

PUBLIC SAFETY BENEFITS FROM RESPONSIBLE ARTIFICIAL INTELLIGENCE

From answering a 9-1-1 call to closing a case, public safety agencies are processing increasingly large amounts of data. Motorola Solutions is responsibly and incrementally applying Artificial Intelligence (AI) to help agencies better manage this data to improve safety and efficiency, and reduce response times. While doing so, we hold ourselves to the highest standards in the application of AI, just as we do for our mission-critical communications. **We are not displacing human judgment with AI; rather our goal is to use AI to help public safety personnel make their best decisions in the moments that matter.**

PUBLIC SAFETY AGENCIES AND DATA

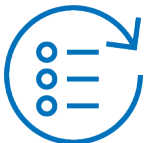
The avalanche of data available to law enforcement agencies - from body-worn cameras to law enforcement records - is becoming increasingly challenging to manage. Many agencies continue to rely on manual, time consuming processes to extract data and formulate insights. At Motorola Solutions, we have the unique opportunity to help public safety agencies realize the potential benefits that AI presents by designing and deploying applications that will allow them to work more effectively and efficiently.

MOTOROLA SOLUTIONS AI

Motorola Solutions has provided public safety agencies and first responders with reliable, resilient and secure purpose-built solutions for over 90 years. The crucial role that public safety plays in our society suggests that the ethical cornerstones of AI are just a starting point. To responsibly apply AI for public safety, we rely on these three additional design principles:



Human in the Loop: We believe that the best use of AI in public safety is to assist and accelerate human decision-making, not replace it. Our AI systems are advisory in nature and will never take consequential actions on their own. Using AI-generated guidance, we can help public safety personnel make better decisions faster in the moments that matter.



Focused Application: Our experience working closely with public safety agencies for almost a century helps us to isolate specific areas of the workflow where AI can help. Users accomplish the same task, but faster and more successfully as a result of AI.



Mature AI: By isolating an understood portion of the workflow, we can apply proven AI components. Using the simplest and most mature solutions makes the AI more predictable and reliable.

CORNERSTONES OF RESPONSIBLE AI

When leveraging AI, Motorola Solutions strives to meet these fundamental aspects of responsible and ethical behavior.

FAIRNESS - Does the result of the AI process treat all demographic groups equally?

We thoroughly evaluate the data used to train our AI algorithms, ensuring sufficient quantity, quality and diversity to eliminate biases. We then test and retest, in our labs and in the field, to identify performance issues or undesirable behaviors.

UNDERSTANDABILITY - Can we explain the results the AI process delivers?

We use simple, mature AI technologies, so that the behavior of the AI and required inputs are readily understood. This is a critical aspect of correctly interpreting and trusting the outputs.

PRIVACY - Is all of the data - training sets, inputs, and outputs - kept secure?

We utilize sensitive data in our existing public safety solutions today, and will apply the same stringent security protocols - e.g. CJIS in the United States - and cybersecurity practices for our AI efforts as we do for our existing software solutions.

RELIABILITY - Does the AI solution operate consistently?

The mission critical nature of our business means we have established rigorous introduction and rollout processes to ensure that our solutions work in the most challenging circumstances. New AI capabilities will be no different.

ACCELERATING THE WORKFLOW WITH AI FROM MOTOROLA SOLUTIONS

80%

HUMAN FAILURE RATE IN SPOTTING ITEMS OF INTEREST AFTER ONLY 20 MINUTES OF CONTINUOUS VIDEO MONITORING¹



AI helps by:

Actively monitoring cameras for unusual situations, such as the appearance of smoke, a trespasser, or individuals matching the description of missing or abducted persons.

Results:

Video analysts verify potential items of interest instead of scanning endless video feeds.

240M

9-1-1 CALLS RECEIVED EACH YEAR²



AI helps by:

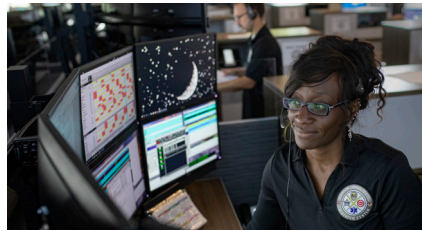
Automatically transcribing and translating speech to text - including recognizing key terms like "heart attack" - allowing the call taker to focus on the response.

Results:

Streamlined 911 call center interactions.

8 MINUTES

TARGET TIME FROM 9-1-1 CALL TO FIRST RESPONDERS ARRIVING ON SCENE³



AI helps by:

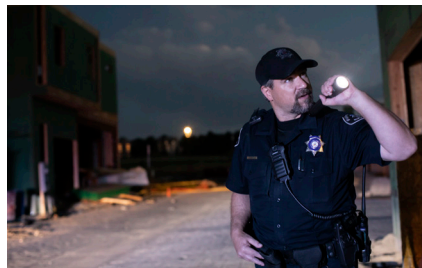
Suggesting the most appropriate response units - in terms of availability or capabilities - to dispatchers.

Results:

Faster arrivals on scene by first responders.

400,000

INCIDENT REPORTS CREATED ANNUALLY - OFTEN MANUALLY - IN A LARGE CITY⁴



AI helps by:

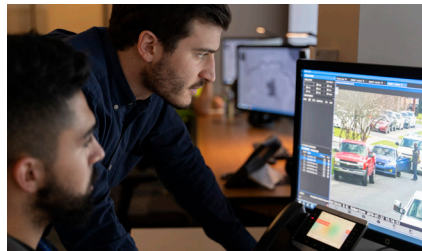
Using natural language recognition to perform standard queries and verbally complete incident reports and take citizen statements.

Results:

Officers in the field are safer operating "eyes up and hands free", and save time.

27,000

CAMERA FEEDS COLLECTING VIDEO EVERY DAY IN A LARGE CITY⁵



AI helps by:

Rapidly searching historical video for missing citizens or persons of interest.

Results:

Speed case resolution for agencies, especially in major incident scenarios.

Motorola Solutions supplies purpose-built, reliable solutions to the public safety heroes that keep us and our cities safe. We are responsibly and incrementally leveraging AI to help agencies make their best decisions in the moments that matter.

¹NASA
²NENA
³Reuters/ JAMA Surgery

⁴LAPD CompStat Division
⁵Chicago PD/ OEMC



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A. [motorolasolutions.com](https://www.motorolasolutions.com)

MOTOROLA, MOTO, MOTOROLA SOLUTIONS and the Stylized M Logo are trademarks or registered trademarks of Motorola Trademark Holdings, LLC and are used under license. All other trademarks are the property of their respective owners. © 2019 Motorola Solutions, Inc. All rights reserved. 11-2019