

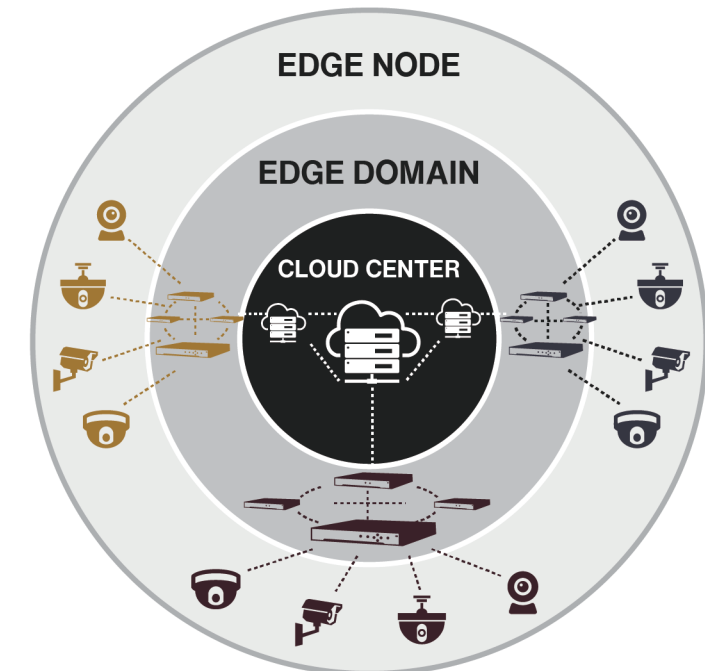
A GOOD SOLUTION NEEDS POWERFUL SUPPORT FROM GREAT SYSTEM

AI CLOUD ARCHITECTURE

Due to the complexities of designing a system at such a scale, an innovative and effective structure is needed. Hikvision's AI Cloud establishes such a foundation, incorporating cloud computing and edge computing.

Hikvision extends the artificial intelligence (AI) algorithm from the cloud to an edge domain of on-site video recorders and servers, and then a step further to edge nodes such as security cameras and NVRs. This smarter and faster three-layer architecture introduces a new class of AI-powered applications.

Hikvision provides a full range of AI Cloud products and solutions – from perception, storage, and computing, to data analysis, as well as comprehensive open interfaces. We offer intelligent industrial solutions by working with partners to develop and build substantial AI-based ecosystems.



Data Gathering on Demand

The **Cloud Center** focuses on multidimensional data fusion and big data analysis.
Application: Prediction & warning, multidimensional analyses - Responds on demand

The **Edge Domain** focuses on data storage, intelligent processing, association analyses, and rapid response.
Application: Trail tracking, command scheduling, and more - Timely response

The **Edge Node** focuses on multidimensional data collection and front-end intelligence processing.
Application: Facial attendance, person / vehicle barrier control, and more - Real-time response

BUILDING SAFER AND BETTER CITIES WITH PARTNERS

OPEN ECOSYSTEM



3rd party cooperation

Products Ecosystem

Device vendors, software vendors, algorithm vendors, data providers, application developers.

Service Ecosystem

Security service provider, maintenance service provider, technical standard guidance, etc.

Create An Ecosystem For Products And Services

Capability of the Open System

| | | | | | |
|----------------------------|------|--|--|---------------------------|-------------------------------|
| Open Application Interface | SaaS | Specialized Applications | Operations Management System | Security Assurance System | Standard Specification System |
| | | Generic Applications | | | |
| Open Platform Service | PaaS | Intelligent Application Services | Intelligent Analysis & Scheduling Services | | |
| | | IoT-based Services | Common Services | | |
| Open Data Resource | DaaS | Data Resource Management & Services | | | |
| | | Data Resource Pools | Big Data Services | | |
| Open Infrastructure | IaaS | Resource Unified Management & Scheduling | | | |
| | | Computing Services, Storage Services, IoT Device Access Services | | | |
| | | Computing Devices, Storage Devices, IoT Devices | | | |

ADVANCED SECURITY SAFER SOCIETY SAFE CITY SOLUTION

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ADVANCED SECURITY SAFER SOCIETY SAFE CITY SOLUTION

SECURITY AND PROSPERITY THE ALL TIME GOAL OF CITIES

Creating a secure and serene environment is essential for cities to develop and thrive. With increasing urban densities, cities need more advanced technologies to safeguard people and property. In years past, urban management relied entirely on manpower to ensure safety – police and private security guards. With the emergence of video technologies, cities welcomed a much more efficient way for keeping a sharp eye on things. Now, a very basic surveillance system makes first response and crime investigation much easier and faster.

This is only the first step to more efficient and intelligent urban management. The graph on the right shows the general evolution of a safe city. More than just intelligent applications, eventually the insights gained from this process could generate surprising new applications, enabling any safe city to be perpetually improving.

End-to-End Solutions
Covering information collection, analysis, processing, and application.

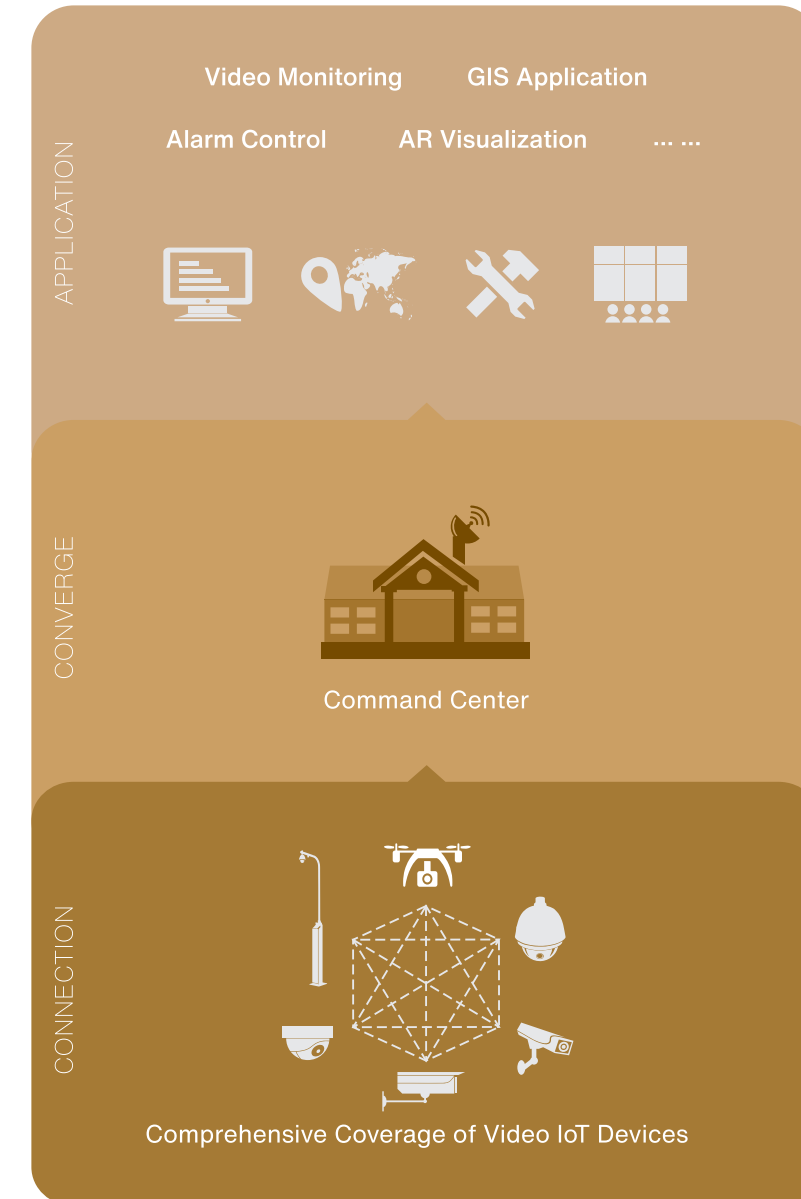
Overall Protection
• Full coverage without blind spots
• Round-the-clock protection

Openness
• Based on a cloud architecture
• Sharing capabilities in infrastructure, data, platforms, and application services with partners

Artificial Intelligence
• Empowering multi-scenario applications with self-developed deep-learning algorithms
• Enriching data to support the construction of smart cities

PHASE 1

CONNECT

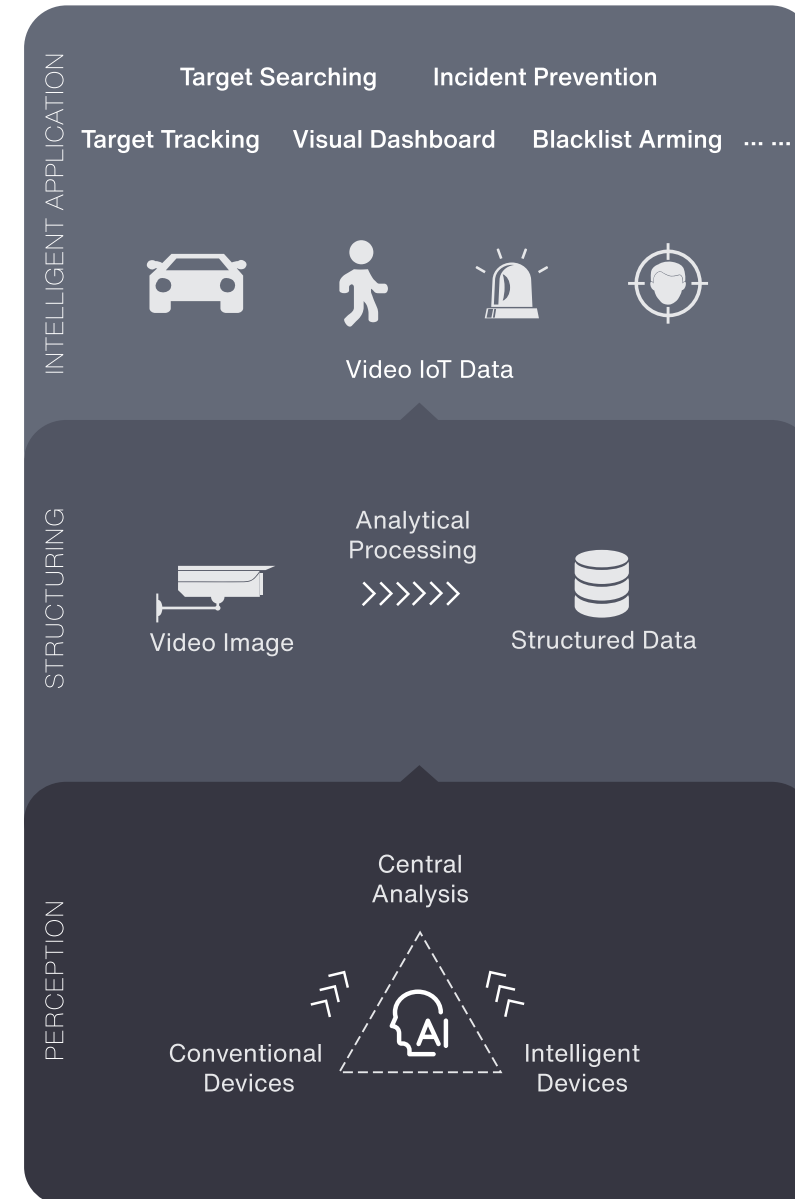


City Basic Surveillance

Build CCTV surveillance systems that cover critical areas of a city and integrate video data between such areas to visualize the underlying security status at city levels.

PHASE 2

COLLECT

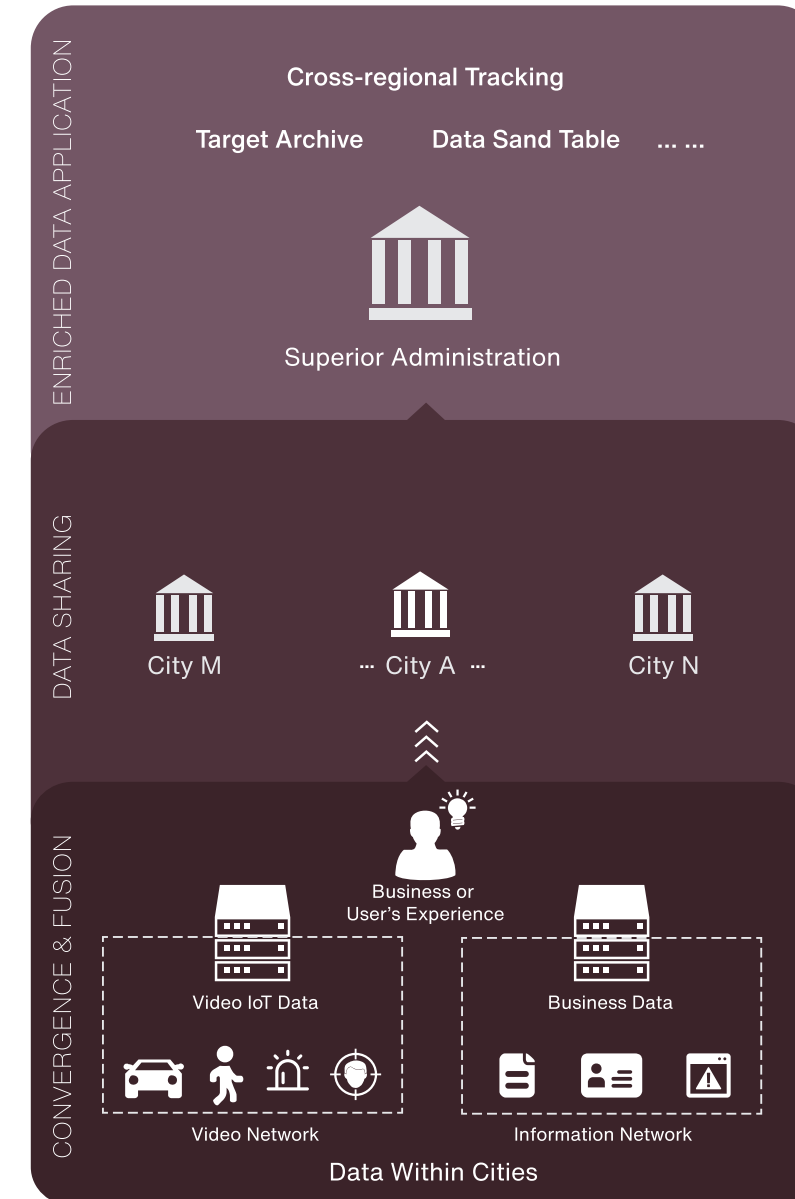


Intelligent Video System

Implement AI capabilities and applications on top of public security resources to promote the intelligent transformation of a city's video system, turning video into IoT data. Clients will likely benefit from higher efficiency in patrols, law enforcement, and resource scheduling at this phase.

PHASE 3

COMPREHEND



Data Fusion and Sharing

Fuse IoT data generated in the intelligent video system with data from information networks according to practical business needs, then provide value-added services and applications. Clients will quickly enjoy precise situational awareness around a city.

Air Control System



By deploying high zoom-rate PTZs, positioning systems, PanoVu cameras, drones, and anti-UAV equipment at the high points of the city, an airspace protection system is formed. The mixture of dynamic and static nodes and the combination of global perception and detail capture makes the Air Control System an integral part of urban security.

Mobile Control System



Fixed monitoring usually covers important urban scenes, but is limited in scope. For the city as a whole, this means there will still be some blind spots. The Mobile Control System is tailored to solve this problem. The system consists of body-worn cameras and portable PTZ domes for flexible and agile responses, enabling rapid deployment in emergency situations and where fixed monitoring is not available or feasible.

Alarm Control System



Installing an Alarm Control System will greatly reduce human resources, but this needs to be built on strict accuracy. Hikvision's Smart Detection Technology ensures that alarms received by the command center are valid and worthy of a response. At the same time, implementing emergency alarms in the city will enhance the sense of security for civilians as police officers can make video calls with people who are at risk and threatened before an event occurs.

Intelligent Control System



As AI technologies evolve, urban security enters an exciting, new intelligent era with unprecedented improvements in efficiency. With vast AI capabilities and a deep understanding of the video-based security industry, Hikvision integrates its proprietary deep learning algorithms into intelligent perception devices in edge domains and powerful computing devices in the cloud. Ultimately, this produces effective and precise data and provides even more functional security applications based on that data.

Ground Control System



Hikvision offers security cameras designed for complex urban scenarios to meet public security needs. The Ground Control System is the foundation of the urban security infrastructure. The cameras in key locales and on main city roads continually provide valuable information for decision makers.

Data Center



The five layers of control systems come together to create comprehensive coverage of a city, but this is not enough. A complete Safe City will inevitably require the construction of a central system. This will be the brain connecting thousands of devices in the city. In order to create a visualized, real-time, and intelligent central system, Hikvision provides a range of central equipment from fail-safe video storage solutions, high-definition large-screen displays, and transmission to central computing, big data, and AI-algorithm training facilities. Moreover, Hikvision also offers a powerful application system to provide and share its rich, multi-dimensional application capabilities based on data processing and analytics.