# Keeping Communities Safe with AI

**Agenda:**
**Introduction**
**Overview**
**Integration Benefits**
**Technical Overview**
**Verticals & Use Cases**
**Q&A**

# Meet Today's Speakers

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**Brian Denmeade**

Field Application Engineer
*Ganz CORTROL, CBC*

I have a passion for helping secure the world through educating others about the latest physical and digital security systems.

**Dan Kopchik**

Vice President, Sales
*Actuate*

I have two kids in elementary school, and am passionate about making communities safer through advancing use of new technologies with positive social impact.
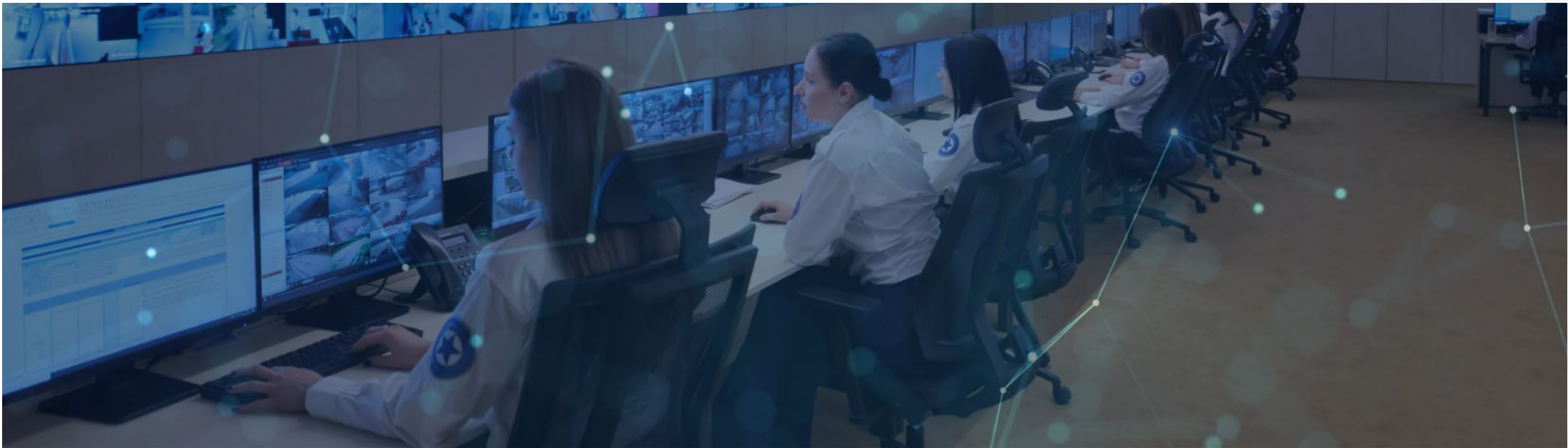
**Eli Katz**

Director of Customer Success
*Actuate*

I build strong technical pre- and post-sales relationships with customers, assisting Security teams and removing barriers to adopting AI in their organizations.

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# Complimentary Design

1. Today, security operators monitor and process both qualified and unqualified events.

2. Using Actuate's AI in conjunction with the Ganz CORTROL VMS helps surface qualified events to the attention of security operators.

3. This allows security operators to make better-informed decisions that free them up to do what they do best, verifying and taking swift action on critical events.

# Efficiency and Accuracy



1. Traditionally, analytics offers a description of what is occurring in a video scene.

2. **Without AI**, analytic detection may send a **false alarm** every time an animal crosses the perimeter.

3. **With AI**, analytic detection can identify the animal as not classified as a person and confirm no requirement for an alert.

4. Actuate's AI offers CORTROL VMS the power to identify, classify, and confirm whether an in-scene object should or should not trigger a required alert.

# Solution-Centric

1. Customers are interested in solutions ranging from gun detection, intrusion, loitering, crowd detection, slip & fall, hard hat safety, and vehicle gate automation.

2. Facial detection, gun detection, intrusion, and loitering systems can address security concerns, and alert employees of known shoplifters or other potential threats.

3. AI-enabled video analytics can monitor for slip & fall, a monetary impact that can range from minor inconvenience to massive liability.

4. The CORTROL VMS integration with Actuate makes it easier to use and more economical to deploy such solutions.



Gun

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# Overview

# Actuate's Founding Story and Mission

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### Founding Story

**Sonny Tai**
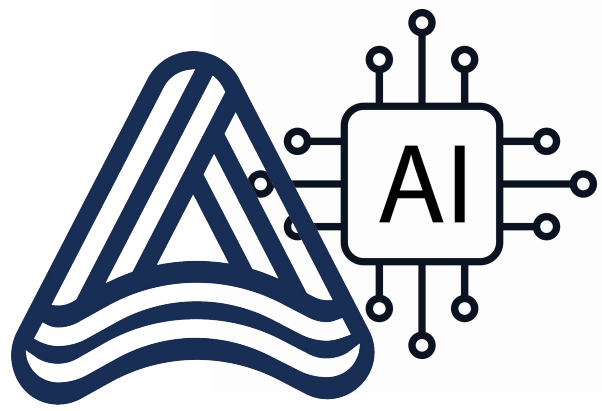**Chief Executive Officer**

- Founder and CEO Sonny Tai was an Enlisted Marine and Marine Officer

- Grew up in Taiwan and South Africa in formative years; South Africa has one of the highest rates of violent crime in the world (3x the US in homicides per capita)

- Close family friend was fatally shot in home intrusion in Johannesburg, leading to a lifelong desire to combat gun violence.

- Founded the company in early 2018 after reconnecting with undergraduate classmate who lost his sister in the Las Vegas Shooting at Mandalay Bay.

### Mission

**To build safer communities with AI software that enables existing camera systems to identify and respond to security threats**

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# Actuate's AI Turns Any Camera into a Smart Camera



## Smarter AI

Proprietary database of over 1 million images in complex and realistic settings used to train AI models

## AWS SageMaker

Built a fully-automated model training pipeline that supports cutting-edge models and new state-of-the-art hardware from Amazon Web Services (AWS)

## Deep Integrations

Flexible API Configurations & Integrations With:

Android OS
95% of existing video management platforms

# How does **Actuate work?**

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## 01
### Existing Surveillance Infrastructure

Motion / Event detected on video

**Model Improvement**

## 02
### Computer Vision Model Detection

Threats identified, tracked, and tagged in real-time

## 04
### Notify Police & Building Occupants

Real-time intelligence enables faster and more precise response

## 03
### Alert Building Security or Operation Center

Confirms threat and triggers defensive/evacuation measures

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# Actuate's AI Identifies Key Events in Real-Time

## THREAT DETECTION & FACILITIES MANAGEMENT

### Gun Detection
Identifies brandished or held firearms

### Intruder Detection
Identifies a person or vehicle where/when they are not permitted

### Loitering Detection
Identifies when a person remains in-frame for a given amount of time

### Crowd Detection
Identifies the formation of large groups of people

### Hard Hat Detection
Detects the absence of proper hard hat usage

### Outdoor Fire Detection
Detects the presence of a fire. *Compliments existing fire detection systems*

### Vehicle Gate Automation
Automates vehicle gates for delivery vehicles and school buses

### Slip & Fall Detection
**BETA** Identifies when person falls to render aid

# Overview of Ganz CORTROL VMS & Features

**Ganz CORTROL VMS** is a video management system providing a solutions platform for security and surveillance needs. It is available in either single-server or multi-server solutions.

✅ Both solutions offer interactive maps, linked alarms, exceptional management of Events and Actions, analytic tools, AD/LDAP, Cyber & Data security functions, and more.

✅ Included with the multi-server edition are Video Wall, Recording Server, Failover, Mirroring, Archive Replication, and Central Management.

✅ Record, search, and view live video from multiple surveillance cameras, manage IoT devices, and manage access control, all from a single platform.

✅ Designed for use in a variety of verticals, including retail, education, healthcare, transportation, and central stations. Scalable and customizable to meet the specific needs of the user, with support for 15,000+ devices from 190+ manufactures.

✅ Ganz CORTROL VMS is a globally-proven solution with over 3 million deployed and managed channels.
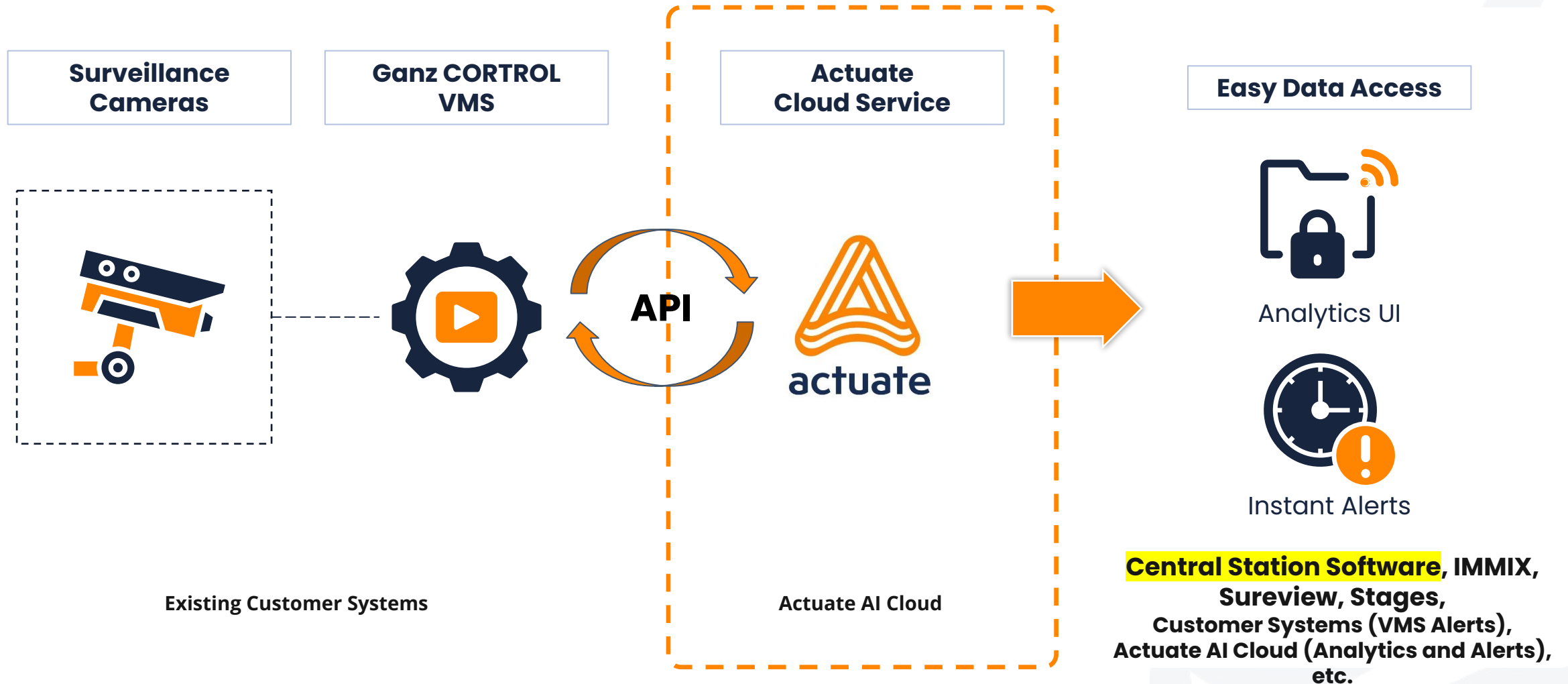
# Technical Overview

# Easy Integration: No Hardware Required

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| Surveillance Cameras | Ganz CORTROL VMS | Actuate Cloud Service | Easy Data Access |

**API**

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Analytics UI

Instant Alerts

**Existing Customer Systems**

**Actuate AI Cloud**

**Central Station Software**, IMMIX, Sureview, Stages, Customer Systems (VMS Alerts), Actuate AI Cloud (Analytics and Alerts), etc.

\* Actuate can integrate with any VMS based on customer demand, except Ubiquity, and is currently a certified partner for most top VMS providers.

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# Easy Integration: Just a Few, Simple Requirements

## INTEGRATION REQUIREMENTS

Actuate's software is system agnostic and requires no additional hardware, **resulting in very few additional integration requirements:**
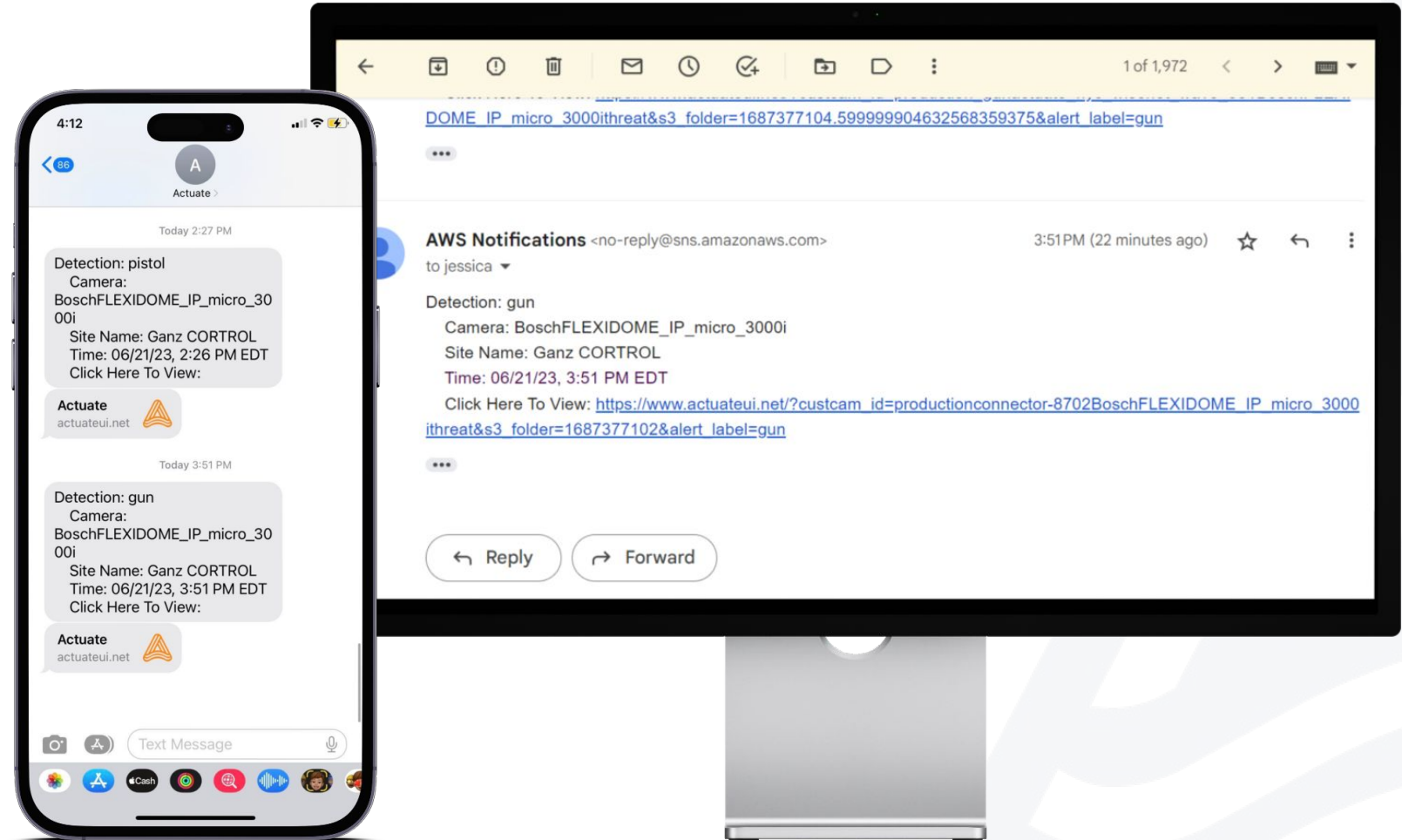
**Connection details**

**Substream with 480/ 720p**

**(3 or 5 FPS)**

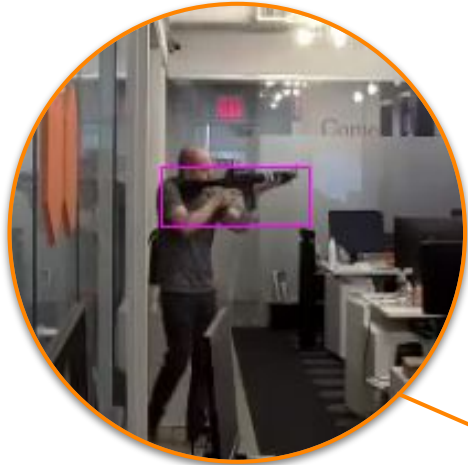# Instant Alerts: Stop Guns, Loitering, Intruders, Crowds

**One-time link** sent instantly via SMS and/or email enables secure access and data sharing



**Also available:**
**VMS Alerts** provide alert info in existing VMS

# Instant Alerts: Actuate's UI



**Bounding boxes** to track detections being made over the course of an event

Detected gun at 11/14/2022, 7:08:39 AM MST

Livestream of BoschFLEXIDOME_IP_micro_3000i at Ganz CORTROL

Detects Only

Use left & right arrows, arrow keys, or drag images to scroll between frames

14.Nov 2022  10:08:22

**Easily browse detections** to identify and react to a situation

**Limited Livestream included** for ease of access

# Integration Benefits

# Actuate x Ganz CORTROL Integration Enhances Video Surveillance and Security

**Drastically reduce false positives** with Actuate's product offerings in addition to advanced features, all available when integrated with Ganz CORTROL

**Fast, easy integration** with few requirements - no additional hardware required

**Easily adopt remote monitoring capabilities with Actuate x Ganz CORTROL** and provide security operators with an additional layer of security support

Prioritize proactivity and respond quickly to threats by **receiving actionable information and alerts** during threat events

# Actuate By The Numbers: Drastically Reduce False Positives

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**We conducted a lengthy period of testing, measuring, and benchmarking with one of the largest alarm monitoring companies in the nation.** This is what we found:

| 97.5% | 89.8% | 1.7% |
|:---:|:---:|:---:|
| **Alert Reduction vs. Motion** | **False Positive Reduction vs. Edge Analytics** | **Missed Detection Rate** |
| This is our universal alert reduction percentage from motion across 21,000+ cameras<br><br>80% to 85% is standard among industry leaders | We analyzed 323 clips received by the customer and found that 206 were false positives generated by their edge analytic.<br><br>Actuate filtered out 185 of them (89.8%) | Out of 117 clips that were labeled as "ground truth", Actuate missed only 2 (1.7%)<br><br>These were 2 identical clips where only 1 frame of a partial person was sent |

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# Enhancing Video Surveillance with AI

- The **CORTROL Crosslink functionality** delivers Actuate's user interface into a unified client experience
- **Advanced notification and reduced false positives** are possible with the CORTROL VMS and Actuate
- **Fast-response environments** are possible with the CORTROL VMS, Acuate and complimentary technology like Emergency Communications Systems
- **Simplifying new installations or retrofitting existing ones**
- From small remote monitoring, single buildings, and space-challenged locations to large enterprise campuses, smart cities, and multi-global locations, **CORTROL's light hardware advantages and Actuate's cloud-based AI** make it possible

# Verticals & Use Cases

# Key Verticals

MONITORING (CENTRAL STATIONS & REMOTE MONITORING)

EDUCATION (K-12 & HIGHER-ED SCHOOLS)

INDUSTRIAL FACILITIES (CONSTRUCTION SITES, ETC.)

PUBLIC/PRIVATE SPACES (RETAIL ESTABLISHMENTS, CORPORATE CAMPUSES, ETC.)

HEALTHCARE (HOSPITALS, CARE FACILITIES, ETC.)

# Apply Actuate AI to a Wide Variety of Use Cases

## SCHOOLS

- **Detect guns** before shots are fired during active shooter events
- Enable **intruder and vehicle detection** to support overnight security operations
- Quickly identify and resolve fights and altercations on school property with **crowd detection**

## CAR DEALERSHIPS

- Identify and prevent auto theft with intruding **vehicle detection**
- Deploy our **stationary vehicle filter** to further reduce false alarms/positives

## RETAIL

- **Replace or enhance existing burglary alarms** at consumer electronics stores, quick serve restaurants, etc.
- **Quickly respond to armed robbery events** at convenience stores, pharmacies, consumer electronic stores, cannabis dispensaries, etc.

# Existing Customers & Verticals

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## 30,000+
Cameras Deployed

## 3,300+
Customer Sites

### Customers & Verticals

**GENESIS**
SOLAR · TECH · SECURITY

**Security Company Protecting All Schools in Puerto Rico**

*Weapon Detection
Intruder Detection*

**CENTRAL STATION**

**Monitoring Company with Strong Presence in Southwest**

*Intruder Detection*

**CENTRAL STATION**

**Security Company With A Major Northeast Presence**

*Intruder Detection
School Bus & Delivery Vehicle Recognition*

**RETAIL**

**Large Cap REIT with $1B+ Annual Revenue**

*Weapon Detection
Intruder Detection
Loitering & Crowd Detection*

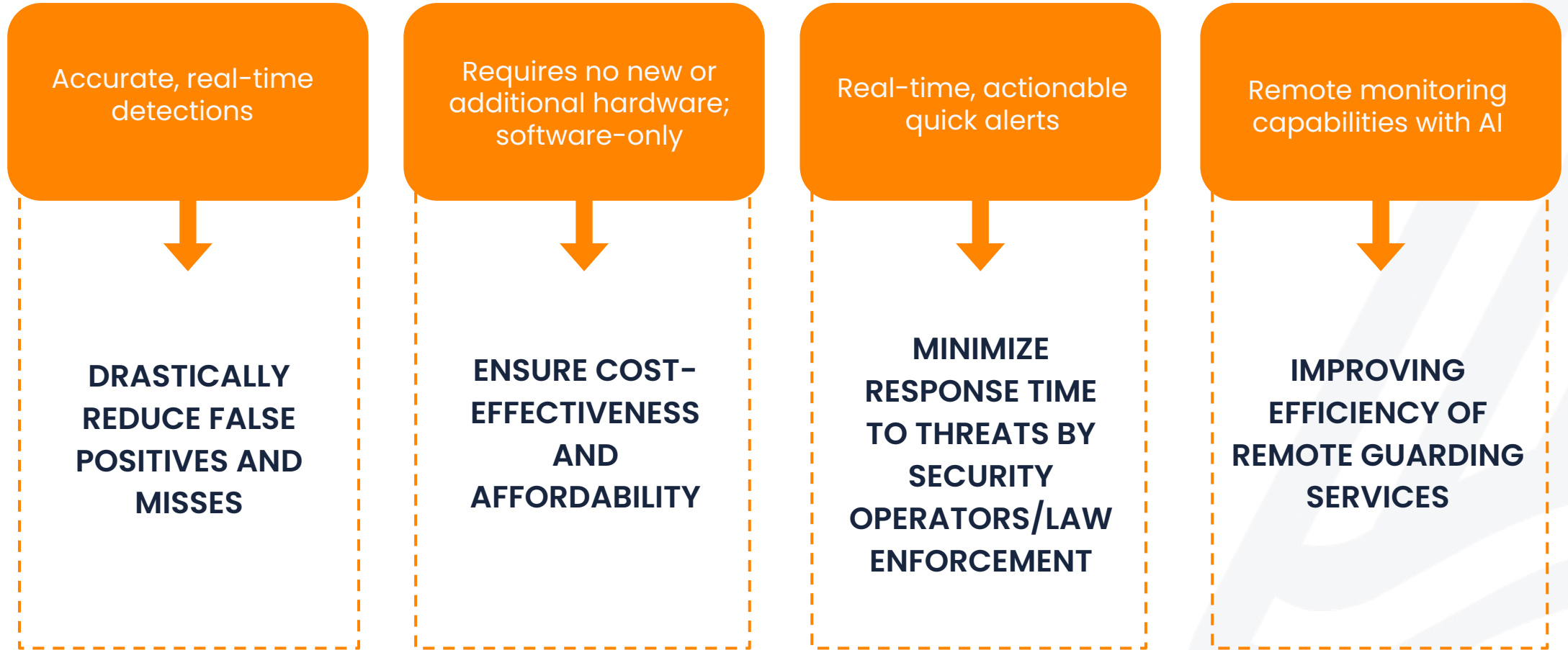**U.S. ARMY**

**Army Futures Command**

*Gun Detection (Munitions)*

**INSURANCE/ HEALTHCARE**

**Vehicle Insurance Provider**

*Intruder Detection*

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# **Value** To Your Security Systems

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| Accurate, real-time detections | Requires no new or additional hardware; software-only | Real-time, actionable quick alerts | Remote monitoring capabilities with AI |
|---|---|---|---|
| **DRASTICALLY REDUCE FALSE POSITIVES AND MISSES** | **ENSURE COST-EFFECTIVENESS AND AFFORDABILITY** | **MINIMIZE RESPONSE TIME TO THREATS BY SECURITY OPERATORS/LAW ENFORCEMENT** | **IMPROVING EFFICIENCY OF REMOTE GUARDING SERVICES** |

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# Q&A

# Thank you for joining us!

**Contact us:**
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