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**HUAWEI ENTERPRISE ICT SOLUTIONS A BETTER WAY**

# Huawei IVS Intelligent Video Surveillance Case Study

Dept: Video Surveillance Product Mgmt Dept

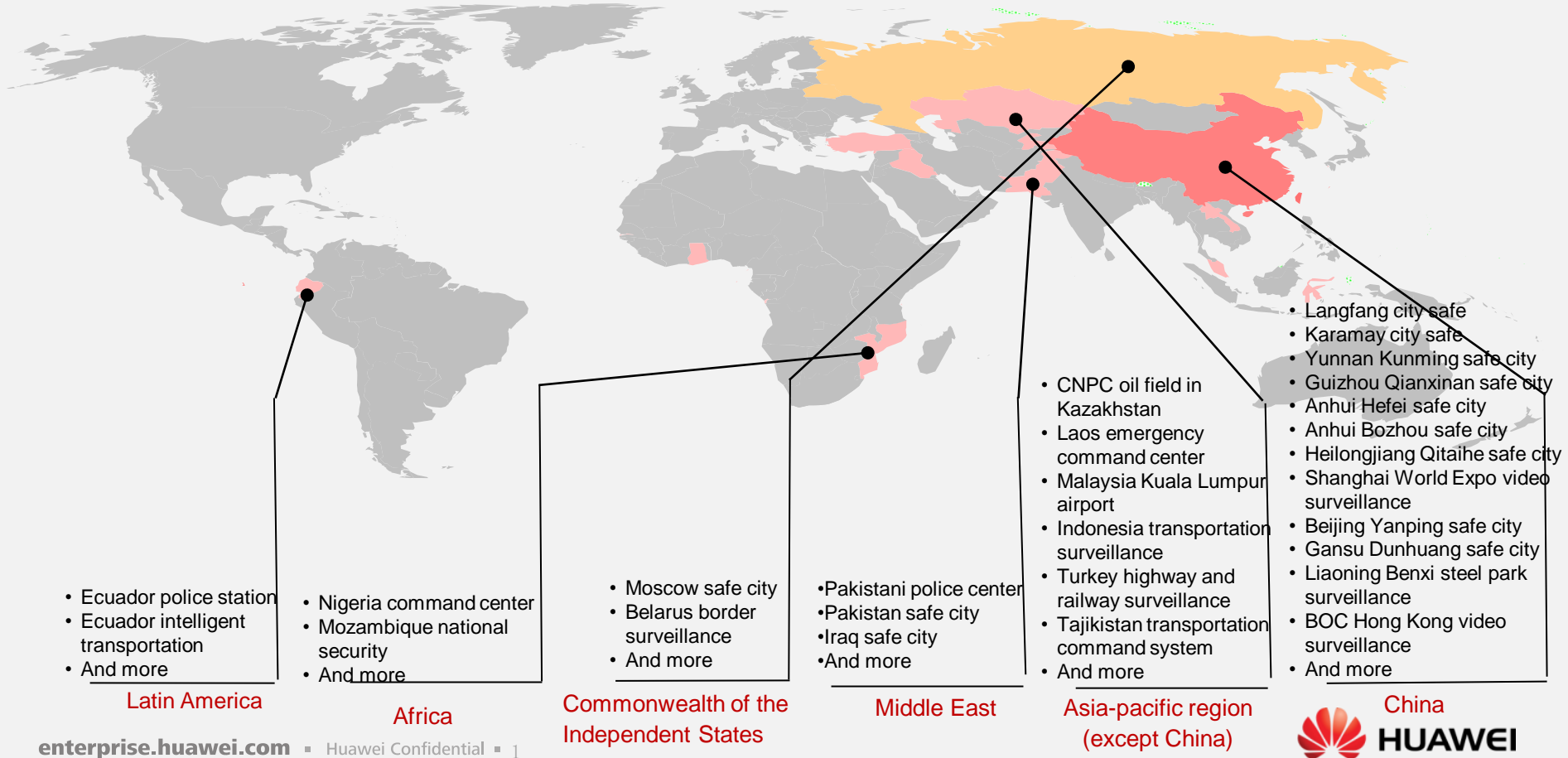
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HUAWEI TECHNOLOGIES CO., LTD.



# Huawei IVS in Global Markets



# Changsha China Safe City



## Customer challenges

- To establish a high-definition, controllable, and available video surveillance system, sky-net project is issued by the Ministry of Public Security, guaranteeing the security of people's lives and properties.
- Original surveillance resources suffer low definition and require HD 720P image for city's surveillance coverage. Deployment of **26,000 HD IPCs at the first phase of the project, covering all districts and counties of Changsha.**
- Maximize reliability and operational continuity of video surveillance.
- **Advanced IVS storage architecture ensures future extensions as required with low initial construction costs.**

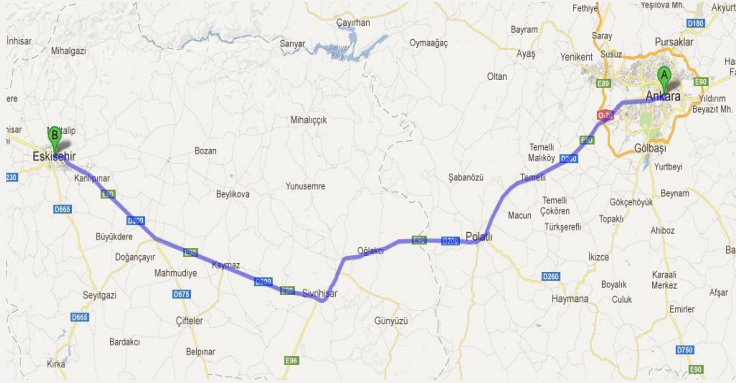
## Huawei solution

- Adoption of **Huawei V1300N solution with the configuration of 26PB capacity**, meeting the demand of mass storage in safe city
- All-in-one solution with advanced storage technique enables cutting edge and reliability to be superior than competitors, saving maintenance costs. It is the best choice for customers and integrators.

## Customer benefits

- Establishment of comprehensive high-definition, controllable, and available video surveillance system to effectively manage Changsha and fight against crime, setting up the safe city model to the surrounding city.
- Advanced storage architecture effectively **reduces the cost of investment by 103 sets of servers, the costs of O&M by 410,000 degree power consumption each year, and equipment room space by 206U.**
- Detection for disk bad sectors in internal storage and repair technology guarantee reliability for video, reducing the maintenance cost. Naked data block storage achieve retrieval in a second of PB level monitoring system, while retrieval time of common file storage is more than ten minutes.

# TCDD Video Surveillance



## Customer challenges

- Requirement for video surveillance system to cover railways, access points, and other key areas along the 270-km Ankara-Eskisehir high-speed railways
- Need for intelligent intrusion detection system, allowing incident warning services

## Huawei solution

- Deployment of 390 channels of IPCs, covering key areas such as railway trunks, tunnels, bridges, viaducts, underground tunnels
- Infrared IPCs that support HD video surveillance in harsh environments that have low illumination, heavy rain, and dense fog, lowering railway accident rate
- Two surveillance centers that work in active-standby mode, ensuring the continuity of surveillance services along the railway.
- Intelligent analysis and alarm linkage

## Customer benefits

- Warning for sabotage and natural disasters, allowing quick incident response
- HD video surveillance, protecting the security of service operation and railway properties
- Network and video resource sharing

# Transportation Surveillance in Moldova



## Background and challenges

- Only part of intersections were deployed traffic surveillance cameras and most of them were in disrepair in Chisinau.
- Increasing vehicles caused more congestions and accidents.
- The government planned to add over 500 cameras to monitor traffic situation and improve traffic management and service level.

## Huawei solution

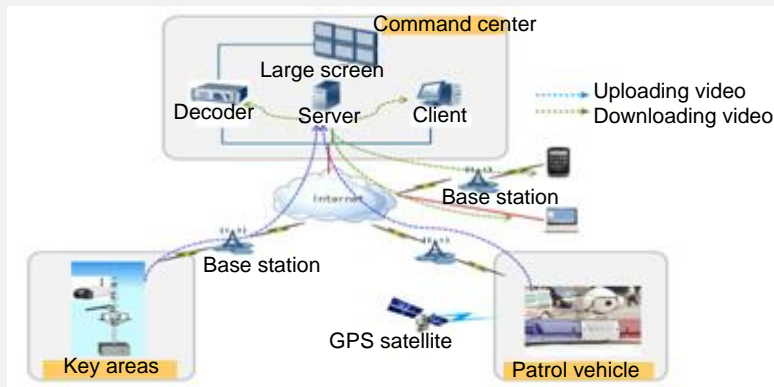
- Huawei offered electronic police systems (for 33 intersections), traffic video surveillance systems (for 30 intersections), intelligent checkpoint systems (for 8 sections) and cabling and construction services.
- Huawei deployed HD cameras on main roads and intersections for real-time surveillance.

## Customer benefits

- Automatic detection, recognition, shooting for traffic violations and linkage with police dispatch system greatly improved traffic management and service level and utilization efficiency of traffic resources, lowered energy consumption and environment pollution.
- Save travelling time, reduce traffic accidents and prolong vehicle service life.
- The utilization of signal control systems and electronic police systems save a lot of police personnel.

# Guangdong Qingyuan Road Video Surveillance

-Wireless surveillance, mixed power supply, and China's first vehicle-mounted road inspection system



## Customer challenges

- Outdated digital camera equipment, resulting in low work efficiency
- Requirement for vehicle-mounted surveillance devices that can significantly simplify office works
- Difficult power supply in remote areas such as tunnels, bridges, and hillsides

## Huawei solution

- End-to-end solution: vehicle-mounted inspection software, wireless cameras, Huawei Minipad (controlling cameras to collect surveillance video), and industry-leading vehicle-mounted inspection platform
- Mixed power supply solution: solar and wind energy for power supply in tunnels, hillsides, and bridges (other vendors can provide only wireless cameras)

## Customer benefits

- New work mode (digital and electric road inspection) and GUI-based road status display, improving inspection personnel's work efficiency
- Improved operation security and quick emergency response, allowing inspection personnel to collect road status information in a timely manner

# Changsha Subway (Line-2) Video Surveillance



## Customer challenges

- Changsha subway (line-2) crosses Changsha City from east to west and runs **34.83km with a total of 19 stations**.
- Requirement for linkage of **nearly 800 HD IPCs** with vehicle-mounted surveillance device and police system.

## Huawei solution

- Huawei network video storage V1300N, allowing surveillance system construction for stations, vehicle depot and control center as well as video surveillance linkage. Video surveillance architecture is based on IP network, and constructed in the concept of "distributed storage and centralized management".
- Huawei network video storage V1300N features with video optimization technology: highly reliable SmartData technology, RAID balancing load, Fast index recovery technology, and energy-saving.

## Customer benefits

- 1080P self-developed HD IPCs, allowing high quality monitoring experience.
- Unified network management greatly improves customer management efficiency.

# Nigeria Emergency Command Center



Emergency command center in Minna of Niger state

## Customer challenges

- Requirement for the development of emergency command centers in 37 states to cover a population of 140 million all over the country
- Need for the unified access platform and quick emergency response

## Huawei solution

- Development of emergency command centers in 37 states across the border
- Unified access platform that supports multiple access modes, offers unified access numbers, and receive incidents and respond to emergency in a centralized manner
- CAD and GIS, allowing quick emergency response
- VPN and SBC, ensuring system security

## Customer benefits

- Stable and efficient emergency response assistance system, offering end-to-end management services
- Emergency command system that uses existing devices, lowering project investment costs, and maximizing the customer's ROI



# Laos Emergency Command Center



## Customer challenges

- Requirement for emergency command systems that can lower the crime rate and protect public security for Laos' capital Vientiane
- Need for cross-department resource integration and service collaboration
- Demand to use existing networks to lower investment costs and maximize the customer's ROI

## Huawei solution

- Unified access platform, supporting service collaboration and resource sharing
- CAD and GIS, allowing quick emergency response
- Comprehensive video surveillance system, covering key areas within the city
- System interconnection, allowing data sharing

## Customer benefits

- Quick response to contingencies and lower casualties and economic loss caused by incidents
- Better cross-department collaboration
- Optimized solution evolution capabilities, maximizing customers' investments and lowering project investment costs

# Huawei Park Video Surveillance



## Customer challenges

- Requirement for independent operation of multi-layer security protection system
- Need for cutting-edge video surveillance systems to protect the security of campuses that feature large areas and dense population
- Outdated SD video surveillance system that does not support HD images or intelligent analysis

## Huawei solution

- Deployment of campus surveillance centers that cover 8 campuses outside China and 13 campuses inside China
- Automatic security protection and intelligent analysis technologies
- HD IPCs, taking 70% of all cameras deployed in the existing security protection system

## Customer benefits

- Comprehensive video surveillance system that integrates surveillance, dispatching, management, control, and storage services
- Global video surveillance network that supports seamless management and timely linked emergency response
- Integration of multiple applications, such as video surveillance, access control, electronic patrol, and intelligent analysis, allowing automatic security protection

# BOC Hong Kong Video Surveillance

-IVS gained presence in the international market



## Customer challenges

- Analog PUs that do not support the connection to the surveillance center
- Cameras and DVRs provided by multiple vendors, lowering system compatibility
- High device maintenance costs in operation branches

## Huawei solution

- Deployment of Huawei DVRs, replacing DVRs that do not support the system
- NVRs + 720p IPCs in newly constructed branches
- Deployment of IVS management platform in the HQ surveillance center, allowing HD and intelligent video surveillance applications

## Customer benefits

- Improved emergency management and security protection, linked video surveillance for branches, and lowered labor costs
- Interconnection with 60%+ existing DVRs, facilitating system management, improving security protection efficiency, and maximizing the customer's ROI
- Optimized network design that uses the existing networks (bandwidth  $\leq 5$  Mbit/s) to lower investment costs

# SZSE Video Surveillance



## Customer challenges

- High requirements for ICTs systems in the new building that has a total investment costs of CNY3 billion
- Need for a comprehensive security protection system that can provide 24/7 live video surveillance, storage, and linked alarming services for key areas, such as entrances, exits, aisles, and equipment rooms

## Huawei solution

- Huawei V1300N video surveillance solution that offers open interfaces and protocols, and supports the intelligent linkage with the access control and alarming systems
- Smart Video technologies, protecting video data security

## Customer benefits

- Quick and flexible deployment, shortening deployment period by 20% and lowering energy consumption by 30%
- 24/7 video surveillance, storage, and intelligent linkage, lowering labor costs, enabling intelligent management, and allowing quick emergency processing
- Video storage with higher stability and reliability
- More intelligent and efficient video query and positioning

# Video Surveillance for United Imaging Headquarter



## Customer challenges

- United Imaging headquarter is a strategic, national-level key project, which is also an comprehensive park integrating production, R&D and life community together.
- Need for a comprehensive security protection system that can provide 24/7 live video surveillance, storage, and linked alarming services for key areas, such as entrances, exits, aisles, and equipment rooms

## Huawei solution

- Deploy Huawei Space IVS servers and eSpace NVR 6032 key platform. Build eSpace IVS and Honeywell alarming platform, linkage system with entrance management platform.
- End-to-end HD solution.
- Linkage between eSpace IVS and comprehensive service platform of the park

## Customer benefits

- The deployment of video surveillance system improves campus safety and production safety.
- Build high-end and international level campus service ability through the linkage of the comprehensive platform.

## Other Success Stories (Domestic)

Safe city	Safe campus	Government and enterprise	Transportation
Shanghai Jiading safe city	Safe campus for Dongbei University of Finance and Economics	Video surveillance for Shaanxi Provincial People's Congress Office Building	Changsha subway (line-2) video surveillance
Beijing Yanping safe city	Safe campus for South-Central University for Nationalities	Shaanxi housing information platform system	Guangdong-Shaoguan highway toll collection video surveillance
Anhui Hefei safe city	Safe campus for Harbin Normal University	Campus video surveillance for Benxi Iron and Steel Group Corporation	Guangdong Qingyuan road inspection
Hebei Langfang safe city	Safe campus for Mudanjiang Normal College	Campus video surveillance for Anshan Iron and Steel Group Corporation	Linked speeding-control surveillance for Shanxi provincial transportation department
Guizhou Qianxinan safe city	Safe campus for Shandong College of Arts	Video surveillance for Changsha municipal procuratorate	Video surveillance project for Yangtze river transportation department Wuhan municipal bureau
Changsha Skynet project	Examination room surveillance for Huazhong Agricultural University	Video surveillance for Shenzhen municipal court	And more
Karamay safe city	Examination room surveillance for Yunnan University of Finance and Economics	Video surveillance for Dongbei Special Steel Group Corporation	<b>Finance</b>
Anhui Huainan safe city	Safe campus for China Pharmaceutical University	Campus surveillance for Shanghai Electric	SZSE office building video surveillance
Henan Nanyang safe city	Video surveillance for Nanjing Union Theological Seminary	Campus security protection for New United Group	ADBC Shaanxi branch video surveillance
Dongguan Songshanhu safe city	And more	IVS for Heilan	And more
Guizhou Anshun safe city		Smart campus security protection for Tianshan Aluminum	
Heilongjiang Qitaihe safe city		Smart campus security protection for TBEA	
Yunnan Kunming safe city		Video surveillance for the Jiangsu Wuxi customs bonded zone	
And more		And more	

## Other Success Stories (Overseas)

Safe city	Emergency command	Campus surveillance	Transportation surveillance
Pakistani police center	Laos emergency command center	BOC Hong Kong video surveillance	Indonesia transportation surveillance
Pakistan safe city	Nigeria emergency command	CNPC oil field in Kazakhstan	TCDD surveillance
Baghdad safe city	Tajikistan traffic command	Kuala Lumpur airport	Tajikistan traffic command
Moscow safe city	And more	Philippines GFII video surveillance	Ecuador intelligent transportation
Belarus border surveillance		Angola safety park	PIDSS oil pipeline video surveillance
Mozambique national security		And more	And more
Ecuador safe city			
Moldova safe city			
And more			



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