BAPCO 2025 speaker focus: Stephen Martini

The APCO International president and director of the Metro Nashville Department of Emergency Communications discusses why emergency services AI should be seen as an opportunity rather than a challenge

Artificial intelligence and machine learning (ML) are being used by organisations around the world in a variety of ways, to assist with information gathering, call processing and training.

Used to assist the call-taking process, these solutions are solving a variety of operational challenges. These include quickly summarising information into relevant and actionable content, and reminding call-takers of key points that could pose a risk to citizens and responders confirming location.

It also includes informing support personnel earlier in the response process, engaging supervisors on specific call types, extending visibility to multiple people in real time, and connecting callers to government services specific to waste management, street repair, signage or codes enforcement.

Outside of the operations room, AI is functioning as a training simulator and QA evaluation tool, which is essential to supporting more-prepared dispatchers.

In Nashville, Tennessee in the United States, the Metro Nashville Department of Emergency Communications is partnered with Vanderbilt University to develop a ChatGPT-based AI solution. This simulates a variety of emergency and non-emergency callers, featuring feedback assessed against an existing quality assurance rubric.

It allows an always-on, continuously dynamic, custom training solution for new staff to learn to process calls and existing staff to train on new technologies and process various incident types, emerging trends or high-priority pre-frequency events.

This solution was developed from our need to improve dynamic training without draining existing staff, who are crucial to meet daily ops goals and performance standards.

The most critical immediate application of AI and ML solutions in the control room is to reduce the workload on staff, including training new employees and reducing non-emergency call volumes so dispatchers can remain available to answer critical calls.

In the United States, 911 calls are often the minority of total calls answered in emergency communications centres, with non-emergency calls comprising the majority. Today, AI is effectively identifying routine non-emergency calls, and either providing answers to frequently asked questions or routing callers to the appropriate division or department to provide information. This keeps emergency dispatchers available to answer critical calls.

Specific to emergency calls, AI-generated call summaries can be quickly copied and pasted into narratives within computer aided dispatch (CAD) programmes. And, hopefully, automatically imported in future iterations, reducing the amount of typing dispatchers do.

Such innovations could transition the role of the dispatcher from a court reporter – typing feverishly to document each word – to an incident manager, ensuring the relevant information is transmitted to the appropriate field responders and making sure of a quick and accurate response.

ML can enhance unit tracking through speech-to-text transcription for radio traffic, instantly feeding responder status updates into CAD. This reduces mouse clicks and keyboard taps, leaving the dispatcher free to focus on managing the broader response.

To ensure this technology is effectively adopted by public safety practitioners – while also considered a trustworthy solution by the caller – we must emphasise the human-in-the-loop approach, similar to the strides we saw with the introduction of assembly line or computing software.

Phone operators weren't deemed irrelevant and dismissed. Rather, they migrated into roles requiring higher-level learning to guide call routing and delivery, rather than physically pulling and plugging cables.

The same is true of machines making parts. What was once assembled by hand migrated to machines, and those same jobs transitioned from assembly to assessing quality and maintaining the machines.

We must stress the assistive role of AI, giving confidence to the public and our existing personnel that a 'robot' isn't expected to send critical help – but rather is assisting the human to make sure the right help gets to the right place at the right time.

We should avoid viewing AI and ML as a challenge rather than an opportunity. Properly understanding the assistive nature of these solutions reduces the amount of people required to conduct scenario training or type all details of an incident.

This allows us to reduce the workload in the ECC, which reduces the amount of time spent processing calls. It also leads to increased time between calls (for mental health and work-life balance), while potentially reducing the seemingly continuous cycle of hiring and on-boarding.