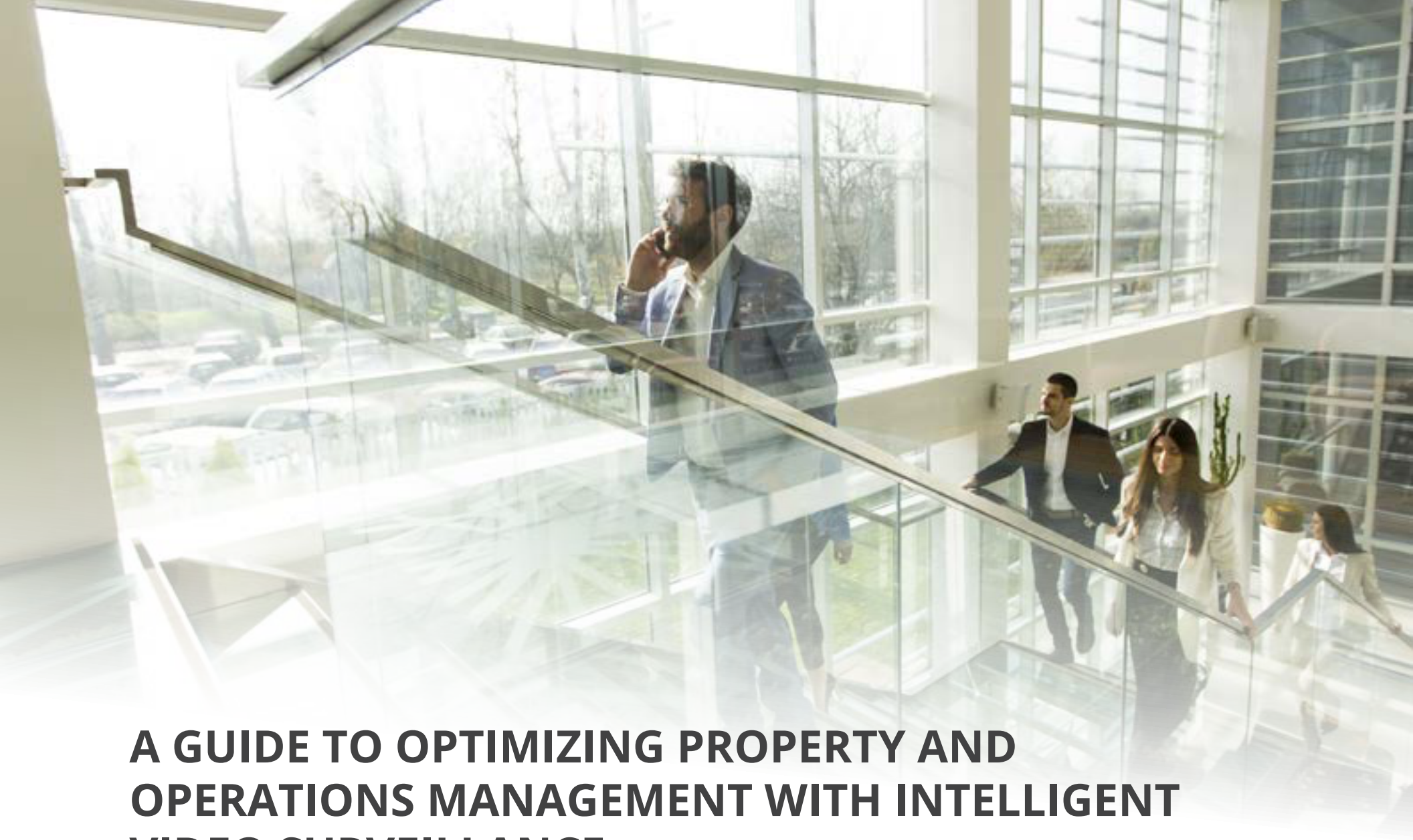


A GUIDE TO OPTIMIZING PROPERTY AND OPERATIONS MANAGEMENT WITH INTELLIGENT VIDEO SURVEILLANCE

BriefCam

TABLE OF CONTENTS

CHAPTER 1

CAPITALIZE ON VIDEO SURVEILLANCE SYSTEMS

In recent decades video surveillance (CCTV) systems have become ubiquitous in many industries, primarily for physical security purposes. Security teams typically use cameras to monitor activity in real-time, or to review footage in post-incident investigations. Such cameras create vast quantities of footage containing information regarding events, behaviors, and activities captured by cameras. Such information is valuable to multiple stakeholders across an organization, above and beyond security, to include operations managers, property managers, and others. However, much of that information typically goes underutilized, because manual review of video footage requires too much time; even if there were enough manpower to review thousands of hours of footage, human observation is incapable of comprehending and analyzing all of that data accurately.

This guide will describe why video analytics software is the key to unlocking the business intelligence that lies buried in video footage. It transforms video footage from unstructured data into business intelligence that operations and property managers can leverage to reduce operational costs, ensure facility compliance, enhance tenant satisfaction, and, ultimately, drive greater revenue.

This guide will explain what video intelligence software is, and how operations and property management teams in various industries — from transportation to healthcare, education, manufacturing, retail, education, finance, healthcare, and hospitality — can harness video content to derive more value from their investment in video surveillance.

CHAPTER 2

WHAT IS VIDEO CONTENT ANALYTICS SOFTWARE?

Video content analytics software is powered by Artificial Intelligence (AI) to process video to identify and classify objects in the video footage, such as people, vehicles, and other items, and then index them. This enables operators to quickly and easily search live and recorded video, filter and alert on content based on identifying criteria, such as gender, size, color, speed, path, direction, and dwell duration. Intelligent video surveillance makes video not only searchable and actionable, but quantifiable.

Video analytics also aggregates data so that multiple teams and functions within an organization can research visitor traffic or behavioral trends, benchmark activity, and develop strategies for improved efficiency. Aggregated video data is accessed via dashboard reports and heatmaps to uncover trends and enable data driven decision making. By aggregating video data over time, video content analytics provides business intelligence that critically helps managers understand trends, make better decisions, and optimize strategic planning.

Depending on their industry, operations and property managers oversee a variety of priorities: i.e., streamlining pedestrian or vehicle traffic flows inside and outside their facilities, reducing crowding or long queues, optimizing facility cleaning and maintenance, and improving site layout. Given those diverse tasks, they typically collaborate with a cross-section of teams such as facility maintenance, staffing, security, and customer service. The following provides some examples of how video analytics software enables managers to streamline operations and improve guest and tenant satisfaction.

CHAPTER 3

HOW TO IMPROVE PROPERTY MANAGEMENT

Property managers in office buildings, commercial retail buildings or in large residential buildings must satisfy both the clients/tenants who lease space in their property, and the visitors and residents who use those services. To drive revenue for commercial retail tenants, which in turn drives revenue for the property as a whole, managers must enhance visitor engagement, encourage guest loyalty, and optimize guest amenities. In contrast to anecdotal observations, video analytics data provides better visibility into traffic patterns, visitor demographics, and how visitors interact with a property, so that managers have actionable, quantifiable data that informs management decisions and strategies and helps managers respond to current, real-time, evolving situations.

OPTIMIZE SITE LAYOUT AND SPACE UTILIZATION, ACROSS MULTIPLE SITES

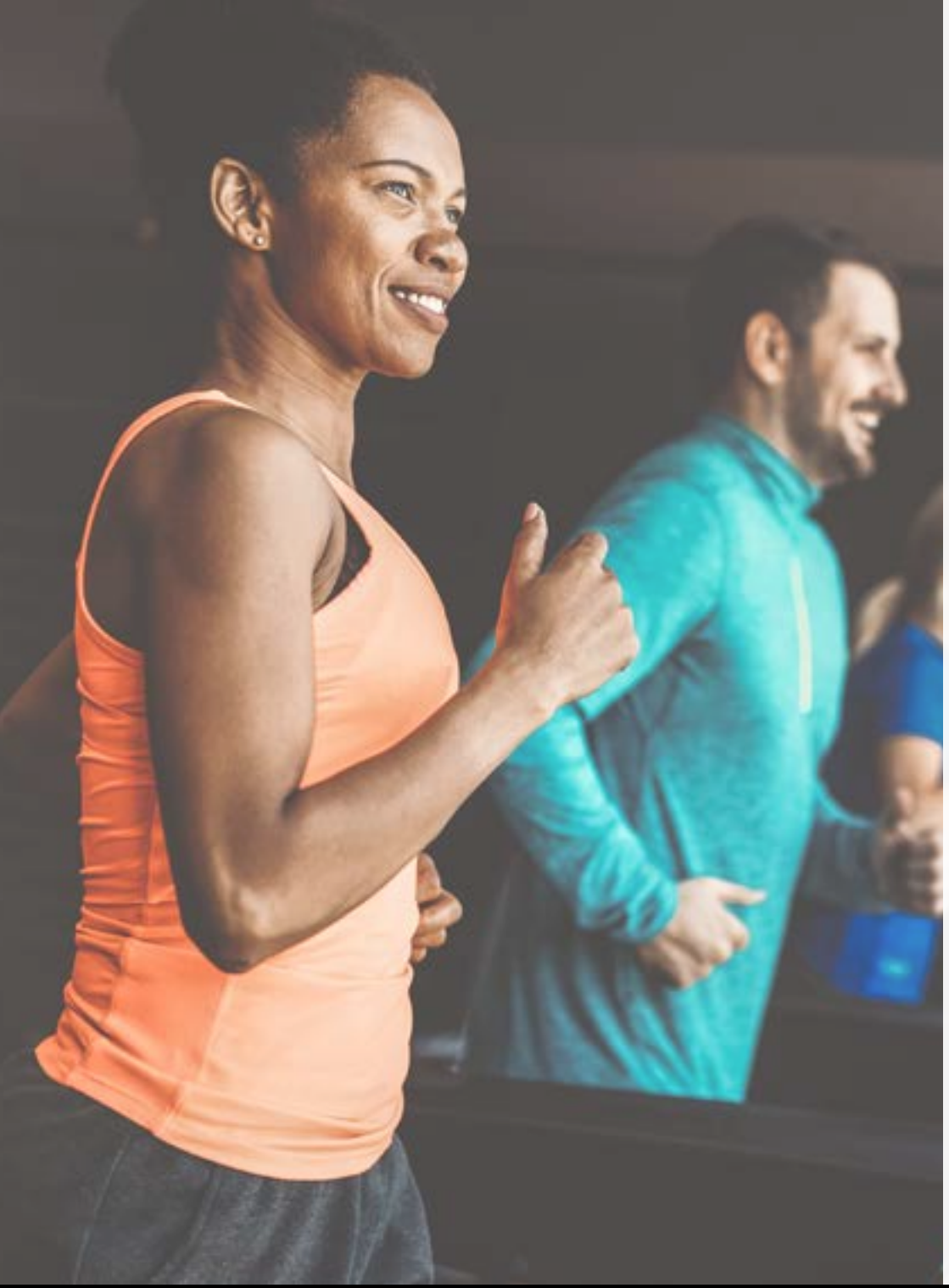
Video analytics software aggregates data over time (days, weeks, months, years), and presents it in the form of dashboard reports, including heatmaps, graphs, and charts to answer questions such as, which attractions or displays attract the most visits? During which hours is there increased traffic? How much time do visitors spend studying the building map? How do visitors typically navigate a building or area? These questions and more can be answered with visual heatmap reports that indicate which areas of a facility are popular and which areas have problematic crowding, and uncover inefficiencies in site navigation. For property managers that oversee multiple sites or stores, such as big box retailers, they can collect all that data at the individual store level, and roll it up to corporate headquarters to compare each site.

Video analytics data helps manages identify spaces that may be under-utilized, or spaces that should be reconfigured or expanded, so they can revise layouts, or improve staffing and signage to optimize the flow of traffic throughout a building or complex of buildings. They may even solve some navigational problems simply by analyzing navigational trends and updating their building maps or directories so that visitors can more easily navigate the building. By maximizing space utilization based on actionable and quantifiable insights, property managers can deliver better visitor experiences, facilitate informed decision-making for tenants, and drive their bottom line.

PREVENT CROWDS AND LONG QUEUES

Video intelligence software can “count” the number of people that are in a camera view or have passed through a pre-defined point; this data can be aggregated over time. For example, by knowing how many people utilize a food court or cafeteria in a shopping mall, or airport terminal, or office building, and how much time they dwell in a queue, property managers have quantifiable data that can help them decide whether to open a second cafeteria or restaurant, or place food and beverage vending machines in other floors or areas of a building to alleviate crowds and queues.

Also, to respond quickly to address crowds and queues, analytics operators can configure the analytics system to send real-time alerts whenever pre-set thresholds for occupancy or traffic have been exceeded. These alerts that can be customized according to each area of a property, such as an airport security gate, or a retail checkout queue. When the normal threshold (a benchmark that is determined by aggregated data) is exceeded, a notification will go to the analytics operator, who can then notify the appropriate customer service or security manager to respond to and assess the crowd or queue.



UNDERSTAND VISITOR DEMOGRAPHICS

Property managers need a deep understanding of who their guests are, how they navigate facilities, and which amenities and attractions – such as a gym or restaurant – are most frequented. Video footage contains that information, and video analytics provides those qualitative and quantitative demographic insights, such as the total number of travelers that pass through each airport terminal on a weekly, daily or hourly basis, and the number of men vs. women, or adults vs. children. That information helps property managers (as well as marketing teams) assess their audience, and tailor their purchasing, marketing and displays according to their targeted audience.

COLLECT FOOTFALL STATISTICS TO QUANTIFY THE VALUE OF TENANT SPACE

To understand the number of visitors, customers, or employees that enter a defined space, property managers can use video analytics to track the number of footfalls across a facility, or in particular areas of a facility. Armed with this data, managers can assign staff accordingly, and share that data with their current or prospective tenants to justify the cost of space rental and place tenants in the best possible locations.

Property managers may also use face re-identification technology, which leverages face recognition technology to anonymously identify individuals. Such functionality can be used to recognize employee faces (to exclude them from traffic reports), while tracking customer faces anonymously, thus enabling managers to accurately track aggregate visits, as well as unique visits, repeat customer visits, and bounced traffic at a facility or to specific attractions within a facility.

REVIEW INCIDENTS EASILY AND QUICKLY

Video content analytics software enables property managers to collaborate with security staff to quickly and accurately review video footage so they can analyze incidents that occur on the property, such as maintenance issues, accidents, medical incidents, or thefts. This can help them determine whether anyone (i.e., a resident, tenant, visitor or vendor) is at fault, and if so, whom should be held accountable.

CHAPTER 4

HOW TO DRIVE OPERATIONS EFFICIENCY

UNDERSTAND PEDESTRIAN AND VEHICLE TRAFFIC PATTERNS

Whether they work for a university, shopping center, airport, a bank, or a retail store, operations managers need to understand visitor traffic patterns and problem hotpots. By using video analytics, they can analyze the amount of time it takes pedestrian or vehicle traffic to move from point A to point B and identify barriers and ways to optimize an efficient journey. They can also view heatmaps that illustrate usage of pathways or roadways, and dwell reports that indicate where pedestrians or vehicles tend to spend more time, whether that is in a parking lot, on a roadway, or at a particular information kiosk, cashier checkout, or product display. This information helps operations and security managers allocate staff or signage to prevent traffic friction points and bottlenecks.

MAINTAIN FACILITIES BASED ON ACTUAL USAGE DATA

Operations managers typically base facility maintenance on a routine timetable; however, managers can improve efficiency and create a cleaner environment for guests by directing maintenance efforts based on actual facility usage. Video analytics software aggregates data into heatmaps and dashboard reports to show usage patterns and volumes; managers can apply this data to plan maintenance according to historic patterns. It is also possible to customize video intelligence software to trigger real-time, rule-based alerts that notify maintenance managers after a specific number of people have entered a restroom, changing area, or food court, which would indicate that maintenance is required, so managers can assign maintenance staff on an as-needed basis.

IMPROVE COMPLIANCE WITH OCCUPANCY LIMITS

Many organizations and business sectors are driven by safety mandates and regulatory requirements that can be monitored, enforced and improved based on video intelligence. In some venues, such as a retail store or concert hall, these compliance issues can determine whether a business establishment is allowed to continue operating. Video analytics systems can track occupancy levels over extended periods of time to give managers actionable date regarding whether the venue consistently complies with occupancy limits. Management can use the aggregated video content analytics to drive the compliance process, from assessing patterns to developing audit reports, and detecting violations post-event.

Alternatively, managers can track their building or property occupancy in real-time, across multiple cameras throughout a facility to track the number of persons who have entered or exited the building. A video analytics system may also include people-count alerts that notify video analytics operators whenever building occupancy exceeds the pre-determined threshold, so security staff can proactively respond.

Other industries have granular occupancy rules that must be monitored and enforced to meet compliance standards and best practices. For example, the banking industry often requires multiple tellers to be present when money is counted; in that case, a video analytics system can provide video evidence that employees are acting in compliance. Or, an analytics system can send a real-time people-count alert to the system operator, who can then notify the appropriate manager if the number of persons in a vault falls below a minimum threshold.

IMPROVE HEALTH AND WORKPLACE SAFETY COMPLIANCE

Workplace safety rules vary widely by industry and by company, but video analytics software can be customized to track specific objects or behaviors. For example, in construction sites or manufacturing plants where visitors and staff are typically required to wear safety hard hats, managers can leverage video analytics to generate reports that illustrate where and how often employees are wearing hard hats. Or, analytics operators can set up real-time alerts that notify managers when an employee or visitor is not wearing the required personal protective equipment on a jobsite. And, if there is a workplace safety incident, operators can search video to investigate whether injured parties had complied with safety mandates, and include that video evidence in the incident report. Rapid and accurate search of post-incident footage enables managers to quickly investigate compliance claims, internal mistakes, or theft incidents to validate claims or clear false claims, reduce litigation, and understand incidents post-event.

Given that the COVID-19 pandemic has spurred public health mandates such as face masks and social distancing in a variety of industries, it has become imperative for management teams to track how many employees, visitors, or guests comply with such mandates. Video analytics systems can detect social distancing, via proximity identification, and they can detect the presence or absence of face masks. To prove compliance for auditing purposes, video analytics operators can aggregate this data over time so that management teams can review health and safety mandate compliance over extended time periods.

SUMMARY

By investing in video intelligence, operations and property managers can harness the data that lies buried in video footage to get more value out of their video existing surveillance systems. Video analytics software empowers them to track vehicle and pedestrian traffic, optimize building layout, prevent long queues and crowding, gather demographic data, justify tenant space location and lease rates, as well as adhere to occupancy, health, and safety compliance standards. With real-time information and long-term data from video content analysis, property and operations managers across industries can perform their jobs with greater efficiency, plan more strategically, and make data-driven decisions that drive revenues, reduce risk, and increase visitor and tenant satisfaction.

ABOUT BRIEFCAM®

BriefCam® is the leading provider of video analytics software that enables people, companies, and communities to unlock the value of video surveillance content. Delivering accurate, flexible, and comprehensive solutions, BriefCam's video analytics platform provides valuable insights for accelerating investigations, increasing situational awareness, and enhancing operational intelligence.

VIDEO SYNOPSIS® technology is a registered trademark of BriefCam, Ltd. For more information about BriefCam's video content analytics solutions, visit **https://www.briefcam.com/**.