Hitachi Smart Spaces and Video Intelligence

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Safer Cities. Thriving Communities.

Enhance safety and efficiency with IoT Insight to help your organization or city thrive

Families want safer communities. Businesses aspire to grow economic opportunities. Everyone likes to get around town easily. All these are possible with smart spaces.

Smart spaces are urban, commercial and industrial areas that use video, internet of things (IoT), analytics and artificial intelligence (AI) technologies to deliver insights to people, buildings and machines, to make organizations more effective and improve quality of life. Hitachi helps organizations in the city to drive operational excellence and become safer and smarter with an end-to-end, intelligent and adaptable smart city IoT solution.

With Smart Spaces and Video Intelligence, data-driven solutions will help:

- Keep traffic flowing and transit safe, with integrated video, data, and alerts.

- Protect students on campus while achieving operational excellence.

- Provide downtown area insights on foot traffic, parking, traffic mix, and more.

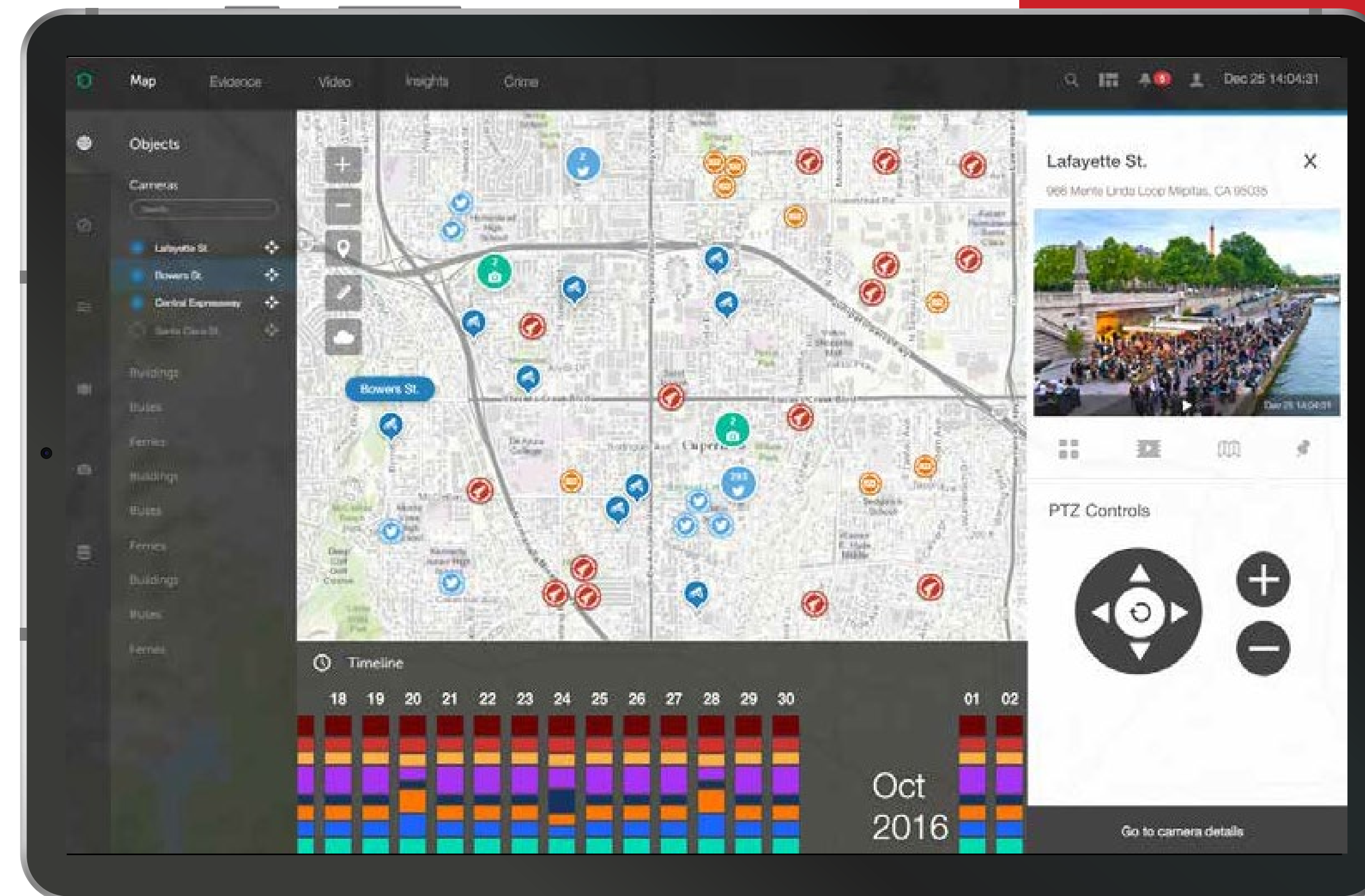- Drive more retail success with business intelligence and insights for a thriving economy.

Smart Spaces and Video Intelligence are the building blocks of smart cities. From retail, campuses, transportation and public areas, they help cities and organizations become safer and thrive.

The Problem and Solution

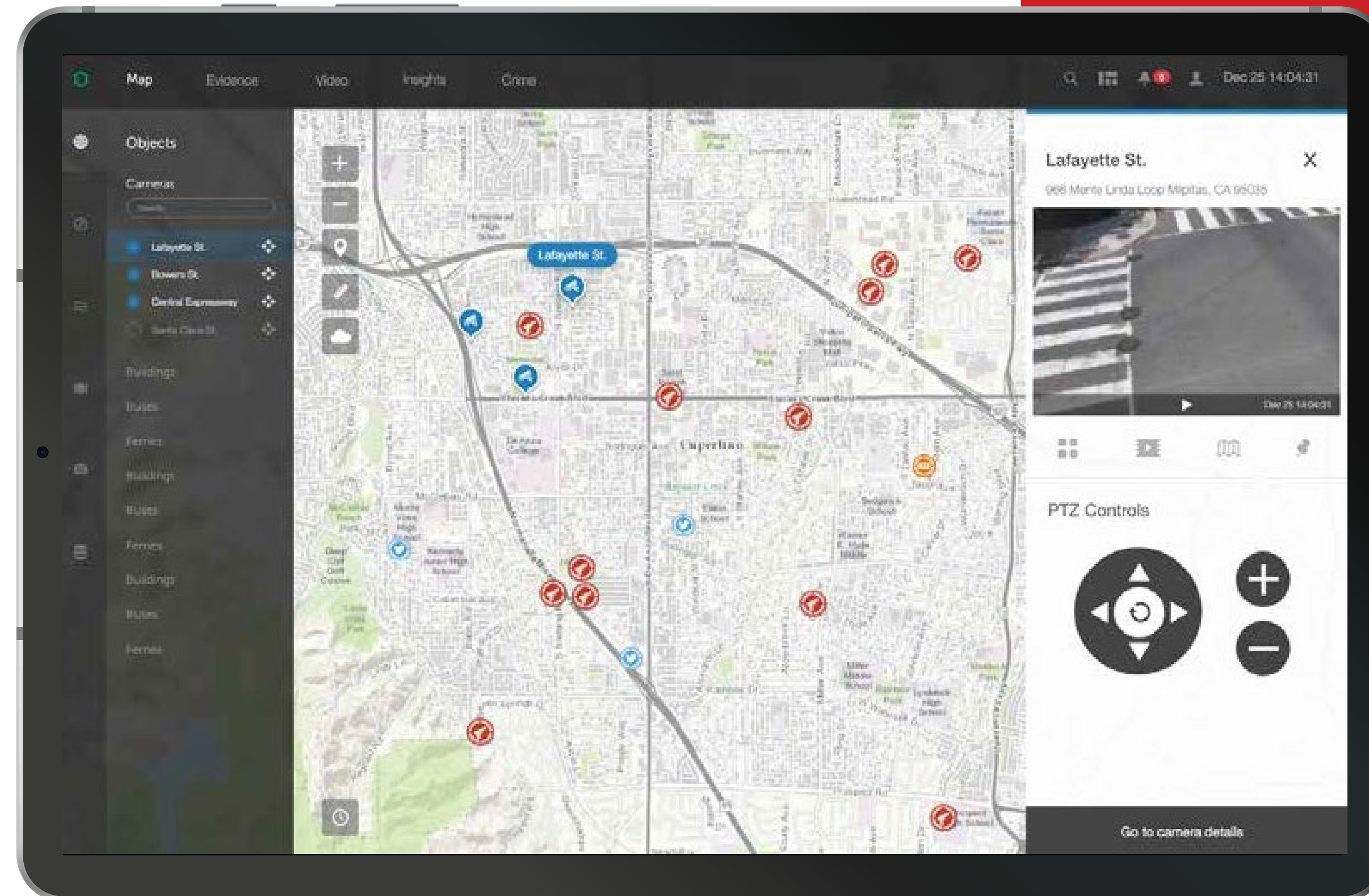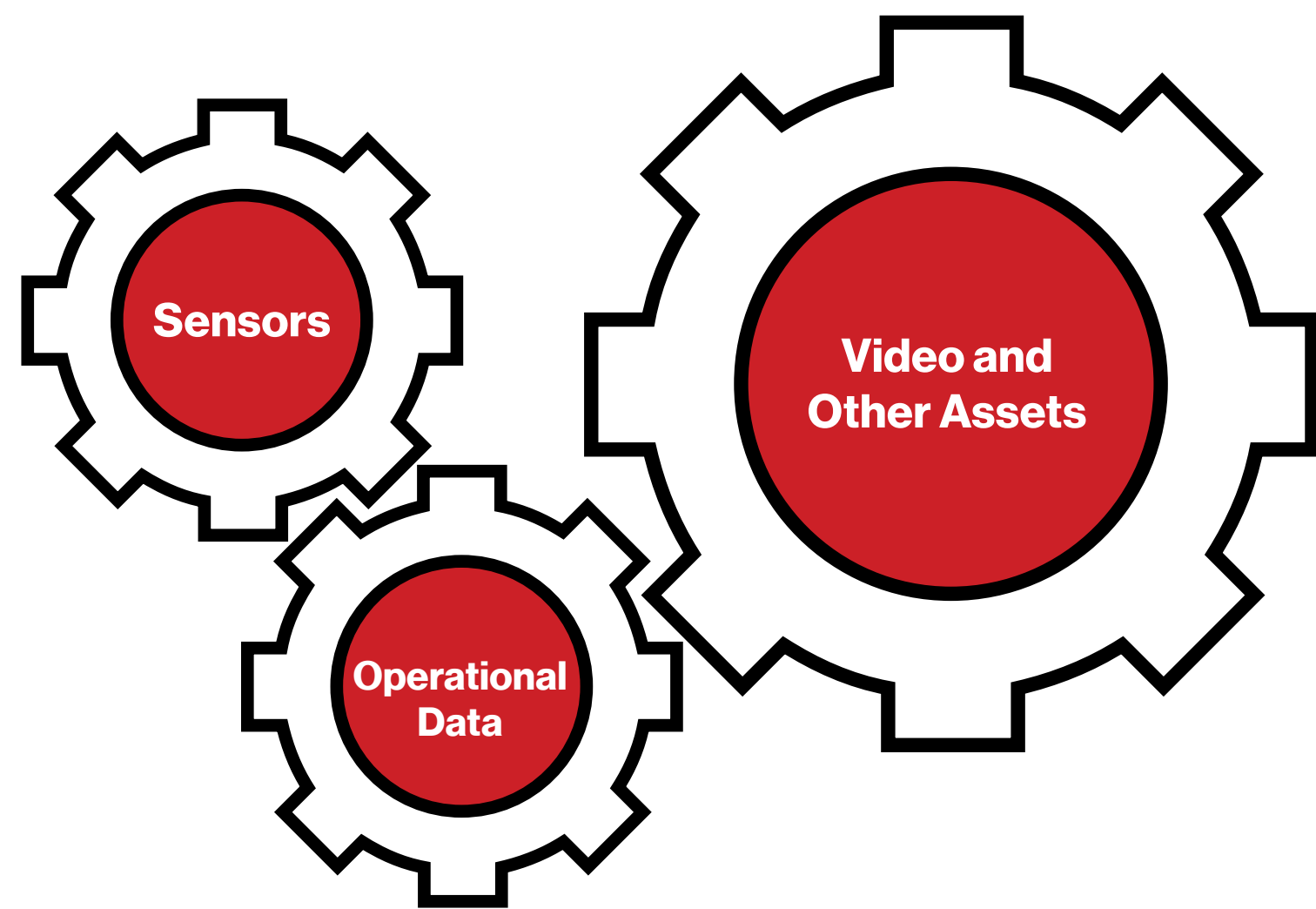**Your single pane of glass for making your spaces smart**

Over the past few years, the majority of public and private organizations have implemented a diverse set of systems to protect their assets, premises and people. To effectively manage large amounts of critical assets and incidents, your systems must be integrated so that they can provide meaningful information. The primary goal of Hitachi Visualization Suite (HVS) is to provide a platform for representing just about any real-world object, such as a building, car, camera, train, boat, you name it. By integrating critical video and event sources together with fixed and moving assets, such as those listed above, HVS provides visual and geospatial correlation in a simple interface that takes command and control to a new level.

Integrating disparate data and video sources and using existing public safety assets, both private and public, HVS applies analytics and the best visualization interface on the market. HVS is quickly becoming the most adaptable and intelligent solution for smart spaces: the foundation for the safe and smart business, facility campus or city.

Full Situational Awareness

Integration of disparate systems and sensors provides connected intelligence

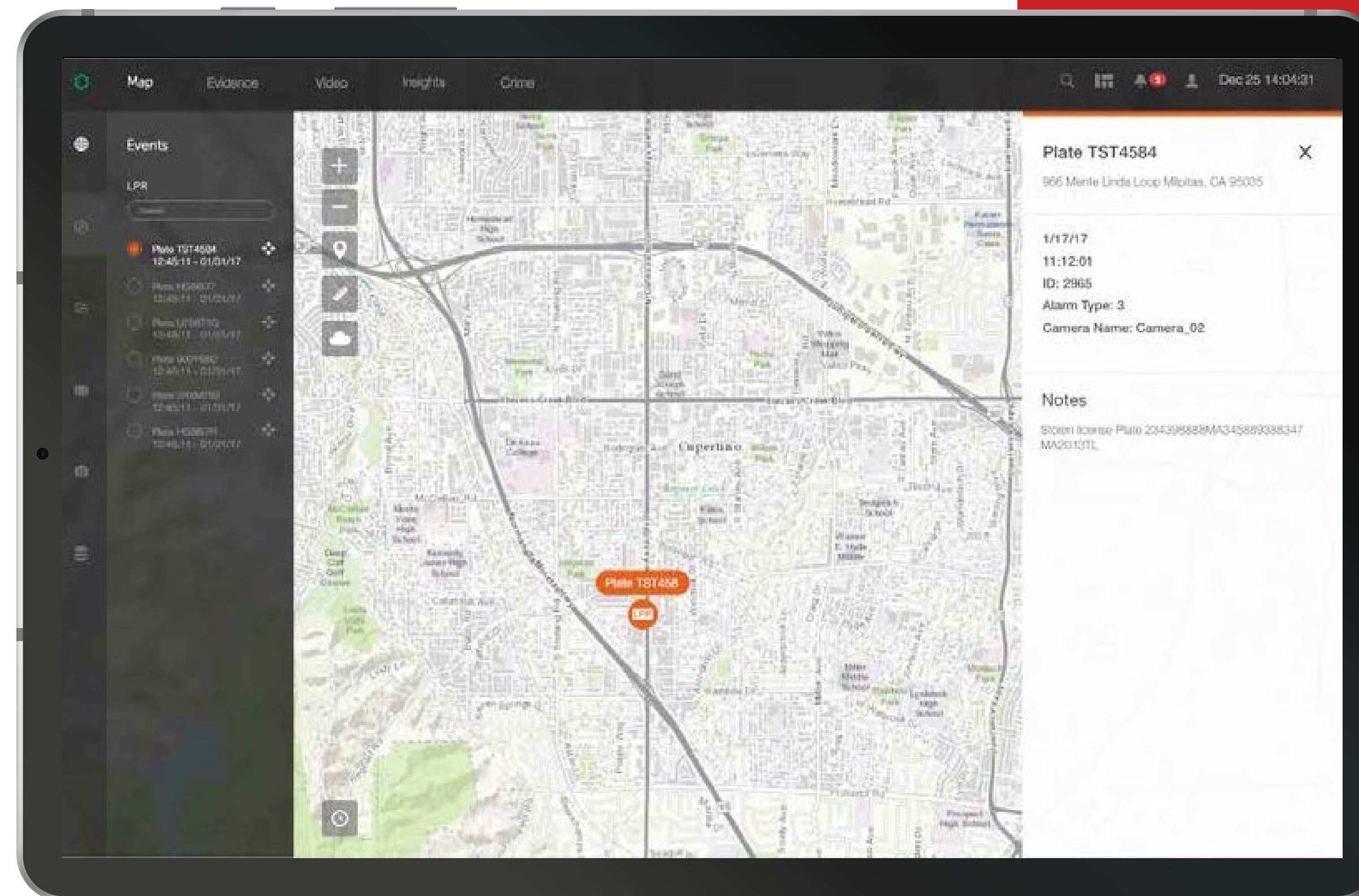**Tailor your view to include all the information you need to make informed decisions quickly.**

Actionable Intelligence

Visual correlation between seemingly different data paints a clear picture

HVS combines public information sources, such as traffic, and social media with private sources of information, including license plate recognition (LPR), computer-aided dispatch (CAD)/911 calls and gunshot events. Just about any sensor data can be integrated with HVS.

- Multiple map layers.
- NOAA weather alerts.
- Imported ESRI shape files.
- Navigation charts.

- Geocoding services.
- Dozens of third-party video systems.
- CAD/911 systems.
- License plate recognition systems.
- Traffic systems.
- Drone detection.
- Video analytics.
- Body worn cameras.
- Smart sensors.
- Building schematics.
- And much more…

Integrated traffic, LPR and social media notifications are among the hundreds of ways to visualize your information.
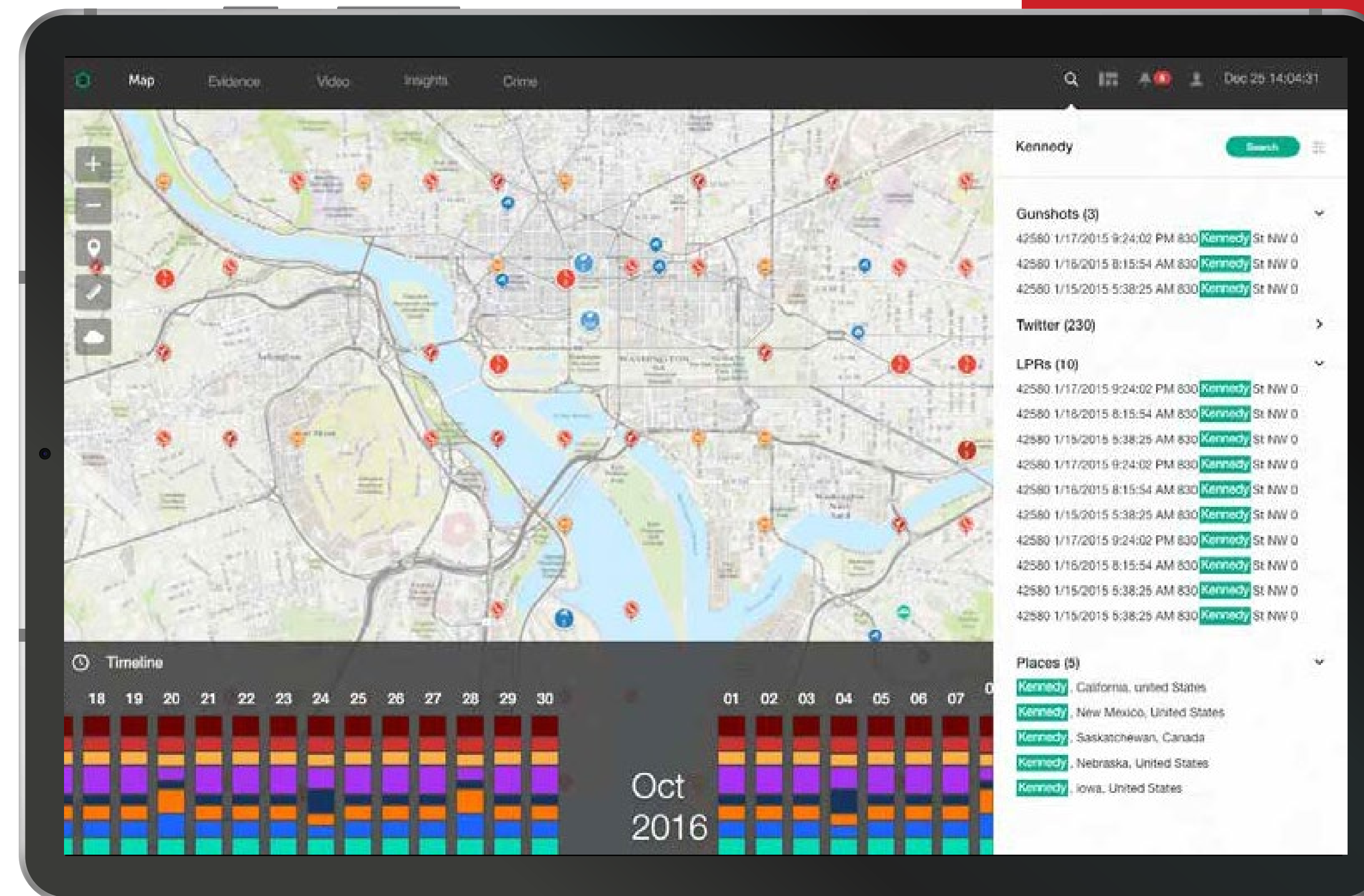
Investigations

Simple search and timeline views make investigations intuitive

HVS provides a single pane of glass view for the user. By showing real-time events correlated with fixed and moving assets, true information can be derived from data locked in standalone public safety systems.

HVS provides public safety organizations with:

- Visual insight.
- Improved collaboration.
- Integration of disparate systems.
- Intelligence from the raw data.
- Event and alarm tracking.

Go back in time and view all of the events for a particular day, or perform a simple search across the logged events or by place and time.
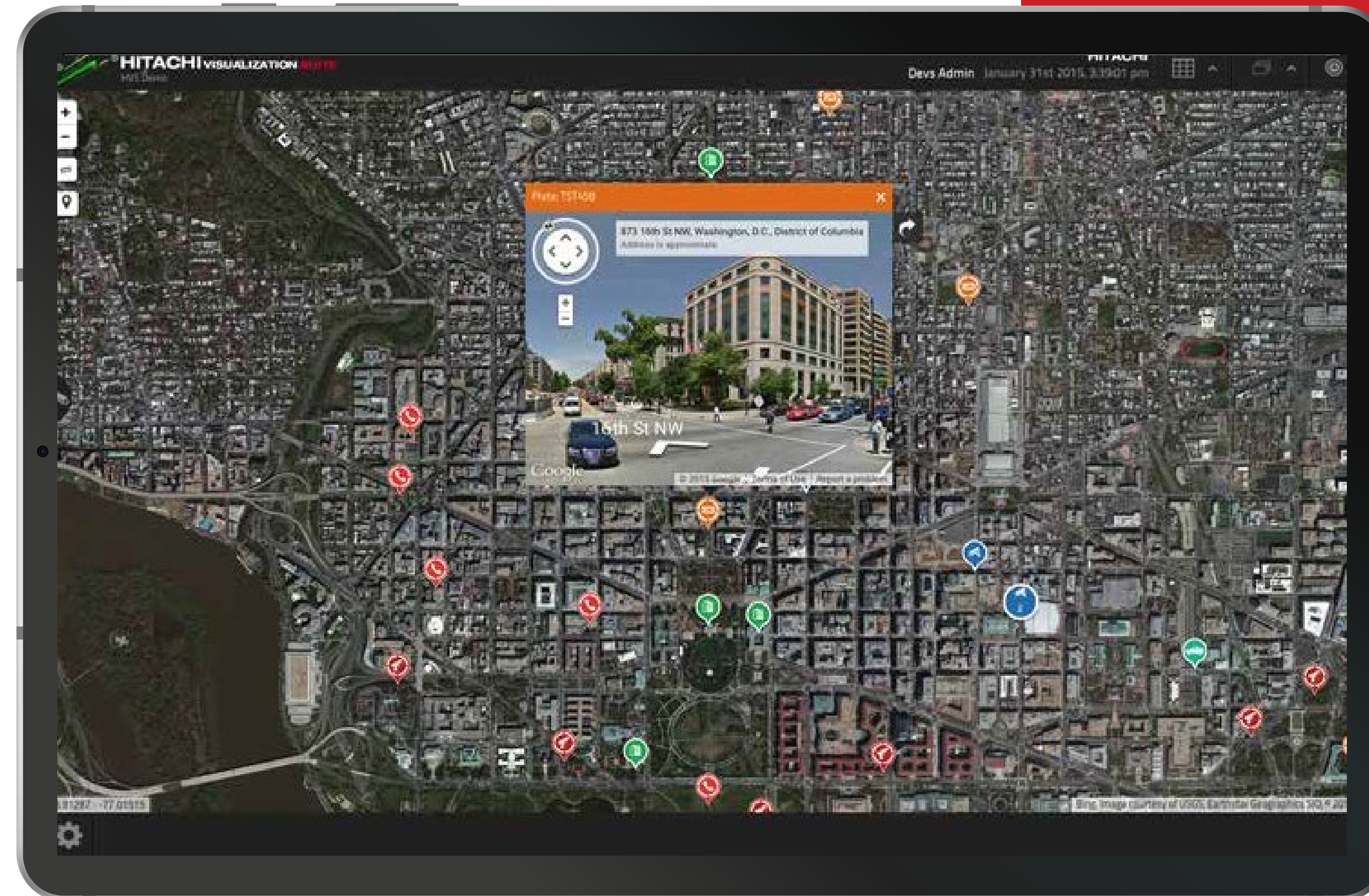
Automated Workflow

Manage by exception

Even the best-trained video operator cannot see everything at once. HVS allows you to manage by exception, instantly and automatically presenting the most critical information when something out of the ordinary occurs.

- License plate read event identifies a stolen vehicle.

- A gunshot event occurs nearby.

- Several people call 911, identifying a man with a gun

- The operator pulls up nearby video and gets a description of the suspect.

- Armed with a license plate number, description of the suspect and visual evidence of the car, they dispatch the closest officers to arrest the suspect.

Actionable intelligence through automated workflow and visualization of distinct events.

Intelligent Video Management

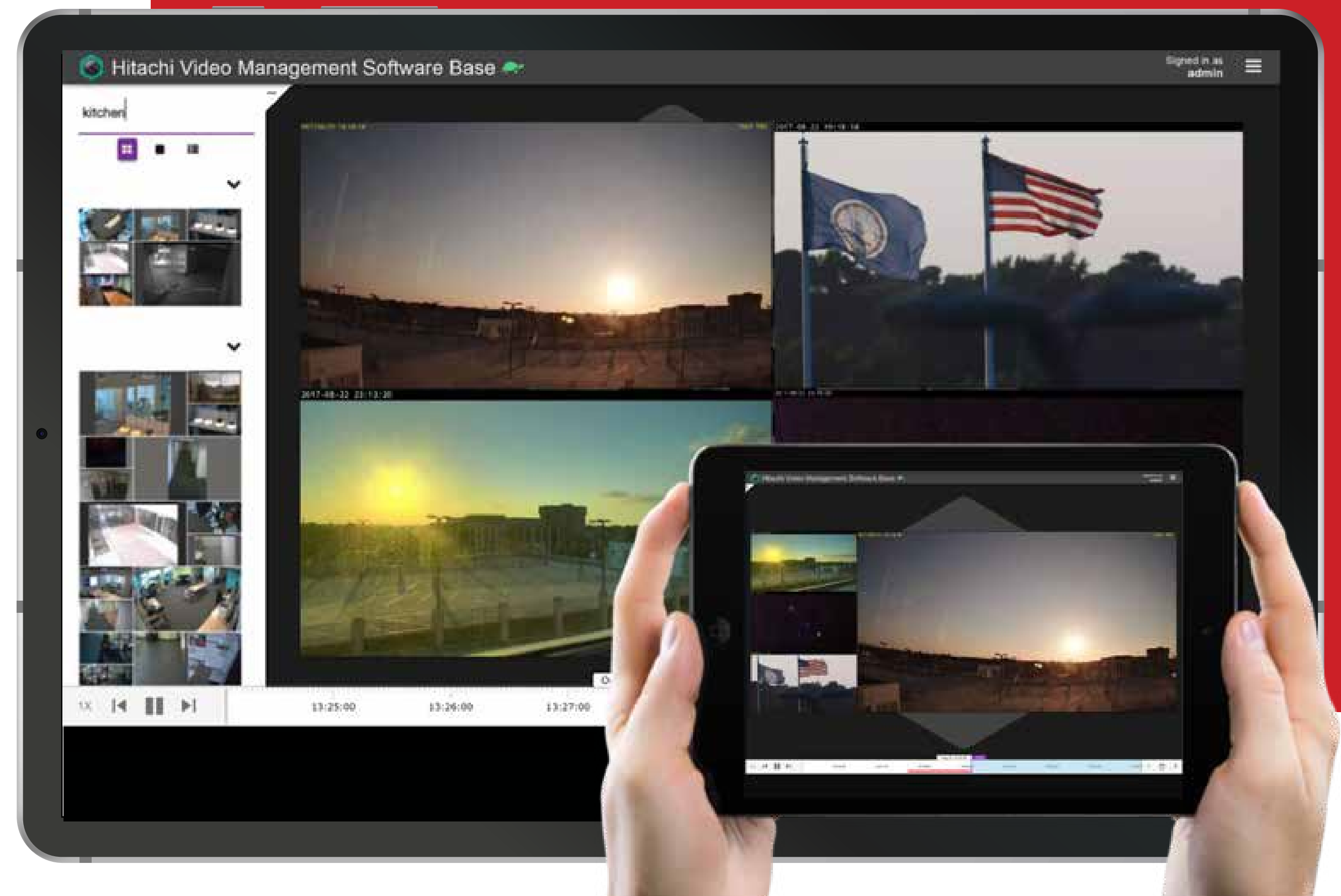**Minimize costs while maximizing camera and server status information**

Hitachi Video Management System (HVMS) provides a powerful platform for operators to access unlimited locations, cameras and users. This advanced management system can be distributed among a variety of servers and IoT devices, and it offers a global view and intelligent search.

HVMS provides a single, highly accessible web interface to view live and recorded video. This approach allows users to utilize the solution as enterprise software that integrates with HVS or as a standalone, onboard software on the Hitachi Smart Camera platform.

Key Features include:

- Scalabilty: unlimited servers and users.

- Browser-based graphical user interface (GUI) that is consistent across all platforms and devices.

- No changes required to existing IT and network with minimal configuration and encryption.

- Firewall friendly.

- Cloud ready.

- Supports the most modern security protocol including Secure Real-time Transport Protocol (SRTP).

Instantly filter as many as thousands of available cameras and locations using a keyword feature that intelligently searches across server names, camera names and metadata for the streams.

Video Analytics Enables Smart Public Safety and Operational Intelligence

Transform surveillance cameras into smart city sensors

Hitachi Video Analytics (HVA) transforms video data into intelligent information that can be used for security and safety of people, assets and buildings, as well as enterprise operations and revenue-generating applications. It addresses privacy concerns while delivering continuous visibility of data via a suite of analytics.
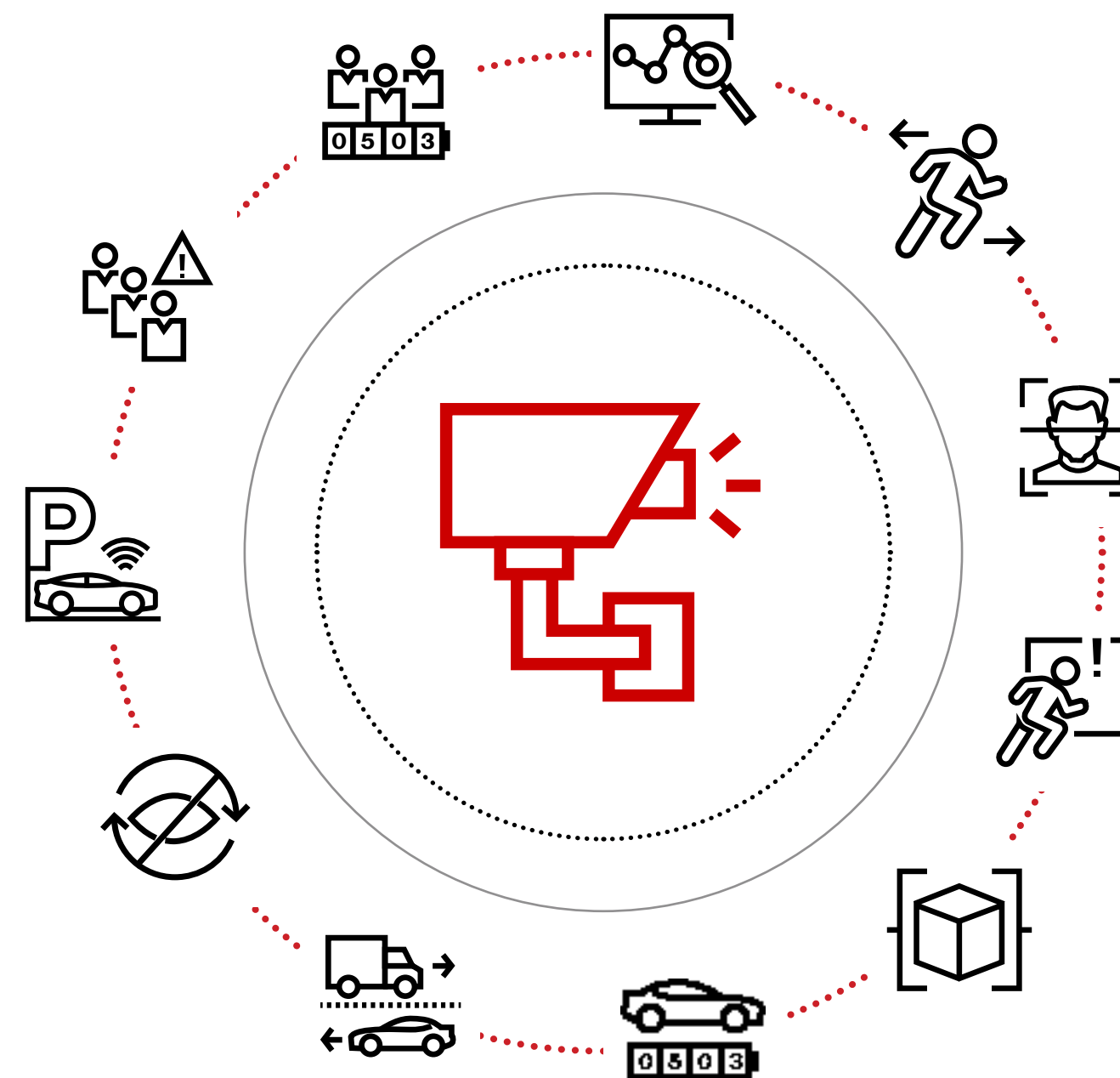
Public Safety

- Facial Detection and Matching .
- Intrusion Detector.
- Object Detector.

Business Intelligence

- Activity Visualizer.
- People Counter.
- Queue Detector.

Operational Intelligence

- Direction Controller.
- License Plate Recognizers.
- Parking Space Analyzer.
- Traffic Analyzer.
- Vehicle Counter.

Hitachi Video Analytics provide accurate alerts and insights for smarter public safety and first responders while ensuring privacy protection with 3D LiDAR.

European Privacy Seal
EP-S-NG29/Y / Valid till 2016-04

Smart Camera

The smart choice for outside-remote camera applications

Hitachi Smart Camera 200 is a standalone surveillance tool. This outdoor camera includes infrared night mode which automatically enables lighting for nighttime vision, built-in storage, onboard analytics and more:

- Video Management Software (VMS) onboard the camera.

- Email notification alerts of snapshots and images based on onboard analytics.

- Wi-Fi and multisensing cellular carrier cellular connectivity.

- Pre-integrated into Hitachi Visualization Suite for easy and accessible situational awareness.
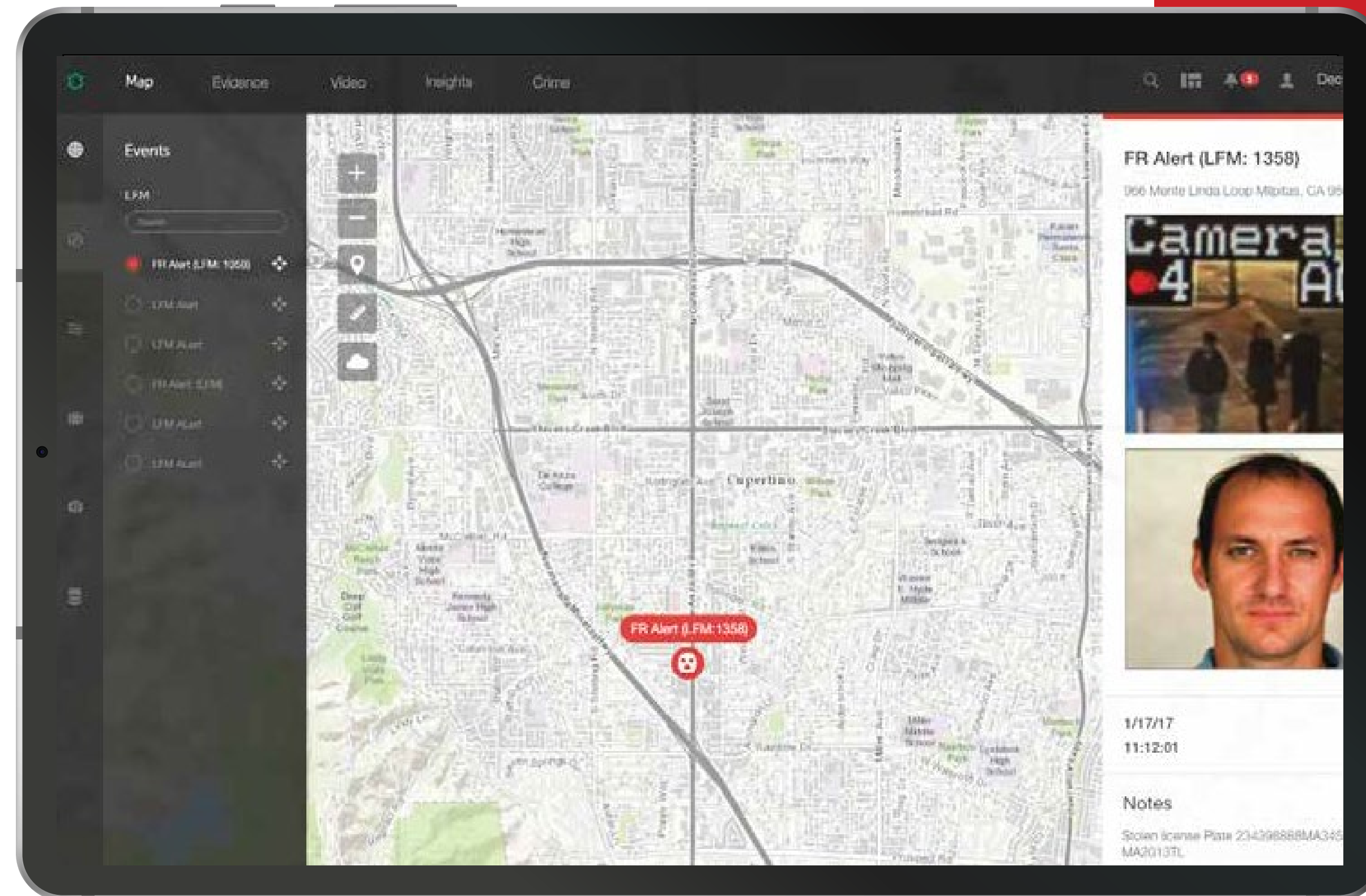

Onboard analytics include line crossing, intrusion detection, scene change, and face detection. Scene change can detect an object that is added or removed from a scene. It is commonly used for asset protection or for suspicious object detection.

For Moments When Time and Accuracy Are Critical

Improve the effectiveness of video surveillance

Facial Detection and Matching provides real-time facial image matching for video surveillance systems deployed in public and commercial buildings, hospitals, banks, railways, cruise lines, airports and many other areas where continuous proactive threat detection is essential.

• High matching accuracy.

• High speed matching.

• High robustness.

• Auto alert.
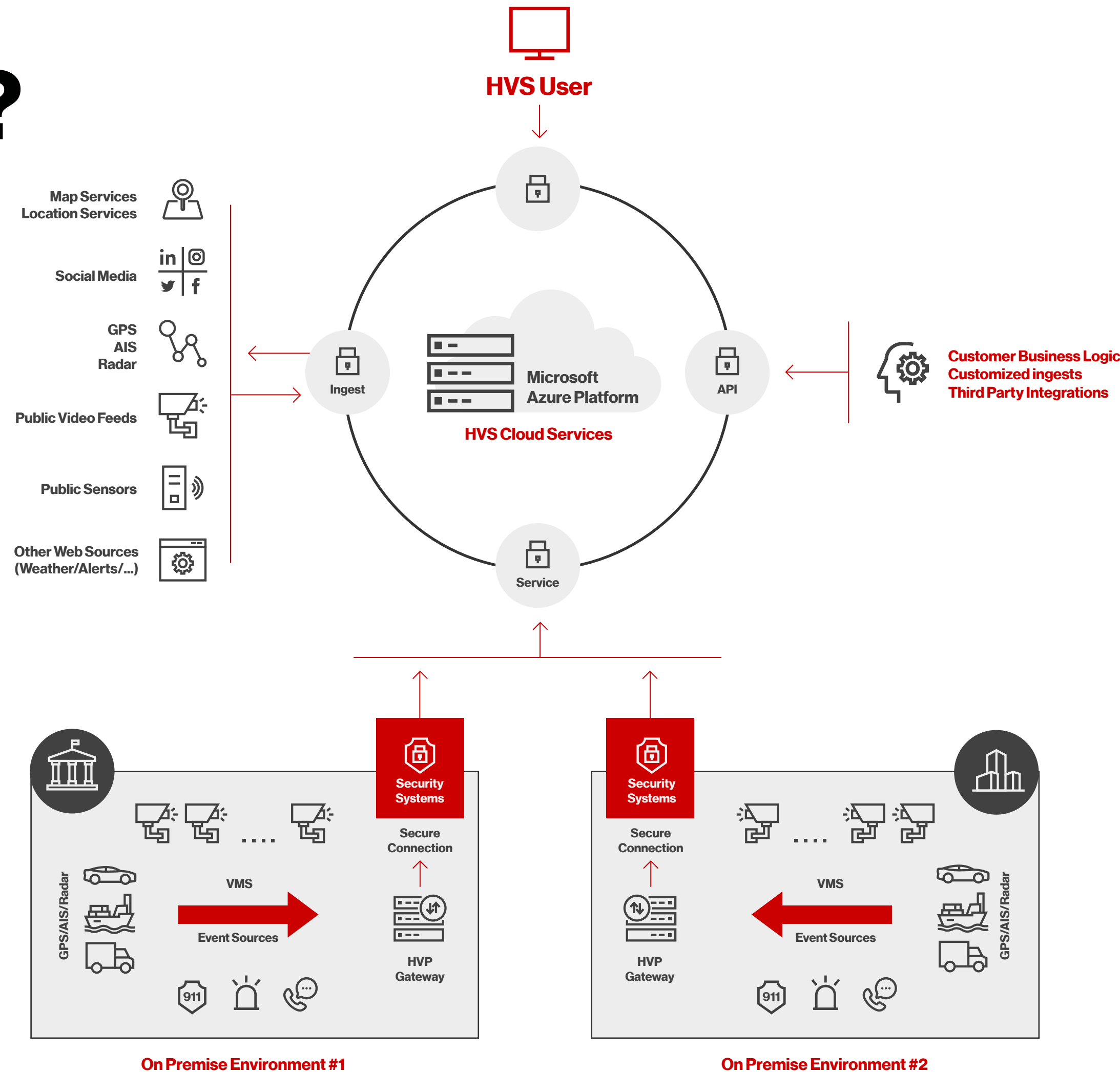
• Integrates with HVS data ingest.

Our facial detection and matching can prevent criminals from entering important areas or facilities, and more importantly, prevent them from causing harm to people or property through proactive alerts.

How Does It Work?

The hybrid cloud design makes Hitachi Visualization Suite the most robust and flexible tool on the market

HVS represents a state-of-the-art design optimally suited for crisis and emergency management. The underlying cloud architecture allows the solution to scale up quickly during high-demand situations, such as when there is an active shooter. Literally hundreds of users can view camera feeds, get alerts and share information as never before. The hybrid cloud architecture allows HVS to easily integrate with third-party camera systems. Hitachi Visualization Platform (HVP) makes deployment simple. It handles all video and data ingest along with workflow on premises. This keeps the sensitive data where it lives currently without having to replicate across data centers or into the cloud.

HVS User

Map Services
Location Services

Social Media

GPS
AIS
Radar

Public Video Feeds

Public Sensors

Other Web Sources
(Weather/Alerts/...)

Ingest

**Microsoft
Azure Platform**

HVS Cloud Services

API

Customer Business Logic
Customized ingests
Third Party Integrations

Service

Security
Systems

Secure
Connection

Security
Systems

Secure
Connection

GPS/AIS/Radar

VMS

Event Sources

HVP
Gateway

HVP
Gateway

VMS

Event Sources

GPS/AIS/Radar

911

911

On Premise Environment #1

On Premise Environment #2

By combining the highly available cloud architecture with an on-premises appliance for integration, HVS can scale up or down quickly, depending upon the criticality of the situation.

Edge Gateway for Video

Simple, effective and low-cost integration appliance

Hitachi Edge Gateway for Video brings intelligence to the edge for your legacy cameras: It's an integrated set of secure and intelligent cloud devices for edge capture and recording.

- Secure internet service bus avoids limitations of VPN connectivity.

- Reliable Microsoft Windows Azure cloud environment provides world-class stability.

- Video transcoding to normalize disparate video feeds.

- Dynamic streaming to provide the best video quality based on available edge CPU and bandwidth.

The mobile gateway is portable for buses, trains, squad cars, ferries, and so forth, for live viewing.

- Cellular connectivity.

- Mobile hot spot.

- Geotracking.
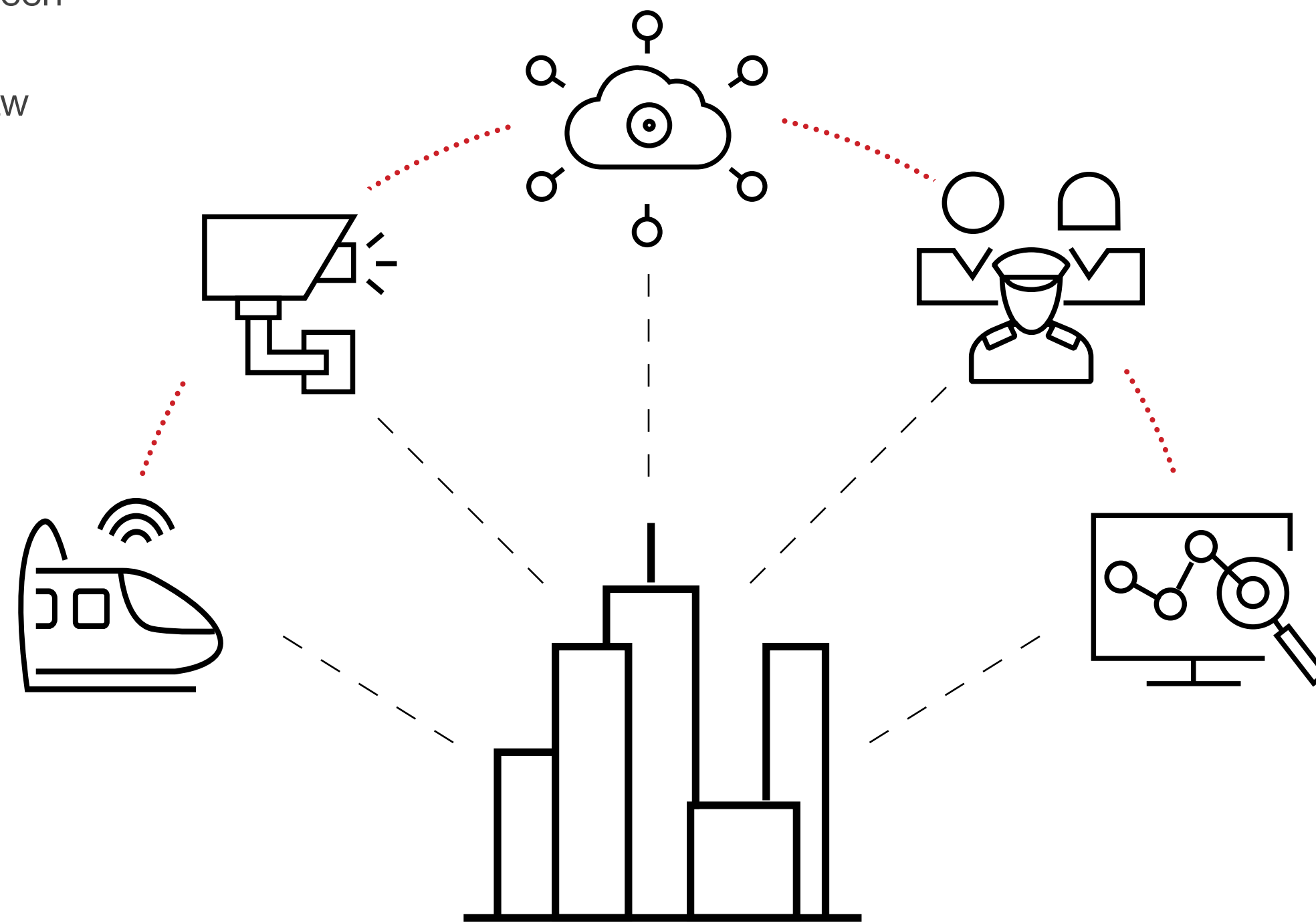
- Stream live video from moving vehicle.

The small form-factor and ruggedized Edge Gateway is ideal for integrating private camera systems into HVS.
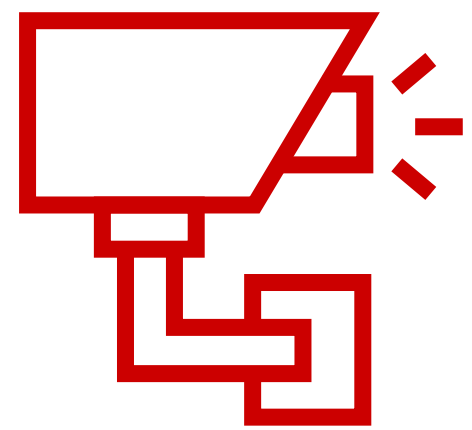
Public and Private Partnerships

Deter crime and promote public safety

Deputizing private-entity cameras expands the area of surveillance without added cost. The process creates partnerships between law enforcement and private entities.

- Access to locations and angles otherwise unavailable to law enforcement.

- Improved patronage and better emergency response.

- Increase data coverage for Hitachi Video Analytics.

DEPUTIZE YOUR CAMERAS

Deter crime and promote public safety by making it easier for the community to collaborate with law enforcement. Businesses, malls, schools and others can help us protect our neighborhoods by sharing their security camera views during an emergency.

DEPUTIZE YOUR CAMERAS

When a crime or other emergency takes place, video is an incredibly helpful resource for first responders. By sharing your security system's video with us in real time, our response and investigation will be faster and your neighborhood will be safer.

GET INVOLVED!

Help the police protect your business and solve crimes. No individual or agency working alone can prevent crime; it takes police and citizens working in partnership. Start being proactive today and fill out the registration form. Tell your police department if you own security cameras and if you are willing to share their video feeds.

SIGNS AND STICKERS

Cameras can be very helpful in preventing crimes when people know they are there. We will provide you with signage indicating that a system is in operation and that you will share recordings of suspicious activity with the police.

Get Started

You can help support criminal investigation by notifying the police department about your system. Knowing in advance if cameras are located in and around your business will improve and accelerate the investigation of a crime.

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