

It is not surprising that 74% of agencies seek external assistance for their two-way radios, and almost 70% for their network as they migrate to newer P25 digital systems. Multiple networks, new technology platforms, and continuous updates make it increasingly difficult to fully manage a system in-house. More and more agencies will seek outsourced management services from network experts, and will look to share responsibility for managing complex technology with reliable partners who can provide technical support, repair, management and operational services.



## SURVEY PARTICIPANTS

Motorola's annual survey offers insight into the technology trends in the public safety sector. This research was conducted in Spring 2015 and reflects input from nearly 800 public safety professionals in a nationwide cross-section of agencies of every size. Of the respondents, 60% of agencies have fewer than 50 employees, 19% have 51-100 personnel, 10% with 101-250 employees, 5% with 251-750 personnel, and 9% have more than 750 employees.

Survey participants represented a wide variety of public safety officials, including government administration, command staff, first responders, intelligence agencies, transportation, higher education, corrections and federal civilian departments.

## SOURCES

1. Future Trends in Policing, PERF, 2014
2. Intelligence-Led Public Safety Survey, Motorola Solutions, 2015
3. Future Trends in Policing Report, Police Executive Research Forum
4. 2014 Public Safety Industry Study, Motorola Solutions
5. "U.S. Struggles to Draw Young, Savvy Staff," *wsj.com*, June 10, 2014
6. "State Governments at Risk," Deloitte/NASCIO, December 2014

This 2015 industry study is part of an ongoing Motorola research initiative to help identify and report on trends affecting public safety communications technology. For more information on planning and deploying an integrated communications approach to address these trends, talk to your local Motorola representative or visit [motorolasolutions.com](http://motorolasolutions.com).

Motorola Solutions, Inc. 1301 E. Algonquin Road, Schaumburg, Illinois 60196 U.S.A. [motorolasolutions.com](http://motorolasolutions.com)

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