



SAFE AIRPORTS

The intersection of technology and transportation



THE PROMISE OF A MODERN AIRPORT



EFFICIENT OPERATIONS

Create a streamlined and enjoyable experience for travelers to increase revenue for airport businesses.



RELIABLE LOGISTICS

Ensure timely arrival and departure of travelers and cargo through the coordination of people and planes.



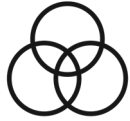
SAFETY & SECURITY

Maintain safety across all secure zones through early detection and coordinated response.

The promise to deliver efficiency, reliability and business continuity is only possible in an environment built on a foundation of safety.



THE PROMISE OF A MODERN AIRPORT



EFFICIENT OPERATIONS

Create a streamlined and enjoyable experience for travelers to increase revenue for airport businesses.

\$40B

Spending in airports in 2017. On average, travelers will spend anywhere from \$11 and \$140 per airport visit.

- *Global Airport Retailing, Airports Council Intl.*



RELIABLE LOGISTICS

Ensure timely arrival and departure of travelers and cargo through the coordination of people and planes.

D0/A14

Flights are expected to depart the minute they are scheduled and arrive no later than 15 minutes past scheduled.

- *Department of Transportation*



SAFETY & SECURITY

Maintain safety across all secure zones through early detection and coordinated response.

\$13,669

The maximum fine that airports face per violation per day for failure to comply with TSA regulations.

- *Transportation Security Administration*

The promise to deliver efficiency, reliability and business continuity is only possible in an environment built on a foundation of safety.



THE CURRENT ENVIRONMENT BY THE NUMBERS



1B & 44.3T

U.S. passengers and pounds of freight flown per year, respectively.

- Federal Aviation Administration

Airlines are connecting more people, businesses and places than ever before.



5%-7%

Consistent, annual increase in global air traffic.

- Statista

The number of annual flights across the globe is vast and continues to grow annually.



4,432

Guns found in carry-on luggage in 2019, a 5% increase from 2018.

- Transportation Security Administration (TSA)

The increased global connectedness and developments in technology creates new and increased security challenges.

MODERN CHALLENGES



How do we effectively monitor widespread and diverse areas of operation?

- Recognize and investigate door alarms
- Detect perimeter breaches
- Monitor large areas in one view
- Recognize and fill security gaps



How can we recognize events and accurately evaluate the situation?

- Automatically track people of interest
- Identify missing persons
- Highlight unusual behavior
- Recognize slips and falls



How do we connect all workgroups that need to collaborate?

- Coordinate with local first responders
- Collaborate with TSA
- Share information across teams
- Alert multiple teams simultaneously



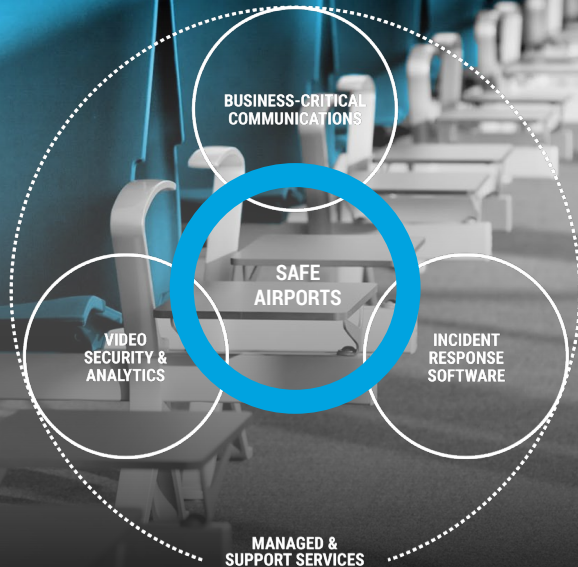
How can we quickly respond to problems before they escalate?

- Aggregated information feeds
- Unify data/evidence storage
- Directly share data with first responders
- Automatically log incident reports



SAFE AIRPORTS

An integrated technology ecosystem



Instant voice communications to reliably connect teams across workflows and zones.

Video analytics technologies to quickly identify and track points of interest across widespread areas.

Advanced software and security to centralize command everyday and during emergencies.

Support services that are always there maintain systems for today and into the future

Technology unified by a common orchestration platform built to empower you to address the unique challenges of your airport.

FACING MODERN CHALLENGES



DETECT

Video Security
Watch list Creation and Alert
Access Control

Know what is happening with better insights to protect people, property & assets.



ANALYZE

Appearance Search
Identity Search
Unusual Motion Detection

Recognize which events are important, quickly find what you are looking for & make informed decisions to take action.



COMMUNICATE

Radio Communications
Broadband Push-to-X
Dispatch Software

Connect instantly across devices & networks to keep teams connected and informed.



RESPOND

Situational Intelligence
Incident and Records Management
Dynamic Interoperability

Simultaneously mobilize and coordinate an immediate response internally and with public safety.



AIRFIELD BREACH

Use Case

Intruders breach U.S. airport fences about every 10 days

MAY 26, 2016 | 7:48 AM

Chicago Tribune

Securing the perimeter of an airport can be a daunting and expensive task when an airports may have hundreds of miles to monitor. Airports need a means to monitor this vast area without draining resources or budget and to respond quickly to intrusions to avoid delays.



MOTOROLA SOLUTIONS

AIRFIELD BREACH

Use Case



DETECT

LARGE AREAS MONITORED WITH LESS

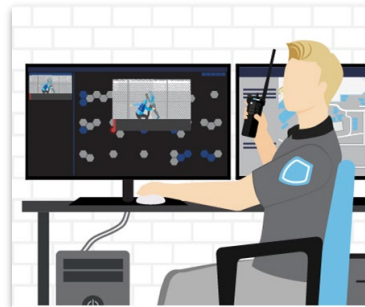
HD wide-lense cameras allow airports to monitor more with less and a camera recognizes an individual scaling fence to airfield and alerts security teams.



COMMUNICATE

RESOURCES DISPATCHED

Hiding place of intruder is determined and shared across security team with to apprehend intruder.



ANALYZE

APPEARANCE TRACKED

Situational awareness maintained as intruder's appearance is automatically tracked across multiple cameras on the airfield.



RESPOND

FIRST RESPONSE DISPATCHED

Local police directly informed with video for immediate response and incident logged with pre-populated fields and relevant data.



AIRFIELD BREACH

Use Case



DETECT

- Avigilon Camera
- Unusual Motion Detection
- Avigilon Control Center
- Radio Alert



ANALYZE

- Avigilon Cameras
- Appearance Search
- Avigilon Control Center



COMMUNICATE

- CommandCentral Aware Enterprise
- WAVE / Broadband Push To Talk
- Radio Communications
- Dispatch




RESPOND

- Ally Incident Management
- CommandCentral Aware Enterprise
- Critical Connect

ELEVATED SKIN TEMPERATURE DETECTION

Use Case



Airports need an effective and efficient way to monitor the health of travelers and staff when entering their facility, especially during times of a public health crisis. Video analytics can empower security operations teams to screen more people in less time than manual alternatives and effectively alert the appropriate personnel to respond to the situation.



ELEVATED SKIN TEMPERATURE DETECTION

Use Case



DETECT

ELEVATED SKIN TEMPERATURE DETECTED

A thermal camera at an airport security checkpoint detects a passenger with elevated skin temperature and automatically alerts the security operations center.



ANALYZE

TEMPERATURE ALERT VERIFIED

The security operations center acknowledges the alert and identifies the passenger with elevated skin temperature.



COMMUNICATE

RESOURCES DISPATCHED

Agents at the security checkpoint are notified of the passenger and a medical professional is dispatched to the checkpoint.



RESPOND

SITUATION RESOLVED

The passenger is discreetly isolated and a medical screening is conducted and an incident logged with pre-populated fields and relevant data.



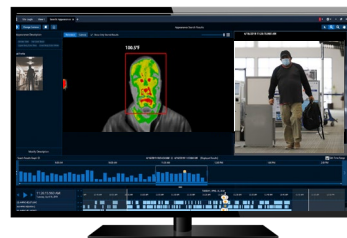
ELEVATED SKIN TEMPERATURE DETECTION

Use Case



DETECT

- Avigilon Camera
- Skin temperature detection
- Avigilon Control Center



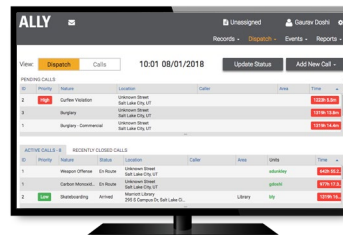
ANALYZE

- Avigilon Cameras
- Avigilon Control Center



COMMUNICATE

- WAVE / Broadband Push To Talk
- Radio Communications
- Dispatch



RESPOND

- Ally Incident Management

STERILE AREA BREACH

Use Case

Security screenings at Detroit Metro Airport temporarily halted due to security breach

When flagged travelers or airport staff bypass security without being properly screened they must be immediately located. The process of tracking these individuals is typically manual and impeded by disjointed systems and communications.



ELEVATED SKIN TEMPERATURE DETECTION

Use Case



DETECT

ELEVATED SKIN TEMPERATURE DETECTED

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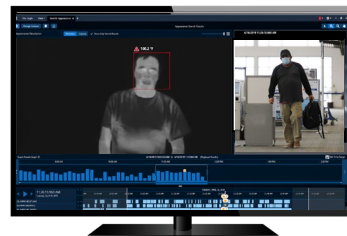
ELEVATED SKIN TEMPERATURE DETECTION

Use Case



DETECT

- Avigilon Camera
- Skin temperature detection
- Avigilon Control Center



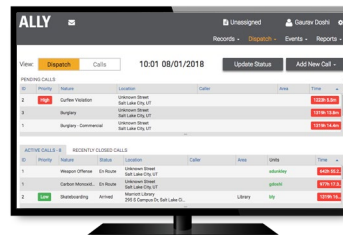
ANALYZE

- Avigilon Cameras
- Avigilon Control Center



COMMUNICATE

- WAVE / Broadband Push To Talk
- Radio Communications
- Dispatch



RESPOND

- Ally Incident Management

SECURE AREAS AND AIR OPERATIONS

Use Case

TSA warns of man trying to enter restricted airport areas

October 7, 2017

AP

Door alarms are the most common type of incident that many airport security and operations respond to on a daily basis. Airports need a better way to efficiently investigate and respond to door alarms without causing disruption whether the alerts are real or false.

DOOR ALARMS

Use Case



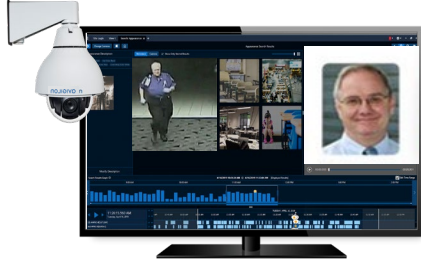
DETECT



DOOR ALARM TRIGGERED & ALERTS SOC

Alert sent to security operations when door opened to restricted area with no code or card swipe.

ANALYZE



APPEARANCE MATCHED & TRACKED

The offender's appearance is captured and automatically tracked over multiple areas and camera. Speakers in camera automatically alert the offender*.

COMMUNICATE



NOTIFICATION COMMUNICATED

After the initial alert, intruder image and location sent to nearby security teams in the field to verify identification and authorized access.

RESPOND



INCIDENT MANAGED AND REPORTED

Security incident is automatically logged and documented allowing for further training & analysis.

RESTRICTED AREA ACCESS

Use Case



DETECT

MOVEMENT RECOGNIZED IN RESTRICTED AREA

Alert sent to security about activity detected in a restricted area with no anticipated entry.



ANALYZE

APPEARANCE TRACKED IN TERMINAL

The intruder's appearance is captured and automatically tracked over multiple areas and camera.



COMMUNICATE

NOTIFICATION COMMUNICATED

After the initial radio alert, intruder image and location sent to nearby security teams in the field.



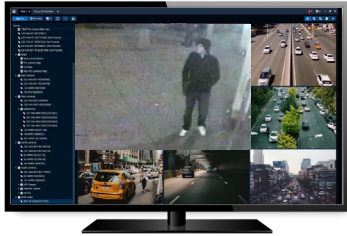
RESPOND

INCIDENT MANAGED AND REPORTED

Security incident is logged with pre-populated fields and relevant data allowing for further training & analysis.

RESTRICTED AREA ACCESS

Use Case



DETECT

- Avigilon Camera
- Access Control Manager
- Radio Alert



ANALYZE

- Avigilon Cameras
- Appearance Search
- Avigilon Control Center



COMMUNICATE

- CommandCentral Aware Enterprise
- WAVE / Broadband Push To Talk
- Radio Communications
- Dispatch



RESPOND

- Ally Incident Management
- CommandCentral Aware Enterprise

TRAVELER SLIP-AND-FALL

Use Case

\$300K FOR BROKEN SHOULDER FROM AIRPORT SLIP & FALL

DEC.18.2018

B BLASINGAME · BURCH
G GARRARD · ASHLEY, P.C.

As travelers move through airports, it is not uncommon for accidents to happen especially when people are in a hurry. Airport authorities need to be prepared for slips and falls through early detection, coordinated responses as well as having associated footage or reports easily accessed for potential litigation purposes.



TRAVELER SLIP-AND-FALL

Use Case



DETECT

HAZARD AREAS MONITORED

An HD wideview camera constantly monitors a large terminal with multiple travelers.



ANALYZE

FALL AUTOMATICALLY DETECTED

Using video analytics, a fall is detected on a traveler and automatically alerts airport operations.



COMMUNICATE

NOTIFICATION COMMUNICATED

The nearest medic or airport staff is quickly determined and dispatched to assist the fallen traveler.



RESPOND

INCIDENT MANAGED AND REPORTED

Airport operations monitors the situation via video and an incident report is logged with pre-populated fields and relevant data.



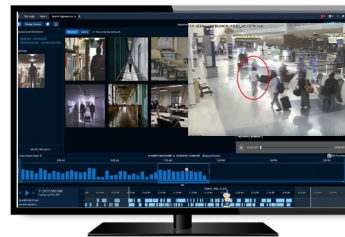
TRAVELER SLIP-AND-FALL

Use Case



DETECT

- Avigilon Camera
- Avigilon Control Center



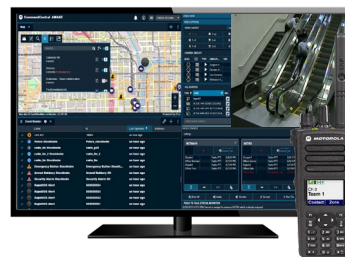
ANALYZE

- Avigilon Cameras
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COMMUNICATE

- CommandCentral Aware Enterprise
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RESPOND

- Ally Incident Management
- CommandCentral Aware Enterprise

LITIGATION RESPONSE

Evidence collection, Redaction



DETECT

ANALYZE

COMMUNICATE

RESPOND



TRAVELER LITIGATION

The injured traveler presses charges against the airport claiming dangerous conditions on the travelator.



EVIDENCE GATHERING

Using their single unified platform, airport security operations is able to quickly retrieve and share all fixed and body-worn camera footage that was previously associated with the incident report.

MISSING PERSON

Use Case

The aviation industry must collaborate to prevent human trafficking

9 December 2019

INTERNATIONAL
Airport
REVIEW

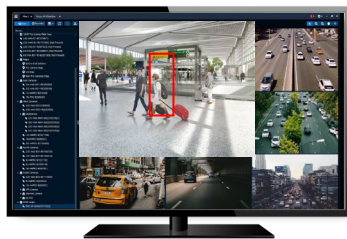
Missing people often times pass through airports, usually against their will, without detection. By leveraging federal watch lists, airport authorities can now identify if a missing person is in their airport, monitor their movements and quickly respond to return them to safety.

MISSING PERSON

Use Case



DETECT



FACE MATCH RECOGNIZED OF MISSING PERSON

Alert sent to security about missing person match from database and captor's image identified.

ANALYZE



APPEARANCE TRACKED IN TERMINAL

Situational awareness maintained as missing person and captor appearances are automatically monitored throughout airport.

COMMUNICATE



NOTIFICATION COMMUNICATED

After the initial alert, individual's image and location sent to nearby security teams in the field.

RESPOND



FIRST RESPONSE DISPATCHED

Local police directly informed with video for immediate response and incident recorded and logged.

ESCALATING SITUATION

Use Case

Bronx slaying suspect caught at JFK Airport trying to flee country

John Annese 1/1/2020

DAILY NEWS

First responders typically respond to a call within 8 minutes, arriving with minimal information.

Every moment which enables earlier warning and better information is a moment that counts.

Integrated technology can help prevent incidents from becoming tragedies.

FLEEING CRIMINAL

Use Case



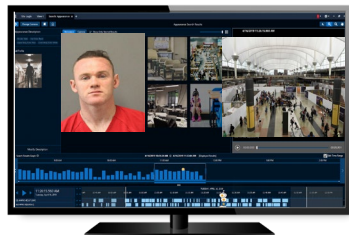
DETECT



LICENSE PLATE RECOGNIZED

Reported stolen vehicle license plate from database detected entering the parking lot.

ANALYZE



APPEARANCE DETECTED

Fleeing suspect associated with the vehicle recognized from database entering main terminal.

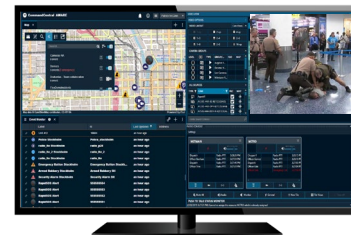
COMMUNICATE



NOTIFICATION COMMUNICATED

Alert dispatched to security staff informing them of situation with images of the suspect and location information. Team locates and approaches the suspect.

RESPOND



FIRST RESPONSE DISPATCHED

The situation escalates and local police are directly informed with video for immediate response and incident automatically logged with relevant data.

SUSPICIOUS LUGGAGE

Use Case

Huge increase in unattended luggage prompts campaign in Paris

29 November 2017

INTERNATIONAL
Airport
REVIEW

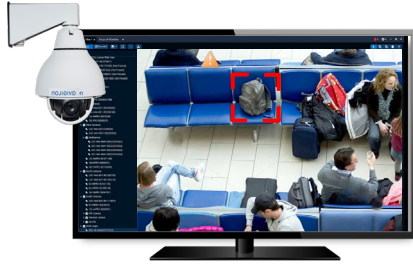
Suspicious baggage can often be a result of passenger or staff carelessness however every incident needs to be treated as a potential threat. Suspicious bags can pose an explosive risk or be involved in illegal activities. It is vital that Airport Authorities recognize and resolve these issues quickly and with minimal operational disruption.

SUSPICIOUS LUGGAGE

Use Case



DETECT



BREACHED LUGGAGE DETECTED

A security agent accidentally pulls the wrong piece of luggage to be screened and the flagged luggage continues into the airport and alerts security operations.

ANALYZE



DETERMINE PERSON & LOCATION

Airport operations captures the identity of the person with suspicious luggage and uses Appearance Search to automatically track them within the terminal.

COMMUNICATE



RESOURCES DISPATCHED

Security notified and BOLO image and current location shared with the field.

RESPOND



SITUATION RESOLVED

Security check finds a forgotten pocket knife in luggage and incident automatically documented with associated data.

A photograph of two men in dark suits and white shirts standing in a modern, brightly lit interior space, possibly a corporate lobby or office building. The man on the left is looking towards the man on the right and is holding a black Motorola walkie-talkie. The man on the right is seen from the side, also holding a Motorola walkie-talkie. In the background, there is a large blue digital display screen mounted on a wall. The overall atmosphere is professional and collaborative.

THANK YOU