MOTOROLA SOLUTIONS

RESTRICTED
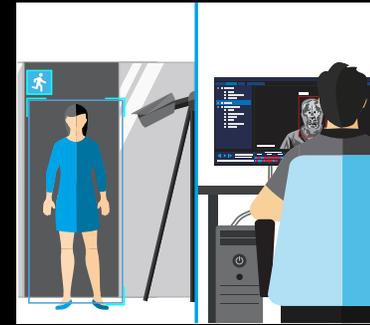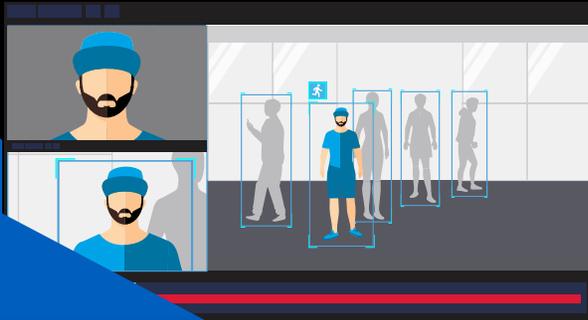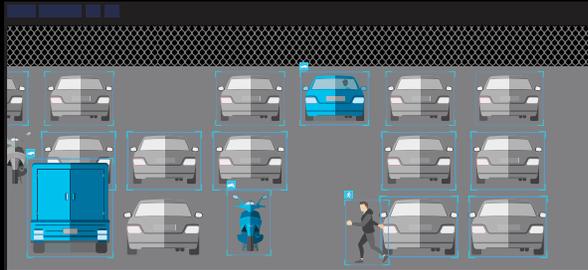
MODERNIZE YOUR VIDEO SECURITY SOLUTION WITH AI AND ANALYTICS

VIDEO SECURITY PLANNING GUIDE

avigilon™

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ENHANCE VISIBILITY AND RESPONSE TIMES WITH ASSISTIVE AI AND ANALYTICS

Within the next five years, there will be around 45 billion cameras on Earth, which equates to roughly six cameras for every single human on the planet.

This abundance of information and data far outweighs our ability to process and analyze all this information on our own. Security teams watching hours of video from multiple camera feeds over the course of a day poses a real risk of critical events being missed.
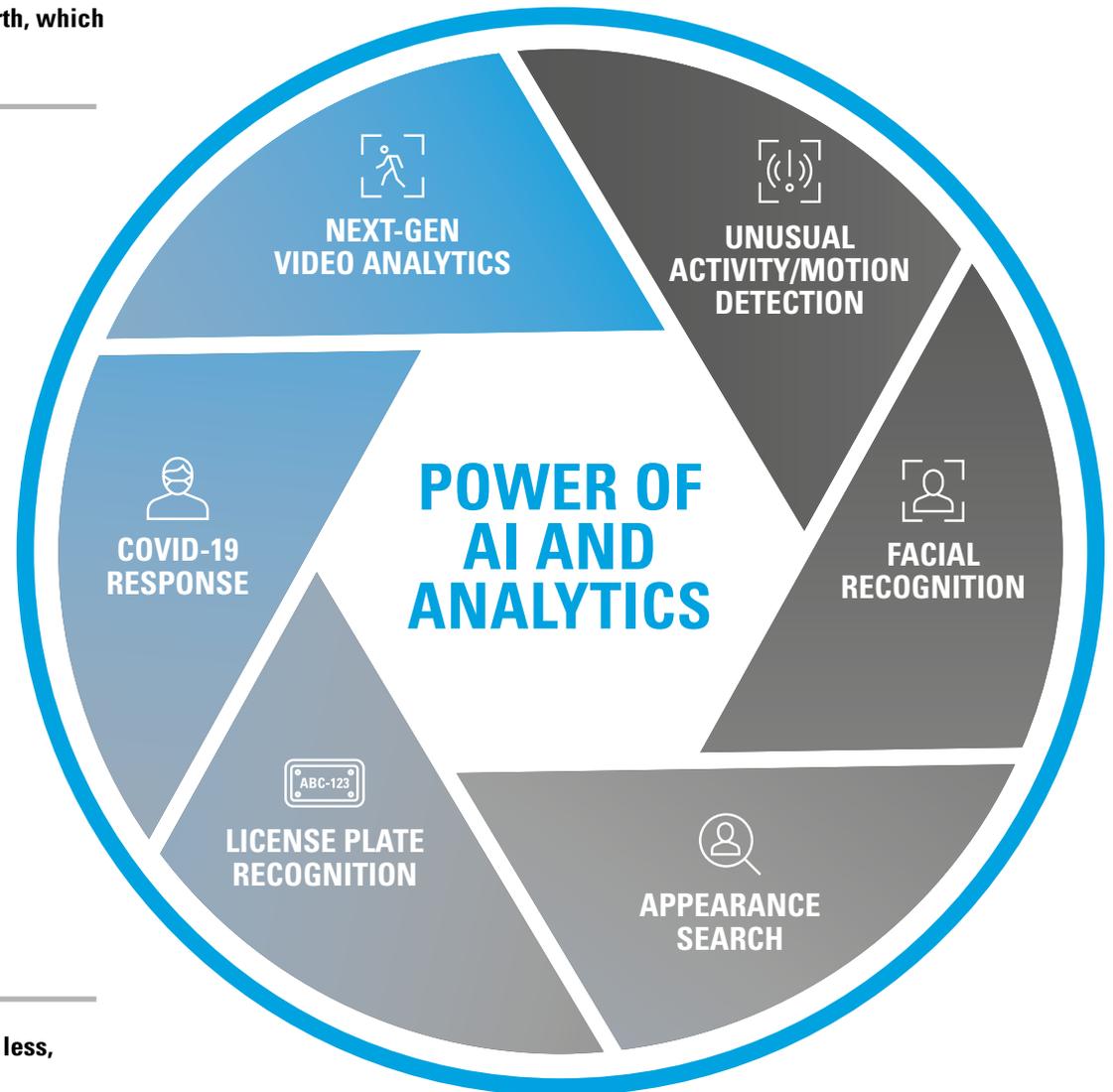
The more data that needs to be consumed, analyzed, evaluated, and investigated, the more challenging it is for security operators to determine what matters most and be as effective and efficient as possible.

Artificial Intelligence, or AI, powering video analytics can help increase the productivity of security personnel and enable effective monitoring of events to facilitate proactive, real-time responses.

With Avigilon, our assistive AI technologies enable security operators to detect potentially critical events that are happening by presenting information in a consumable way–removing the noise, clutter, and bringing the right information with the right criticality to their attention at the right time.

This helps to boost productivity by allowing teams to efficiently allocate scarce resources so they can spend less time on watching live and recorded video, and use their human reasoning to determine the best course of action and drive a more effective and timely response.

Leveraging AI-powered video analytics, security teams can do more with less, while maximizing resources to make monitoring high definition security video more affordable and efficient.

POWER OF AI AND ANALYTICS

NEXT-GEN VIDEO ANALYTICS

UNUSUAL ACTIVITY/MOTION DETECTION

FACIAL RECOGNITION

APPEARANCE SEARCH

LICENSE PLATE RECOGNITION

COVID-19 RESPONSE

AUTO DETECT AND DISTINGUISH OBJECTS IN A SCENE

CHALLENGE

Operators today are tasked with live monitoring multiple cameras at once. This can result in attention fatigue that can lead to critical events being missed, such as recognizing theft, vandalism, trespassing or loitering.

TECHNOLOGY

Next-Generation Video Analytics empower security teams to focus efforts on what matters most by providing reliable object detection, tracking and classification for monitoring indoor and outdoor environments. It increases visibility with the capacity to distinguish people and vehicles in a crowd, including those that are partially obstructed, flag potentially critical events and enable real-time responses. With intelligence at the edge, the analytics operate at the point of capture onboard Avigilon's H5A camera line.

OUTCOME

Respond faster with video analytics to provide insights on potentially critical events with greater accuracy, reliability and context, including perimeter protection and in crowded environments. This allows security teams to live monitor more efficiently and effectively.

Next-Generation Video Analytics bring enhanced object detection, tracking and classification to live monitoring, including the ability to detect up to 50 objects in a scene, even if they are stationary. Its expanded object classification goes beyond simply people and vehicles to include distinguishing between cars, trucks, buses, motorcycles and bicycles, helping to alert operators with far greater context of potentially critical events happening on-site.

Learn more at
avigilon.com/products/ai-video-analytics/nextgen

REVEAL SECURITY EVENTS THAT MAY GO UNNOTICED

CHALLENGE

Certain events are immediately apparent as a potential security threat and require operator investigation, such as a group of people loitering or an individual entering a secure area. However, there are other events that cannot be anticipated but equally require attention, such as a car driving on a sidewalk, or a trespasser scaling up the side of a building to the roof and entering a restricted area.

TECHNOLOGY

Unusual Activity Detection (UAD) is built into the H5A camera line and offers an object-aware solution that highlights atypical speed and location of people and vehicles detected on camera, which may be indicative of a critical event. Whereas, **Unusual Motion Detection** (UMD) continuously learns what a typical camera scene looks like across different time periods and flags atypical movement that deviates from that learned norm for additional operator attention. UMD is available as an embedded solution in Avigilon's H5SL, H5M, H4A, H4SL and H4 Mini Dome camera lines.

OUTCOME

Uncover events that may otherwise have been missed and bring a new level of automation to video security systems. Operators can also quickly review large amounts of footage by filtering the video management software to only highlight when and where atypical events have occurred for investigations, helping to reduce hours of work to mere minutes.

UAD & UMD detects and alerts operators of the unanticipated with intelligent technology that distinguishes between typical and atypical events by learning from observation of scenes over time. No predefined rules or set-up required.

Learn more at
avigilon.com/products/ai-video-analytics/unusual-activity-detection
& avigilon.com/products/ai-video-analytics/umd

H5A-PTZ Camera

RESTRICTED

EFFICIENTLY DETECT A PERSON OF INTEREST

CHALLENGE

An individual has been repeatedly caught vandalising property within the site and has since been added to the facility's watchlist after causing costly damages and potentially risking the safety of employees.

TECHNOLOGY

Facial Recognition technology plays an assistive role in increasing the effectiveness of physical security systems by using the cameras across a site to watch for a known offender whose image has been previously added to the facility's watchlist and alerting the operator when they are detected the next time they return to the site. Embedded on Avigilon's H5A analytic cameras, enabling facial recognition technology to run across an entire site on general-purpose security cameras can help increase the chance of detecting a person of interest. H5A cameras accurately detect faces for ACC™ software to identify potential matches against the configured face watch list(s).
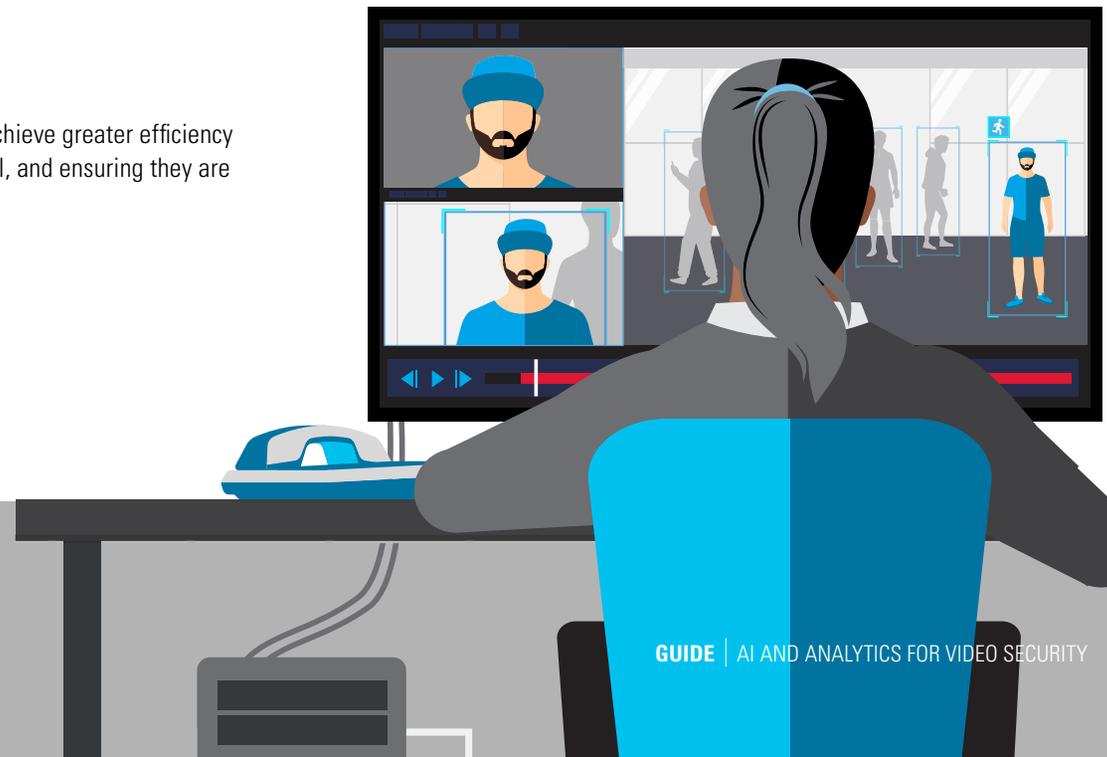
OUTCOME

Facilities are equipped with an incredibly powerful tool that enables operators to achieve greater efficiency in detecting known offenders, quickly attending to the scene to escort the individual, and ensuring they are kept off premises to ensure the safety and security of their assets and people.

Accelerate response times using AI-powered facial recognition technology to detect people of interest based on one or more secure watch lists. Avigilon cameras licensed for facial recognition seek to identify potential matches based on user-identified watch lists. Once a match is found, the user is alerted through Avigilon's Focus of Attention interface or through an alarm within Avigilon Control Center (ACC) software.

Learn more at
avigilon.com/products/ai-video-analytics/facial-recognition

QUICKLY SEARCH THROUGH HOURS OF RECORDED VIDEO

CHALLENGE

An individual is spotted in a restricted area on premise, where only staff are permitted. Eye witnesses have spotted this individual and tipped off to security personnel that the offender is an adult male, with blonde hair, wearing blue jeans and a red shirt.

TECHNOLOGY

Start a search for both people and vehicles of interest based on one instance in recorded video. Complete a motion, thumbnail, alarm or identity search, or scan across the timeline within the ACC software to find the person or vehicle of interest. The security operator is able to initiate the search for this known individual based on physical descriptions, such as clothing color, gender, and age categorization. Enable **Avigilon Appearance Search™ technology** on Avigilon cameras with our pre-configured Network Video Recorders (NVRs) and even enable legacy third-party cameras with this technology when equipped with an Avigilon AI Appliance.

An AI-enabled search engine for video that makes searching through recorded video infinitely simpler. Sort through hours of video with ease to quickly locate a specific person or vehicle of interest and enable your security team to be more efficient by improving their response times. It also allows operators to better enhance forensic investigations by helping them compile robust video evidence, create a powerful narrative of events, and reveal a vehicle or individual's route or last-known location.

**Learn more at
avigilon.com/products/ai-video-analytics/appearance-search**
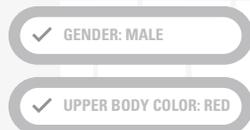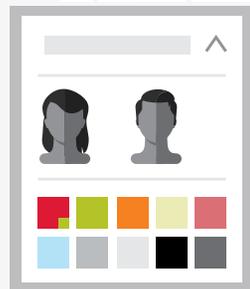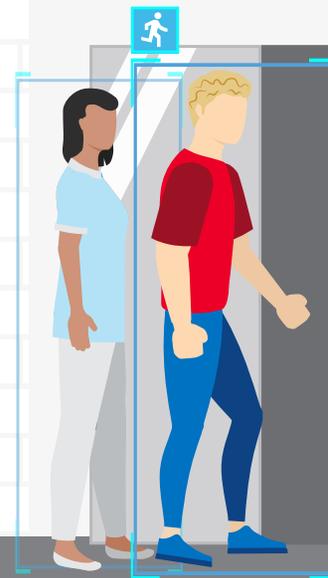
OUTCOME

The security team is able to quickly identify the individual and escort them off the restricted area, ensuring that everyone within the premise is kept safe and minimizing a potentially critical event.

GENDER: MALE

UPPER BODY COLOR: RED

DETECT AND SEARCH FOR SUSPICIOUS LICENSE PLATE DATA

CHALLENGE

Facilities need to reliably and accurately capture footage of license plates off a vehicle travelling at typical speeds, often from a range of distances and under a wide variety of lighting conditions, when looking for stolen vehicles or vehicles belonging to persons of interest.

TECHNOLOGY

Avigilon **License Plate Recognition (LPR) analytics** recognize license plate data with high accuracy. The ability to read and search license plate information from vehicles enables matching them to a managed watch list of license plates for alerting and forensic investigation. Capture license plates with an Avigilon H4 License Plate Capture (LPC) camera from vehicles travelling at typical speeds and from a range of distances, even in challenging lighting conditions using infrared (IR) illumination and visible light filtering.
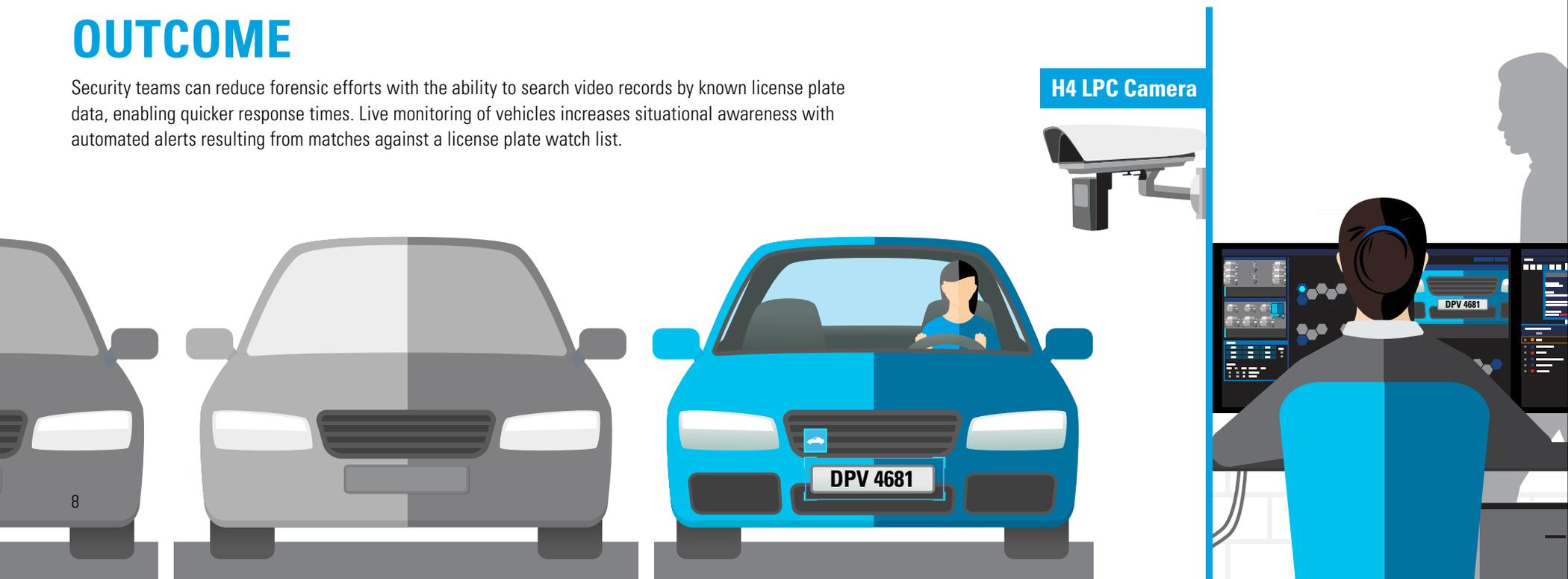
OUTCOME

Security teams can reduce forensic efforts with the ability to search video records by known license plate data, enabling quicker response times. Live monitoring of vehicles increases situational awareness with automated alerts resulting from matches against a license plate watch list.

LPR analytics automatically read license plate information from vehicles, linking it to live and recorded video. This enables security operators to detect the presence of vehicles of interest in real-time or search, using full or partial numbers, and quickly find specific captured license plate video for further verification and investigation.

Learn more at
avigilon.com/products/ai-video-analytics/lpr

H4 LPC Camera

DPV 4681

DPV 4681

MANAGE THE HEALTH AND SAFETY OF STAFF AND CUSTOMERS DURING A PANDEMIC

CHALLENGE

Facilities are unable to determine whether staff and visitors are adhering to health and safety protocols such as limiting occupancy rates, social distancing, face mask attire, and self-monitoring for fever-like symptoms.

TECHNOLOGY

Occupancy Counting analytics register the number of people entering and exiting a facility, providing a real-time count of net occupancy to support social distancing measures. Enforce **Social Distancing** once inside the facility with analytics that monitor when the distance between two or more individuals falls under the recommended threshold and for how long. Supplemental measures include personal protective equipment, for which **No Face Mask Detection** analytics are able to accurately detect objects in the camera's field of view, classify them as humans and determine whether the subject is not wearing a mask. These analytic capabilities are all available using Avigilon's H5A camera line that uses intelligence at the edge to capitalize on AI-based analytics designed to detect violations of health and safety guidelines.

Elevated Temperature Detection analytics detect and alert for indications of elevated body temperature by focusing on a face and measuring the temperature of a person's inner canthus (tear duct) region. Using Avigilon's H4 Thermal Elevated Temperature Detection (ETD) Camera, the technology is optimized to detect faces, ignoring irrelevant temperature signatures from surrounding sources and provide a low friction, contactless alternative to traditional body temperature screening methods.
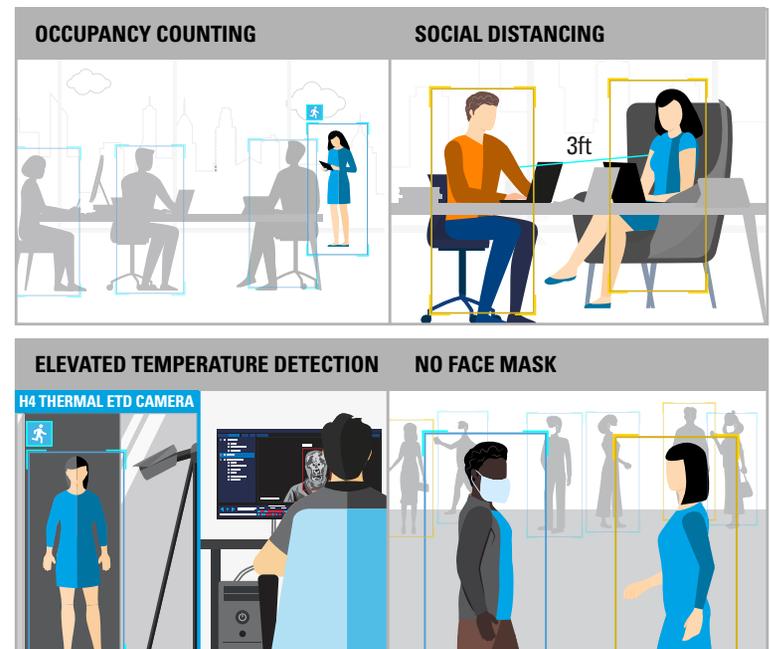
OUTCOME

Confidently manage and address the health and safety of your facility and the people within them using technologies that work in concert to deliver greater intelligence and stronger detection capabilities.

COVID-19 video analytics technology is designed to detect, report, and in some cases, alert on violations of standard health and safety protocols using the edge-based intelligence onboard H5A cameras. The analytic data improves compliance and delivers actionable information that increases visibility and awareness around efforts to improve.

Learn more at
avigilon.com/solutions/covid-19-resources

OCCUPANCY COUNTING   SOCIAL DISTANCING

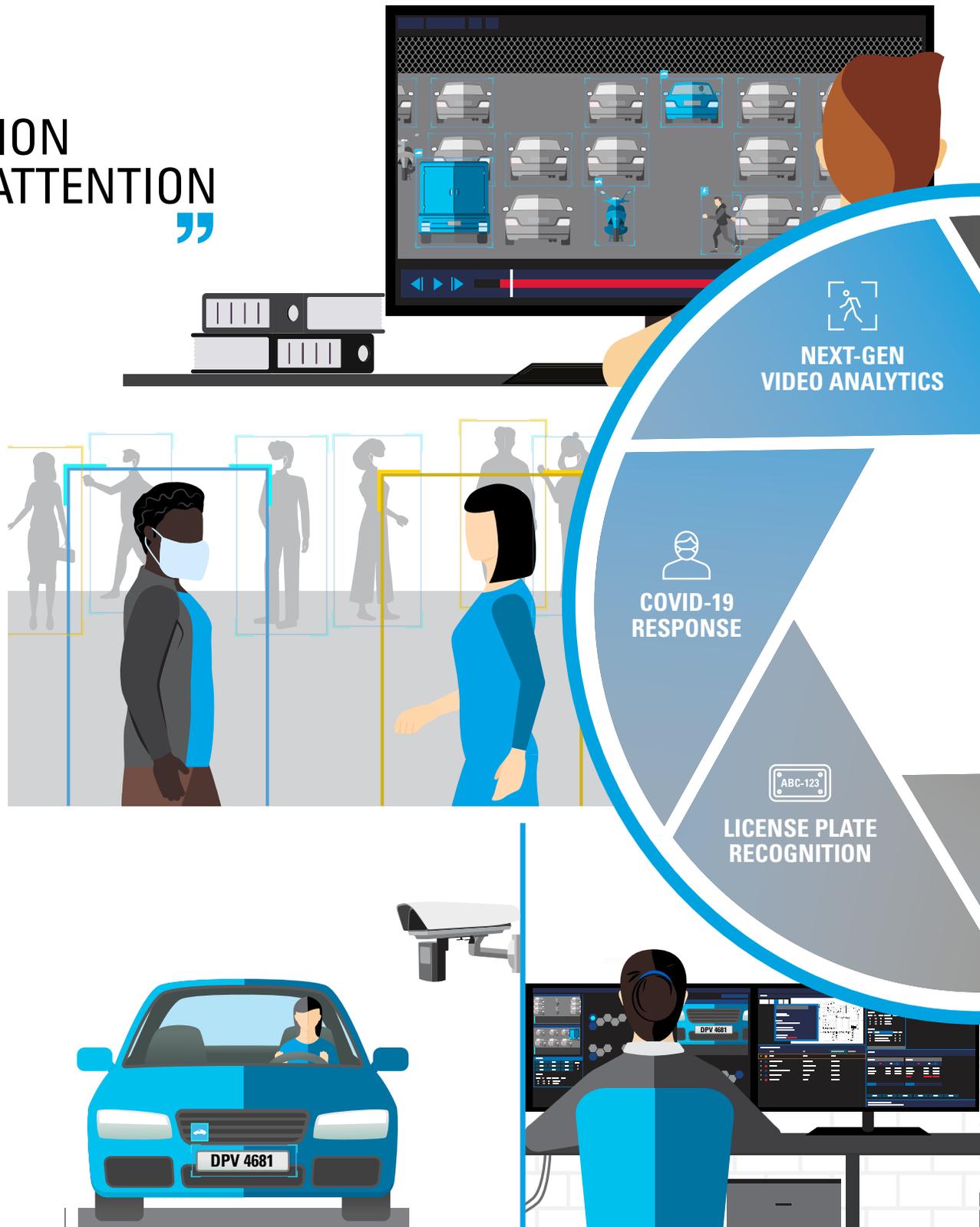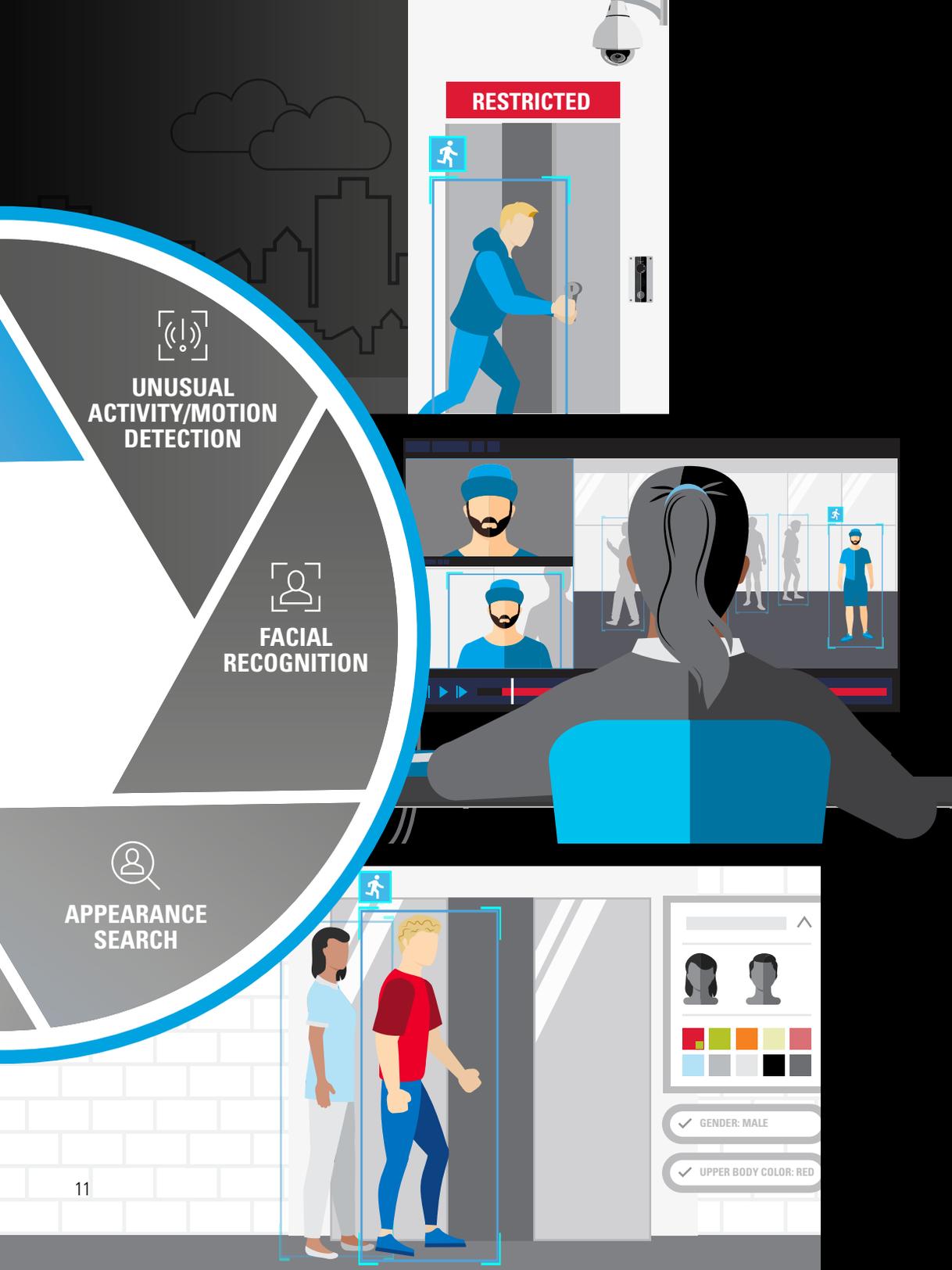ELEVATED TEMPERATURE DETECTION   NO FACE MASK

"
A WEALTH OF INFORMATION CREATES A POVERTY OF ATTENTION

HERBERT A. SIMON, FATHER OF ARTIFICIAL INTELLIGENCE

AI-POWERED TECHNOLOGY THAT DELIVERS ACTIONABLE RESULTS

The human attention span is finite and yet, there is an imbalance. Video today is proliferating across the world, keeping pace with evolving technology and creating an overwhelming amount of information available. As a result, video has outpaced a human's capacity to monitor it. This includes watching live security footage for an entire shift, posing a grave risk to a critical event going unnoticed.

NEXT-GEN VIDEO ANALYTICS

COVID-19 RESPONSE

LICENSE PLATE RECOGNITION

ABC-123

DPV 4681

DPV 4681

AI-ENABLED VIDEO ANALYTICS CAN HELP RESTORE THE HUMAN ATTENTION SPAN AND TECHNOLOGY IMBALANCE.

At Avigilon, we aim to make watching live video obsolete and make recorded video as searchable as the internet. We strive to re-establish the balance with our cameras, which feature advanced video analytics at the edge for enhanced object detection, tracking and unusual event detection. Our Focus of Attention interface within ACC software enables operators to see at-a-glance what is happening across an entire site through a centralized view. Live monitoring is augmented with alert-based functionality that includes Facial Recognition and License Plate Recognition technology to accelerate the identification of people and license plates of interest for quicker, decisive responses, along with COVID-19 response technology to help you effectively monitor for violations of health and safety protocols and manage compliance during a pandemic. Finally, Avigilon Appearance Search technology allows operators to search through recorded video easily to find a person or vehicle of interest within seconds, much like how we operate internet search engines today.

Avigilon's AI-enabled video analytics is created to evolve with ongoing security challenges, including new functionality in the future that will support more classifications, unusual object activity and face applications to address the continuously dividing imbalance between the human attention span and video technology. This is the Avigilon advantage.
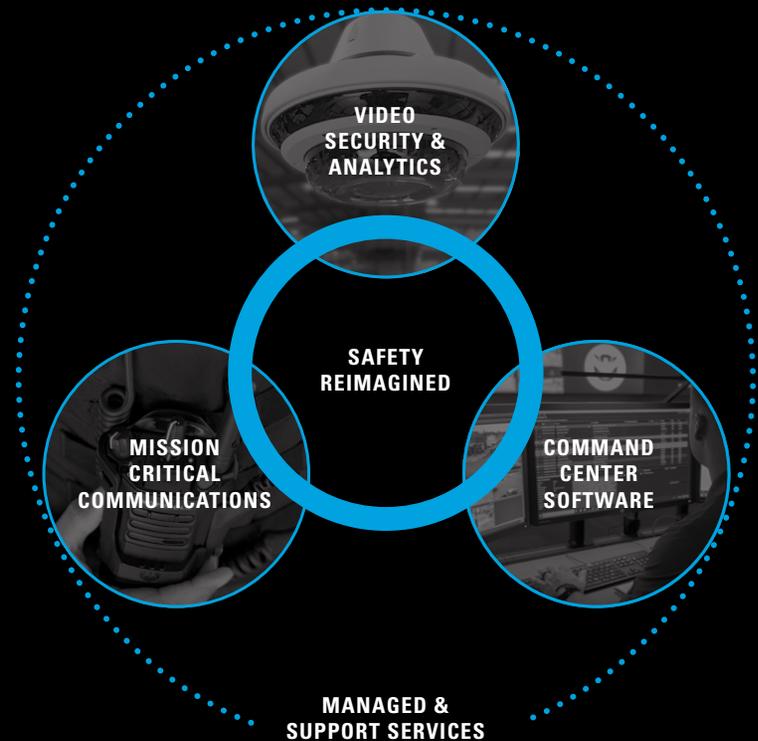
BUILDING YOUR VIDEO SECURITY SOLUTION IS WORTH THE EFFORT

Through Motorola Solutions' Avigilon portfolio of products, we are advancing the security industry by providing innovative, end-to-end solutions. Delivering cutting-edge technology, our offerings provide industry-leading security cameras, video management software and hardware, video analytics, cloud solutions and access control.

Motorola Solutions, a global leader in mission-critical communications and analytics, is revolutionizing how public safety and security is managed.

By taking an integrated approach to video security and analytics, mission-critical communications and command center software, the convergence of these Motorola Solutions technologies creates a powerful ecosystem that enables information to flow seamlessly across systems for a more informed response to critical events and promotes collaboration between security teams and first-responders to reduce the strain on critical personnel and restore focus on the customers and communities they serve.

Incorporating AI and analytics into a robust, end-to-end video security platform for your facility adds a productivity multiplier to help security teams. This results in a dynamic security solution that delivers actionable results and keeps your most valuable assets safe and secure.

VIDEO SECURITY & ANALYTICS

SAFETY REIMAGINED

MISSION CRITICAL COMMUNICATIONS

COMMAND CENTER SOFTWARE

MANAGED & SUPPORT SERVICES

CLICK HERE
TO GET STARTED TODAY

MOTOROLA SOLUTIONS