

Industry Video Surveillance Solution -- - Main Slide

Global Solution Sales Department

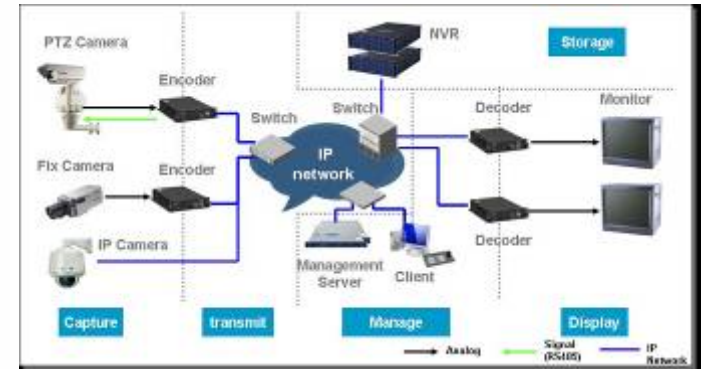


Huawei Symantec

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Video Surveillance Scenario



Monitoring Center



Client Software Display

Development of Video Surveillance



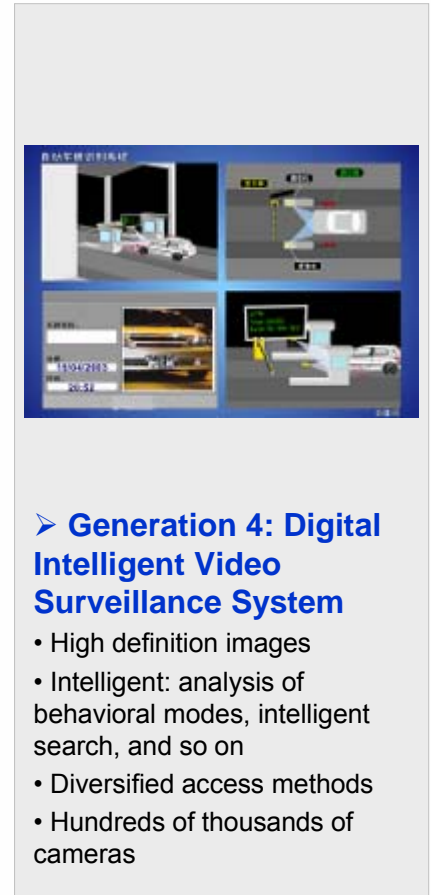
1980 – 1998



1998 – 2006

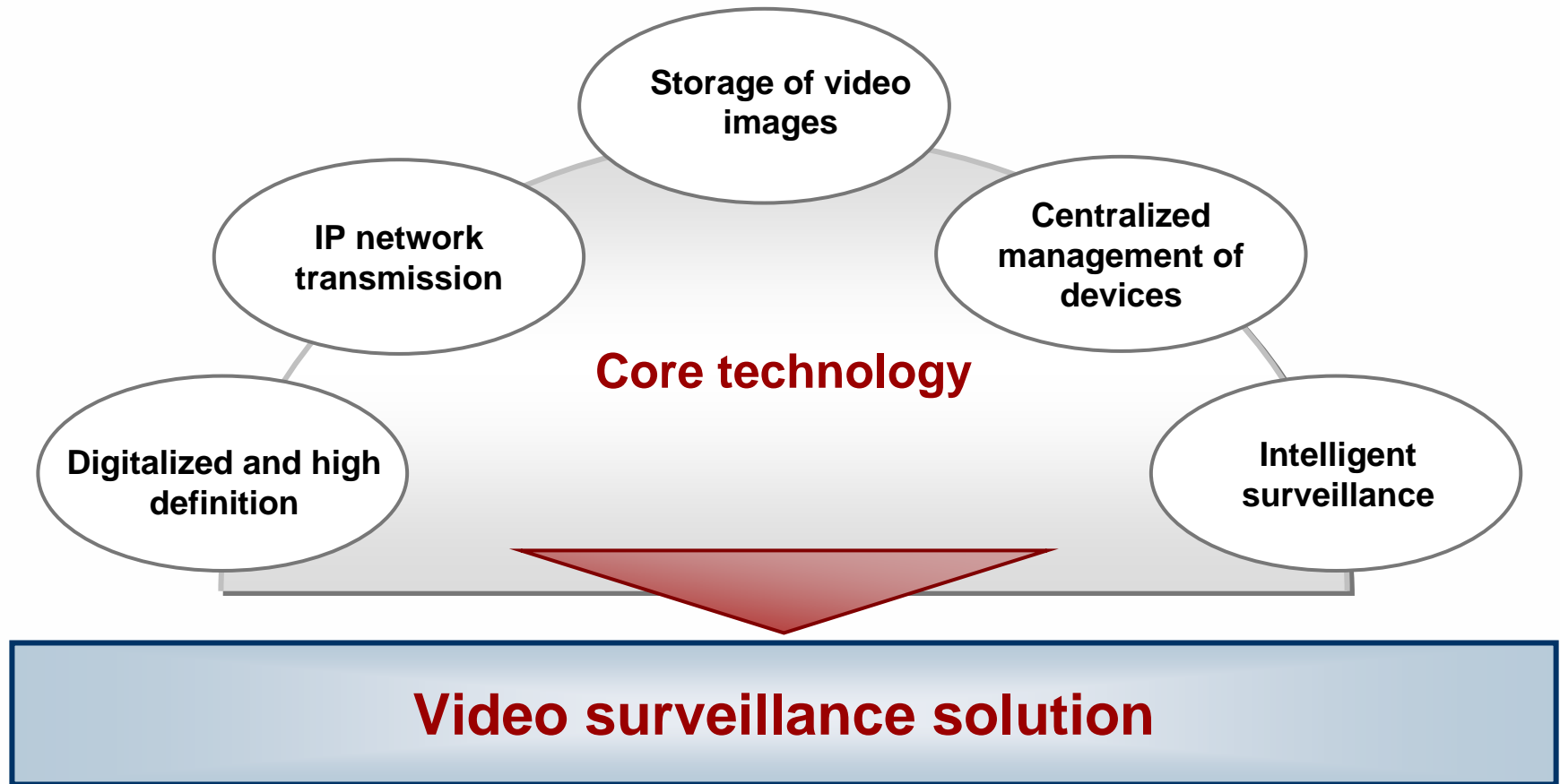


2007 – 2010



2011 – future

Core Technology of Network Video Surveillance Solution



Video Surveillance Architecture

Mainstream Architecture of Current Network Video Surveillance System

1

- Adopting the coding and decoding technology to compress/decompress digital audios/videos;
- Storing compressed and coded data on local disks;
- Integrating image segmentation, multiple video handoff, and video recording/playing;
- Controlling, managing, and checking videos on clients through the network.

DVR Architecture

2

- The server architecture adopts streaming media as the core technology;
- The system provides the powerful function of media stream transmission to meet great demand of client access;
- The storage of video data involves the storage servers and storage arrays;
- Storage is mostly deployed in centralized mode.

Server + IP SAN Architecture

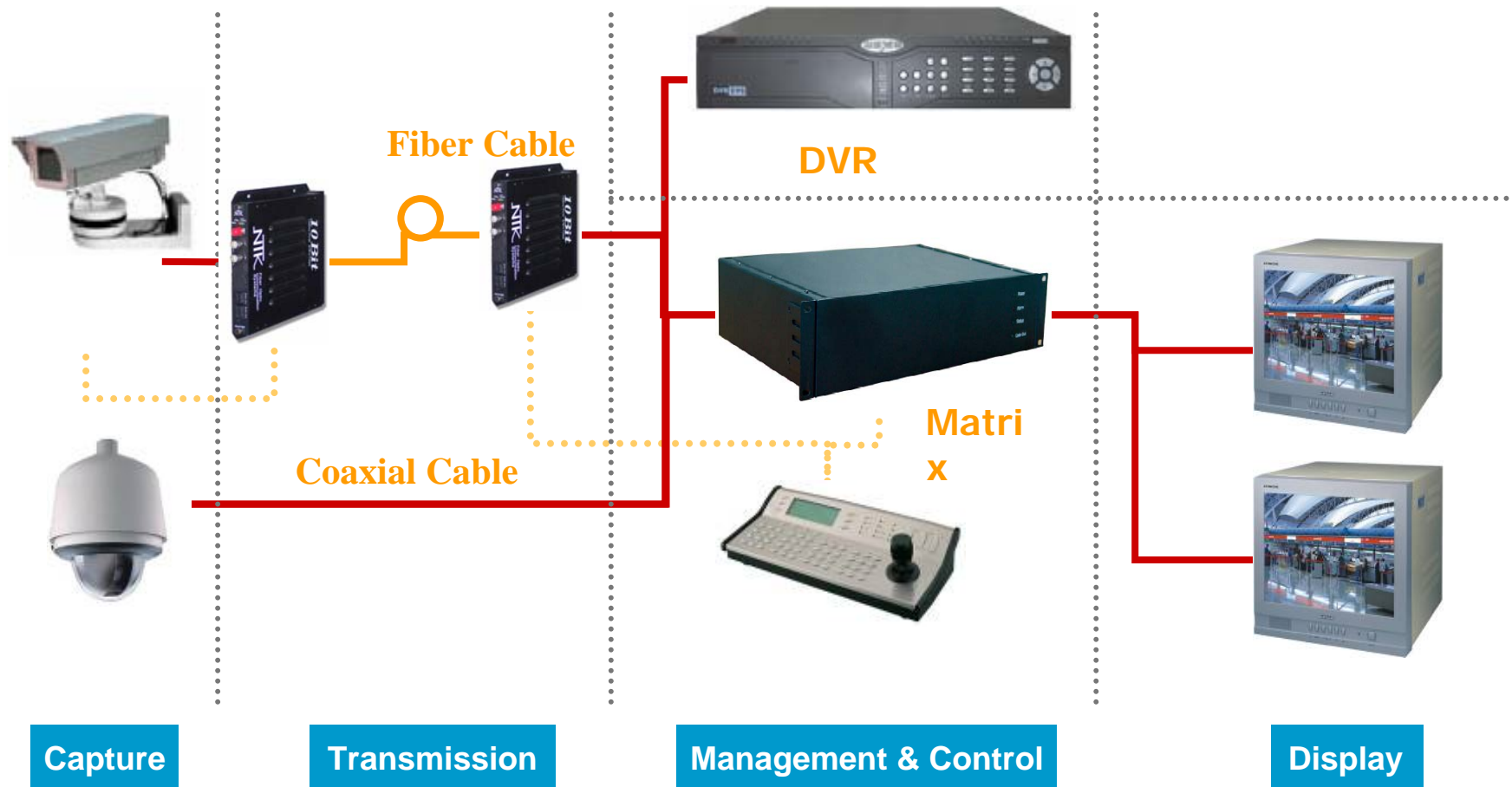
3

- The system integrates video surveillance, image storage, data management, and analog access to provide an integrated video surveillance center;
- The video storage based on the NVR architecture reduces the costs of storage servers;
- Flexible network deployment, distributed or centralized;
- The system can realize the cloud storage of video surveillance.

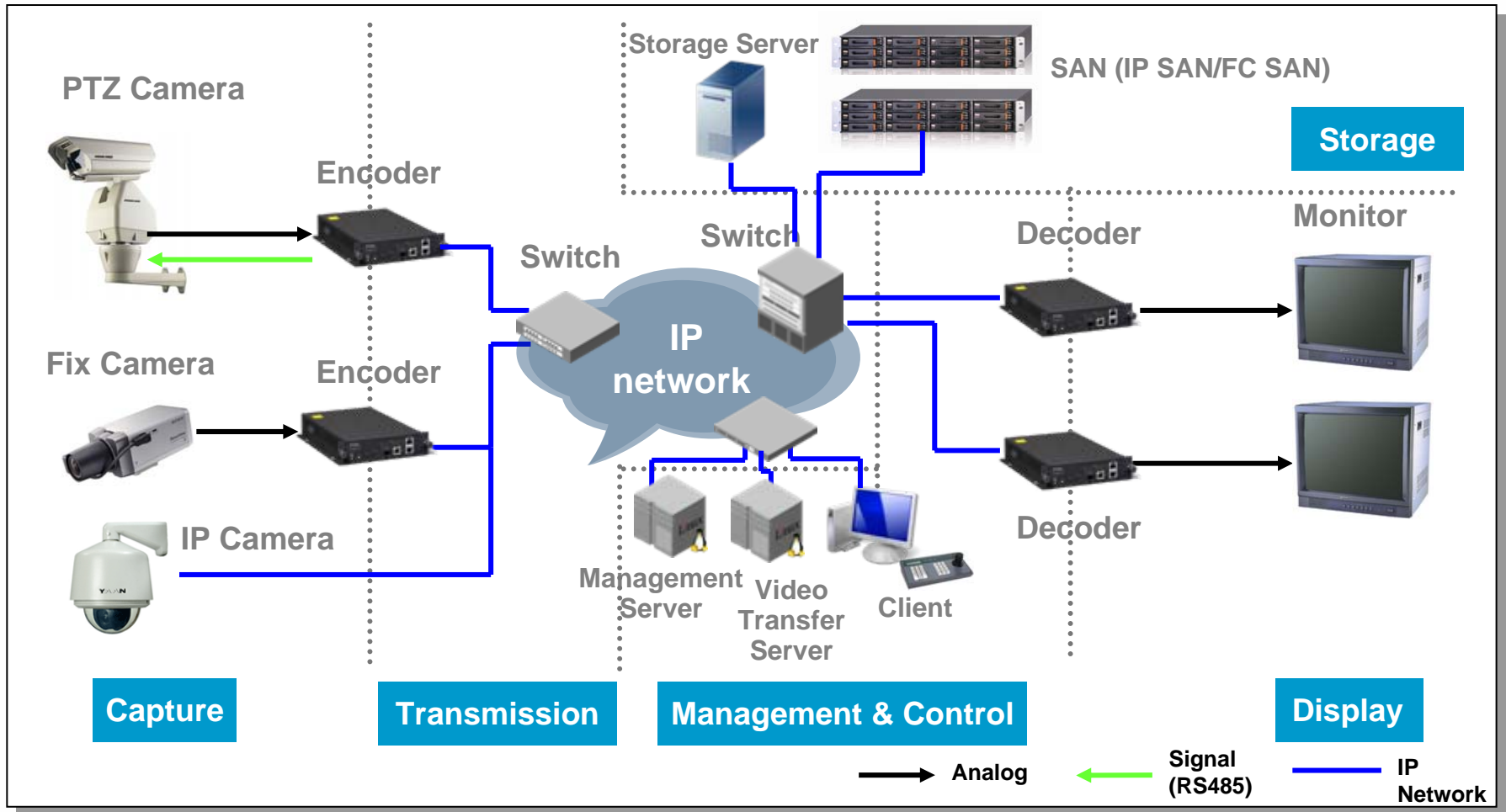
NVR Architecture



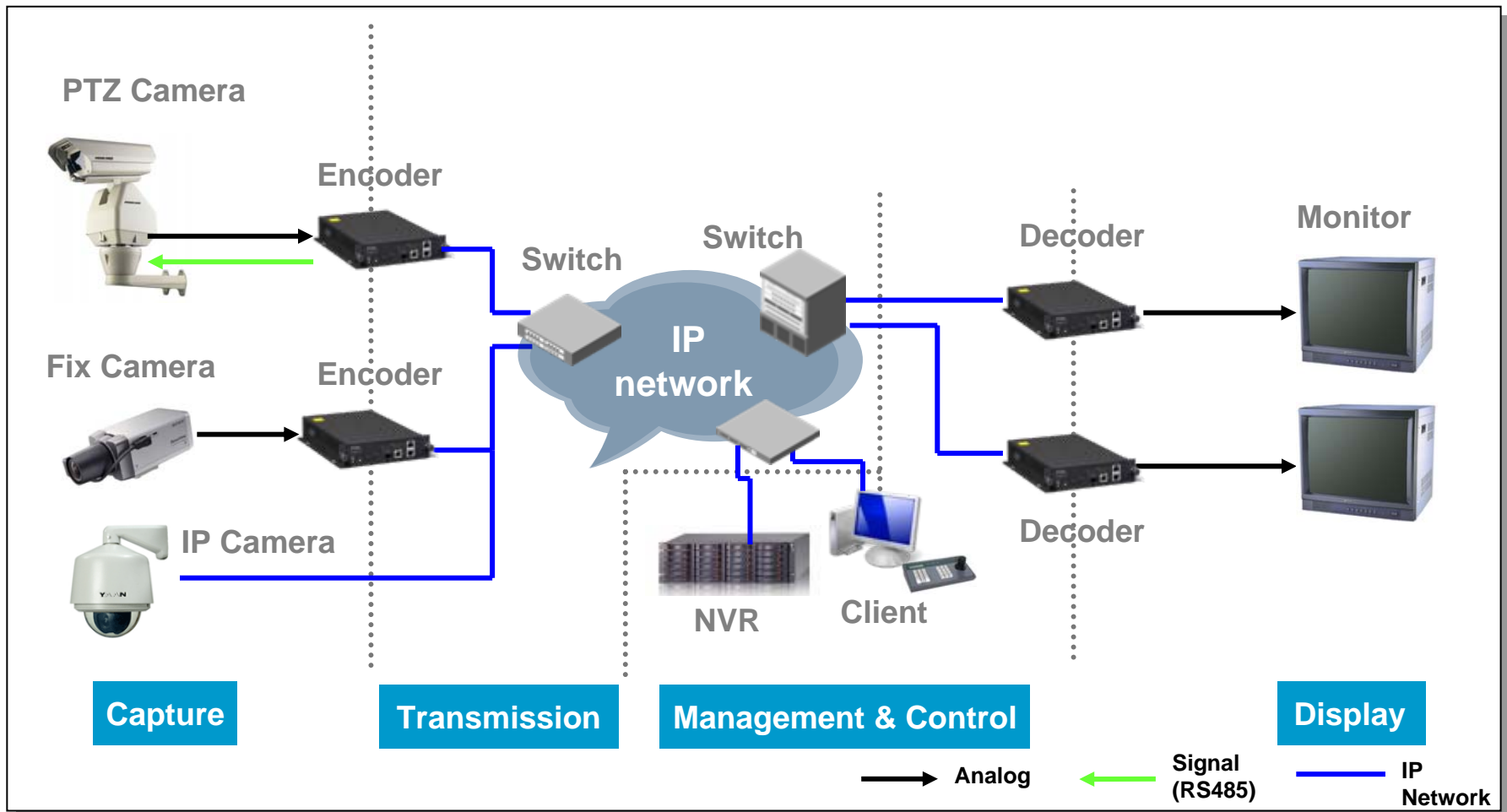
Video Surveillance Architecture(1) – DVR Based



Video Surveillance Architecture(2) – SAN Based



Video Surveillance Architecture(3)– NVR Based



Comparative Analysis of Surveillance Architecture

	DVR	IPVS (NAS/SAN)	NVR
Integration degree of system	★ ★ ★	★	★ ★
Networking degree	★	★ ★ ★	★ ★ ★
Stability	★	★ ★	★ ★
Storage capacity	★	★ ★	★ ★
Front-end device access	★	★ ★ ★	★ ★
Client access	★	★ ★ ★	★ ★
Deployment flexibility	★	★ ★	★ ★ ★
Cost-effectiveness	★ ★	★ ★	★ ★ ★
Digitalization and high definition	×	✓	✓
Market positioning	Small-sized network deployment	Large-sized carrier-level network deployment	Large-and-medium sized network deployment of industry users

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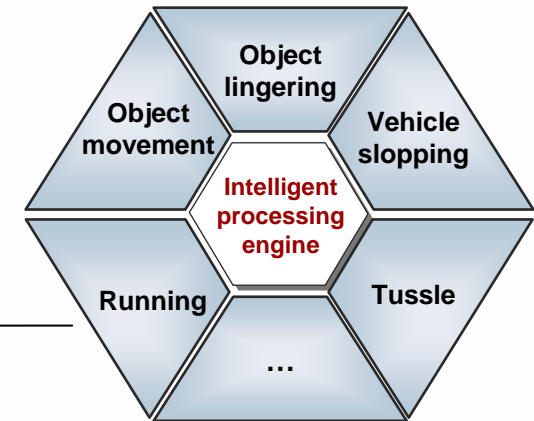
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iNVS – Huawei Symantec intelligent Network Video Surveillance Solution

Intelligent and comprehensive processing center



Third-party programs



Intelligent storage core of video surveillance

Intelligent management server

Alarming unit

Intelligent NVR
Video search engine

Able to manage
1000 intelligent NVRs

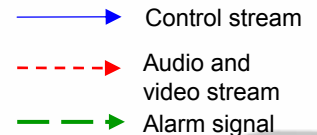
Intelligent NVR

Intelligent NVR

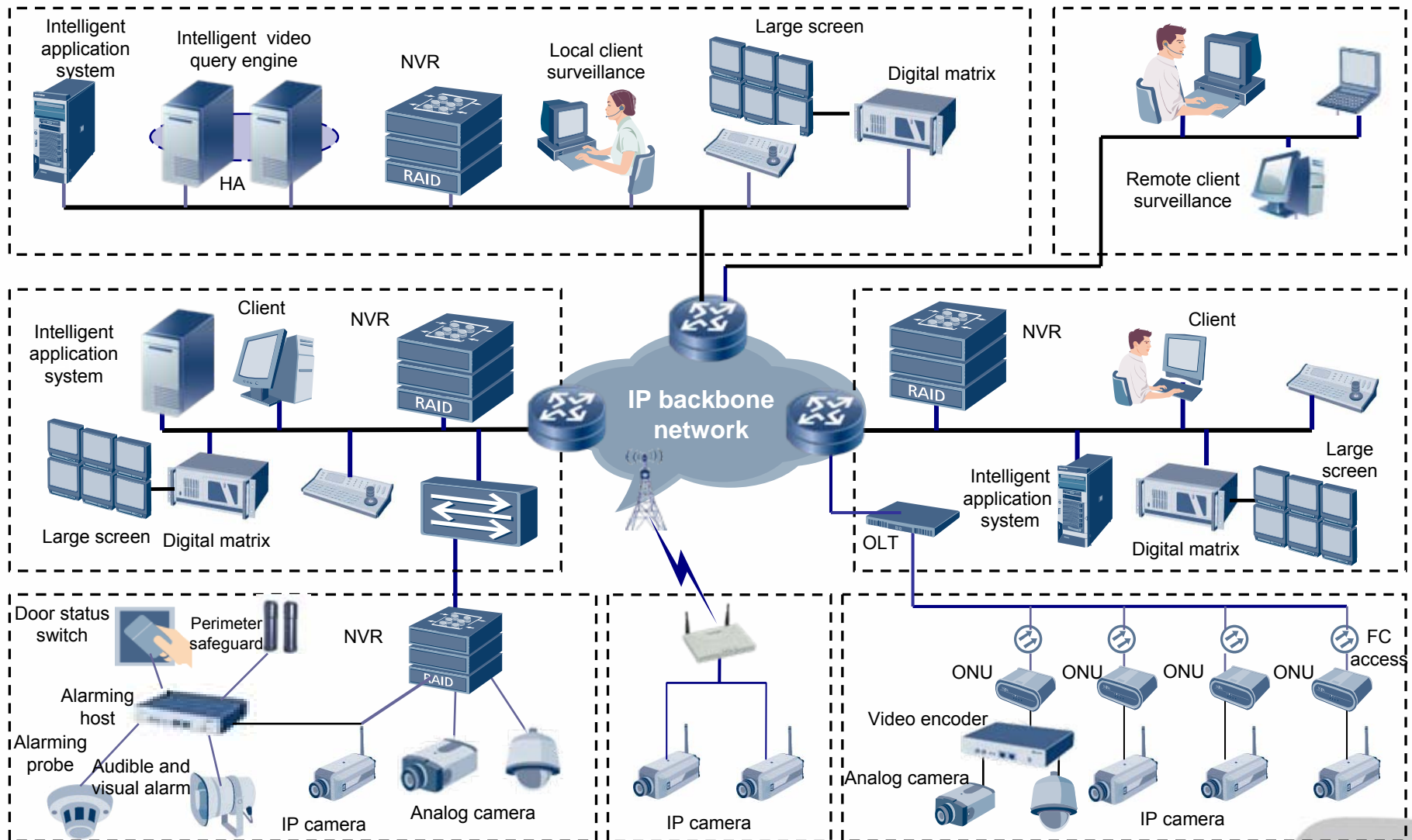
Audio and video stream capturing device



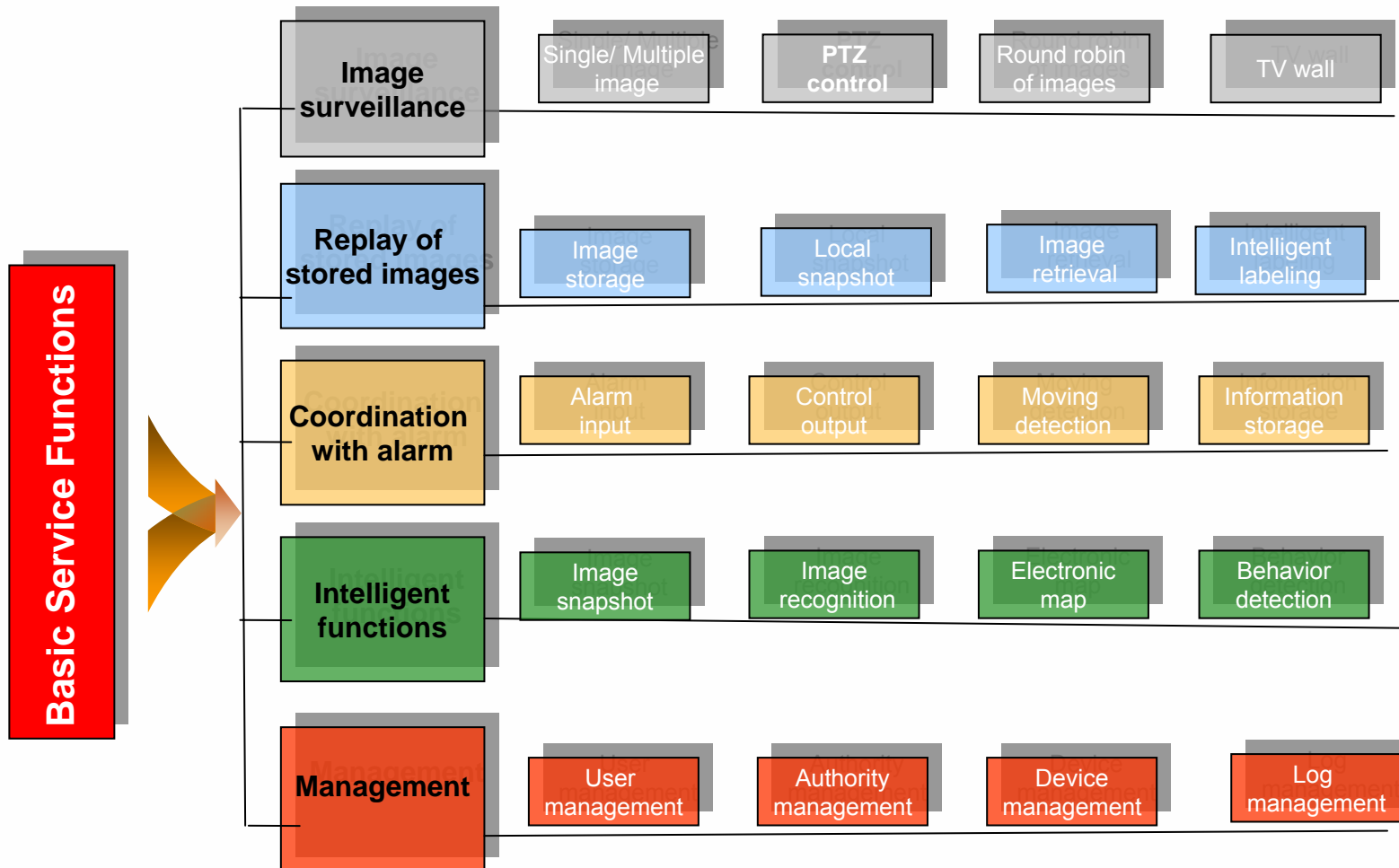
Applicable to financing, large exhibitions, security projects, industrial parks, education, governments, medical care, and rail transportation.



Topology of iNVS Solution



Solution Functions of iNVS Solution



iNVS Hardware – NVR Equipment

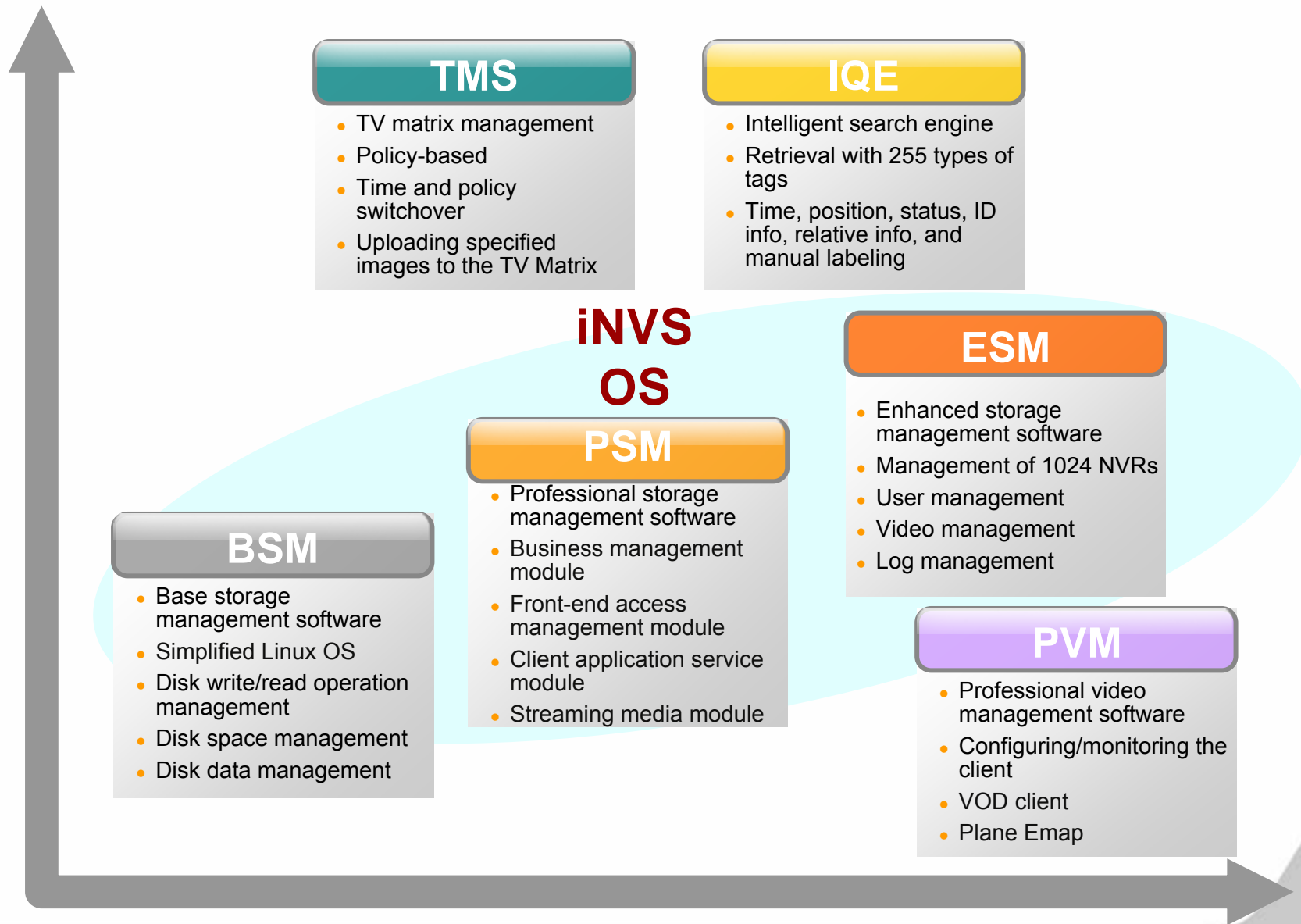


V1300N

V1300N

- Quad core 64-bit processors
- 2 / 4 / 8 GB cache
- Raid 0, 1, 5, 6, 10
- 2 GE hosts
- 24 disks
- 256 channels
- 128 clients
- Video Surveillance Software Embedded

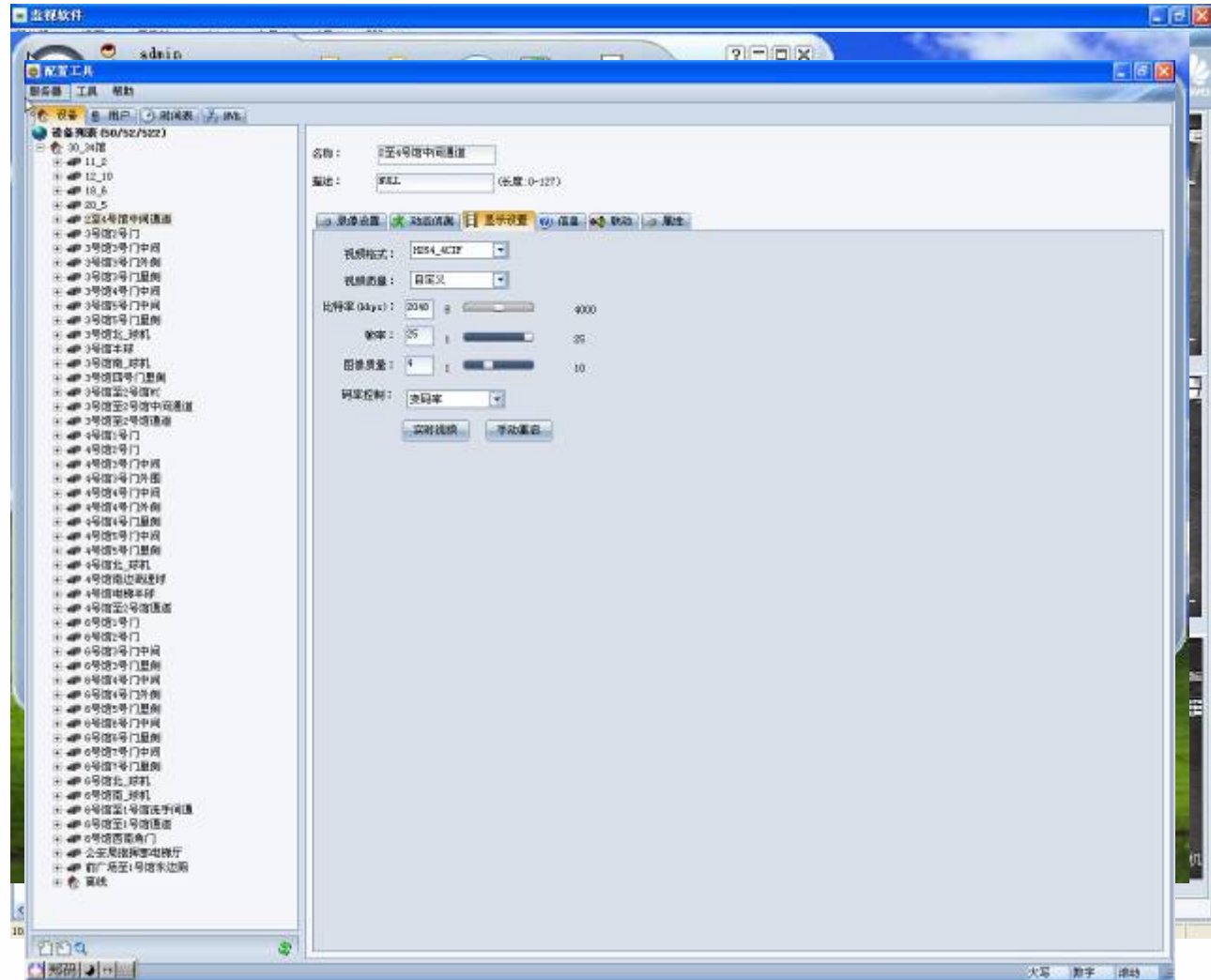
iNVS Software



PVM Client Display

Plentiful Functions

- Real-time monitor
- Video replay
- PTZ control
- Configuration
- Log management



Competitive Edge – iNVS vs DVR

- **High Reliability Of Data Storage**

- Safe devices
 - RAID
 - Temperature control
 - Data flow control
 - Memory error correction
 - SSD
- Safe network
 - Heartbeat line detection
 - Network interruption protection
- Safe system
 - Identity recognition,
 - Hierarchical management
 - Audit
 - Log management



Competitive Edge – iNVS vs DVR

- **High Definition Video Compatible**

- IP Camera
- 720P/1080p/1080i
- 4~10Mbps

- **High Density Storage**

- A single intelligent NVR storage device is capable of accessing 256 channels of video image storage and 128 channels of clients. One DVR can only manage 4~16 video terminals.
- A single intelligent NVR storage device provide 24 disk slots and maximum of 48 TB capacity.
- Up to 1024 NVRs can be managed in one system.




Competitive Edge – iNVS vs SAN

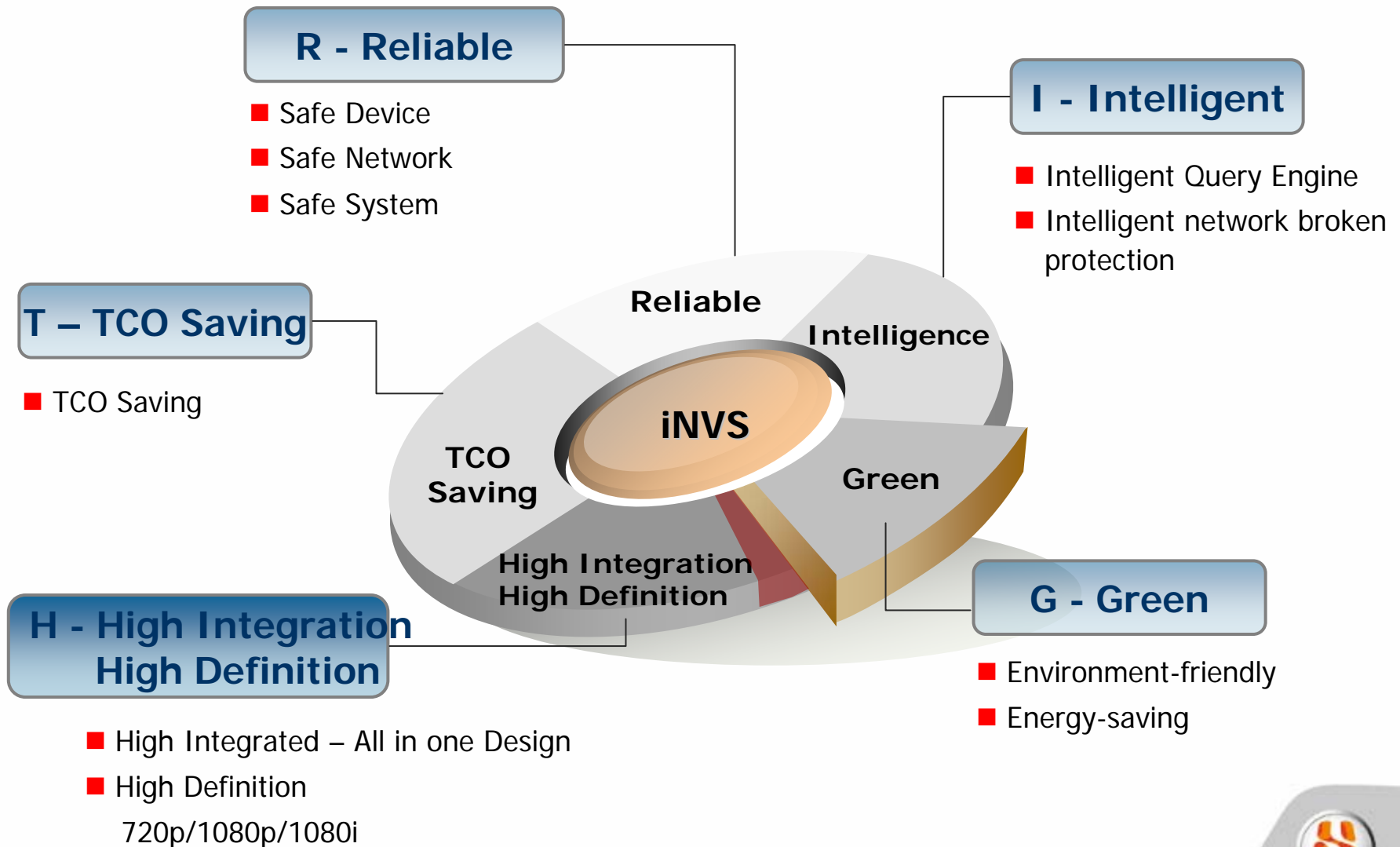
- **ALL-IN-ONE design**
 - Easy deployment
 - Video surveillance
 - Device management
 - Intelligent storage
 - Video displaying
 - Analog/Digital video access
 - Simplified Integration
- **High Reliability Of Data Storage**
 - Heartbeat line detection
 - Network interruption protection
- **Flexible Network Deployment**
 - Distributed network deployment, saving the bandwidth
 - Centralized network deployment, saving the cost



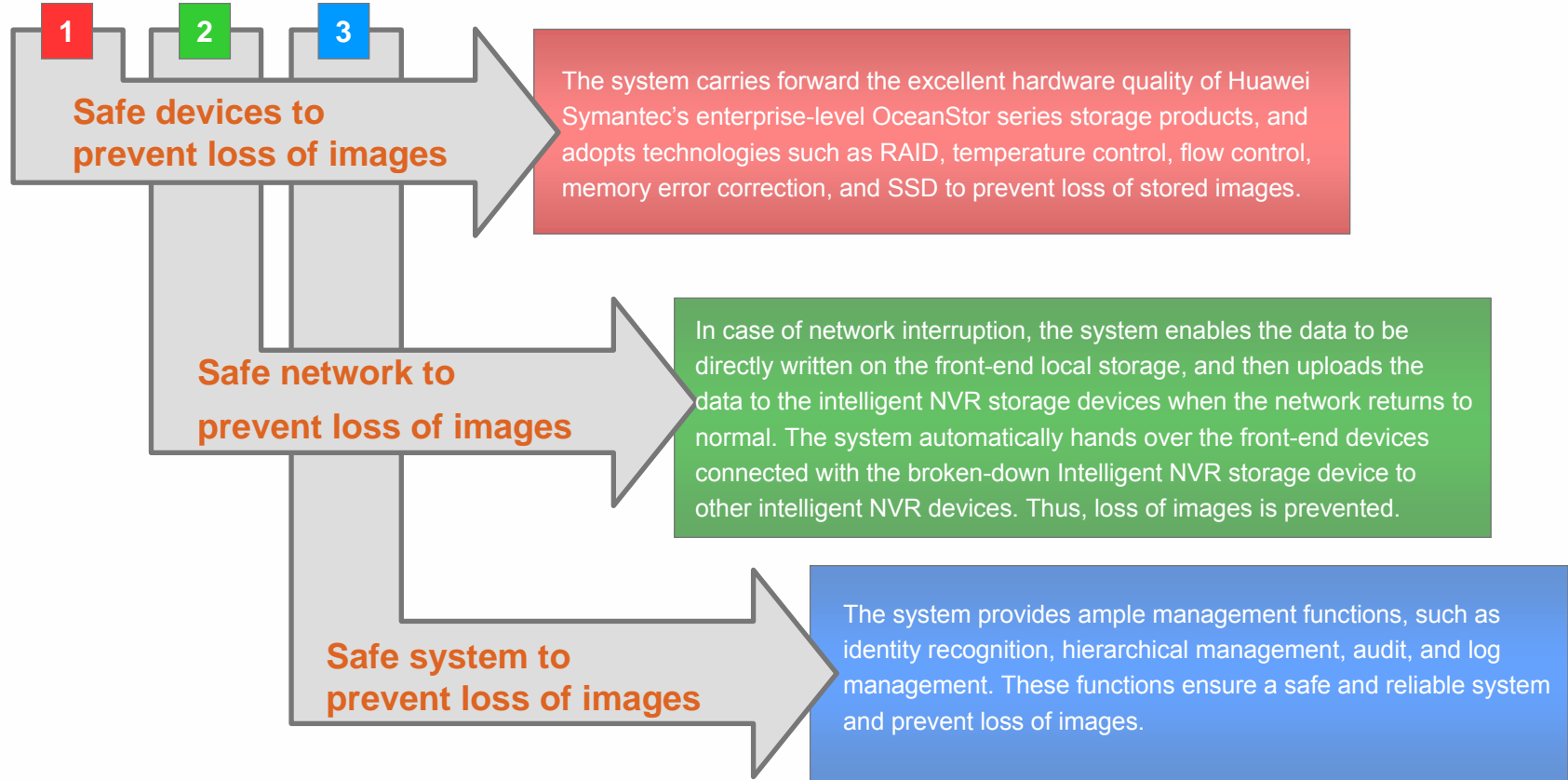
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Do the RIGHT Choice



Reliable (1) - High Reliability of data storage



Reliable (2) - iNVS Security Policy

Identity Authentication

Roles (operator, administrator, auditor)
Levels (seven-level authority management)

Division of Authority

Operators, administrators, and auditors have different authorities for management.
For high risk operations, twice confirmation is required.



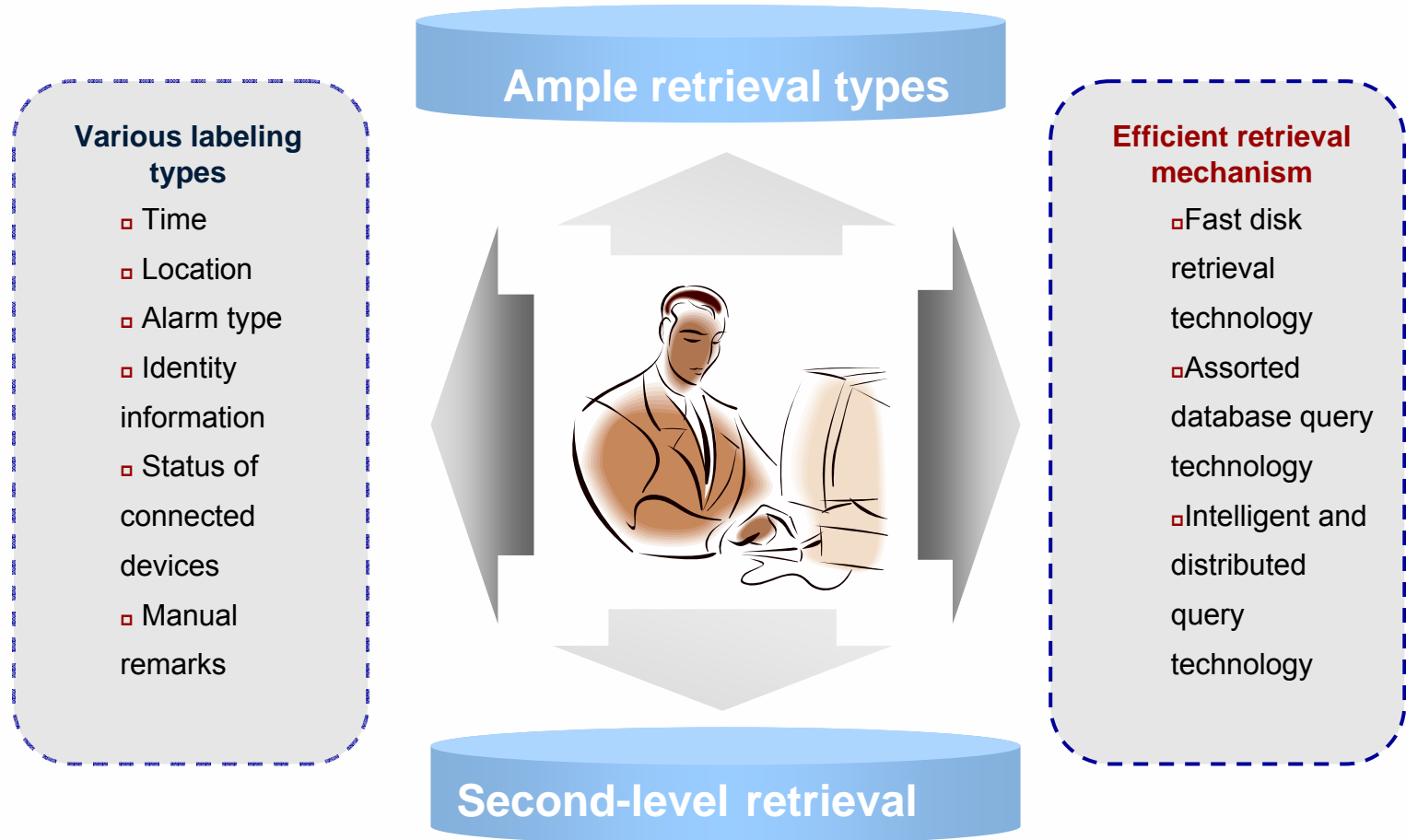
Security Audit

All operations are recordable, manageable, controllable, identifiable, and irreversible.

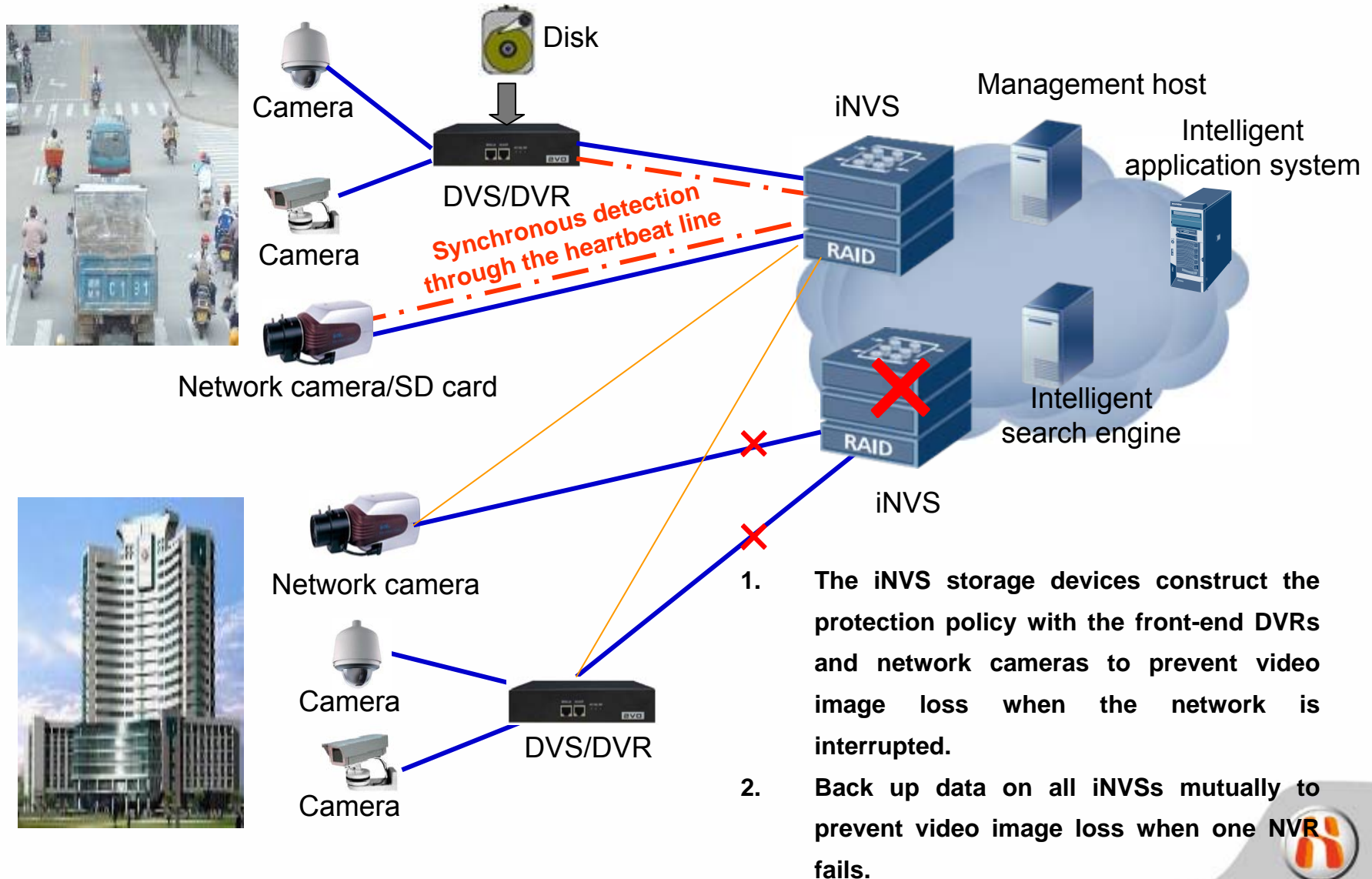
Log Management

All logs, including system logs, alarm logs, operation logs, and auditing logs, cannot be deleted, but only covered. Users can set the validity period themselves.

Intelligent (1) – Smart Retrieval Mechanisms based on Intelligent Search Algorithms



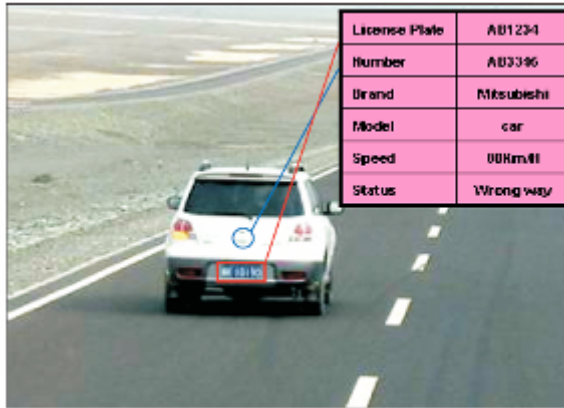
Intelligent (2) – Prevent Video Loss from Network Failure



Intelligent (3) – Video Intelligent Analysis

License plate recognition

- Recognizing commonly-used license plates within a certain region
- Capturing close-up and panoramic views of vehicles, license plate close-up, and binary-digit pictures



Superb resolution

- Processing images not so blurry or clear
- Reducing various noises during imaging and transmission



People counting

- Counting the number of people during any period of time in a certain region
- Counting the number of people moving in a single direction or in two opposite directions



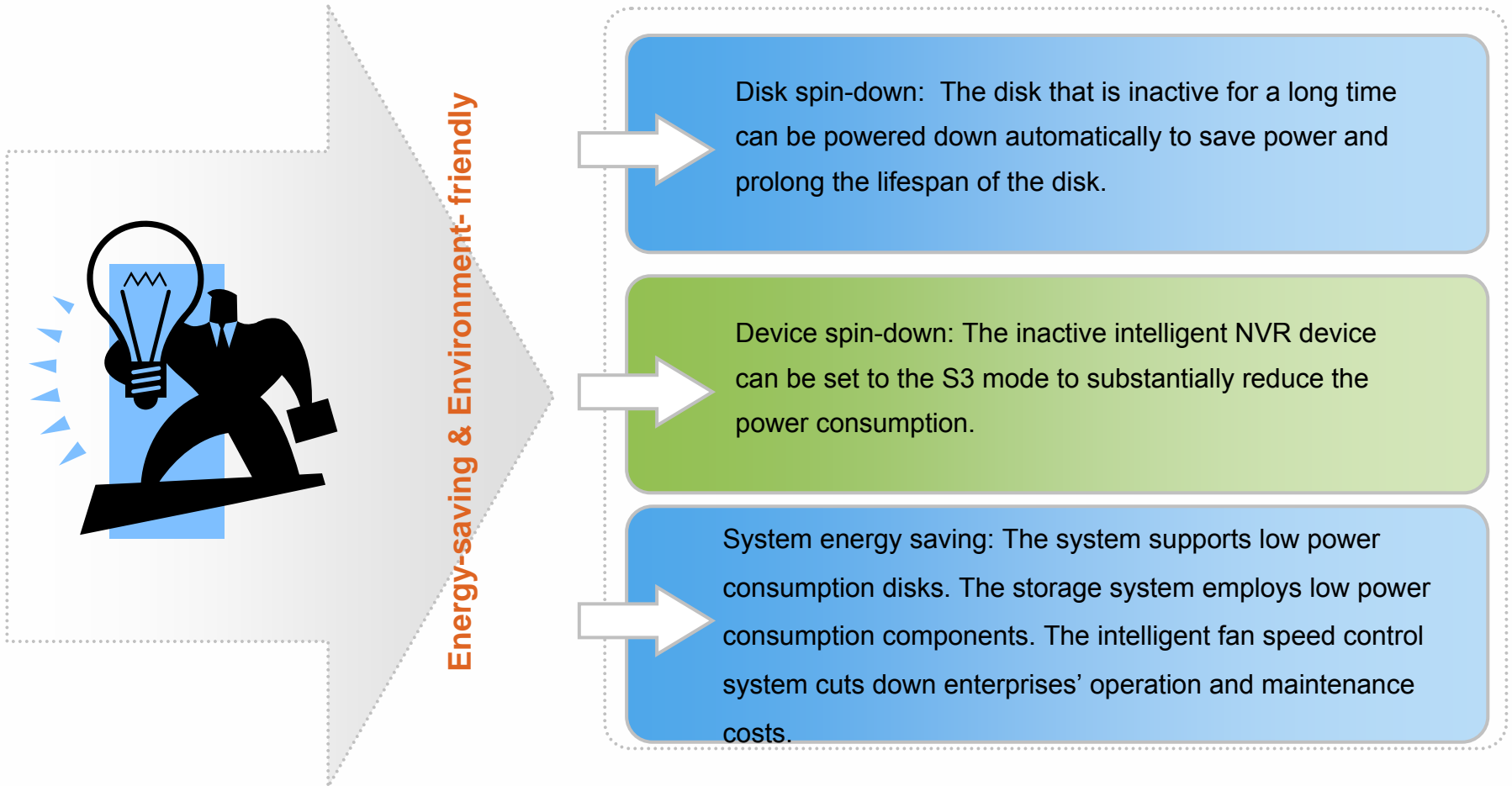
Event detection

- Detecting susceptible people or vehicles in a certain region
- Automatically and intelligently analyzing videos and reporting suspicious events in time



Openness in architecture and compatibility with third-party software bring about more powerful functions.

Green - Environment-friendly & Energy-saving



H - High Integration & High Definition

➤ ALL-IN-ONE design

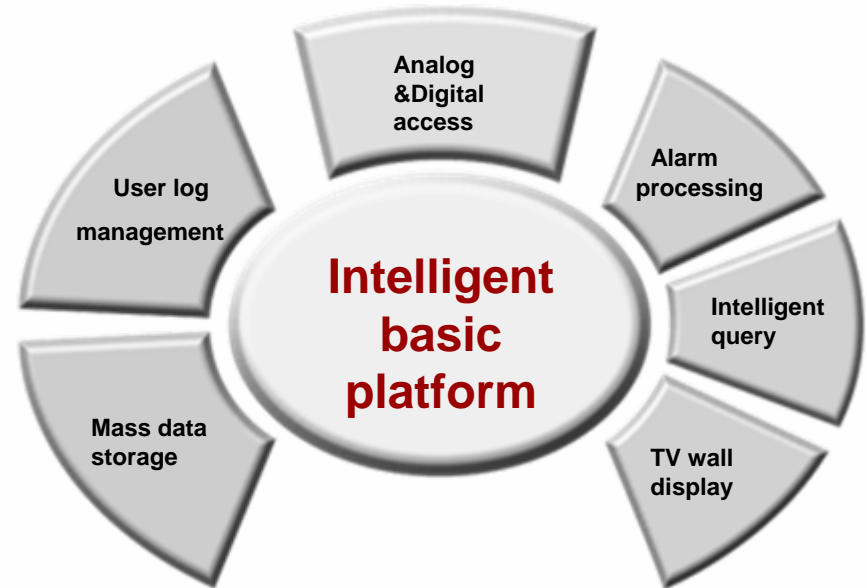
- ❑ Video surveillance system
- ❑ Device management system
- ❑ Intelligent storage system
- ❑ Video displaying system
- ❑ Analog video access
- ❑ Digital video access

➤ Multi-level and multi-area management

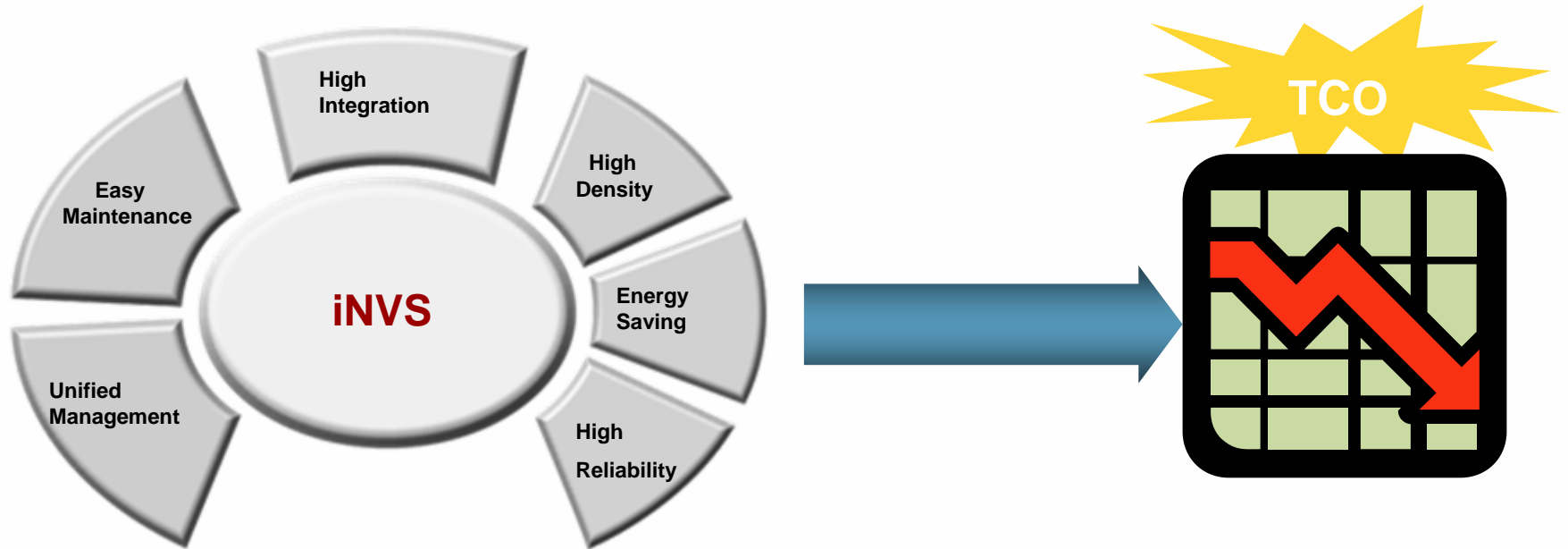
- ❑ Multi-level storage deployment and centralized management
- ❑ A single intelligent NVR storage device is capable of accessing 256 channels of video image storage and 128 channels of clients.

➤ High definition

- ❑ 720p/1080p/1080i



T – TCO Saving



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Typical Application Cases

Project	Typical Scenario	Monitoring Sites	Highlights
Shanghai World Expo 2010	Campus	13000	Huge scale, 10PB, HD
ICBC Sichuan	Bank	10000	300 sets
Indonesia China Bank	Bank	15 branches	HD,IP camera
Pakistan Safe City	Safe City	1000	2PB
Shenzhen Convention and Exhibition Center	Intelligent Building	650	Advanced IP network
One Country Gas-Pipeline	Oil & Gas	300	Total solution

Case Study - Shanghai World Expo 2010

□ Background

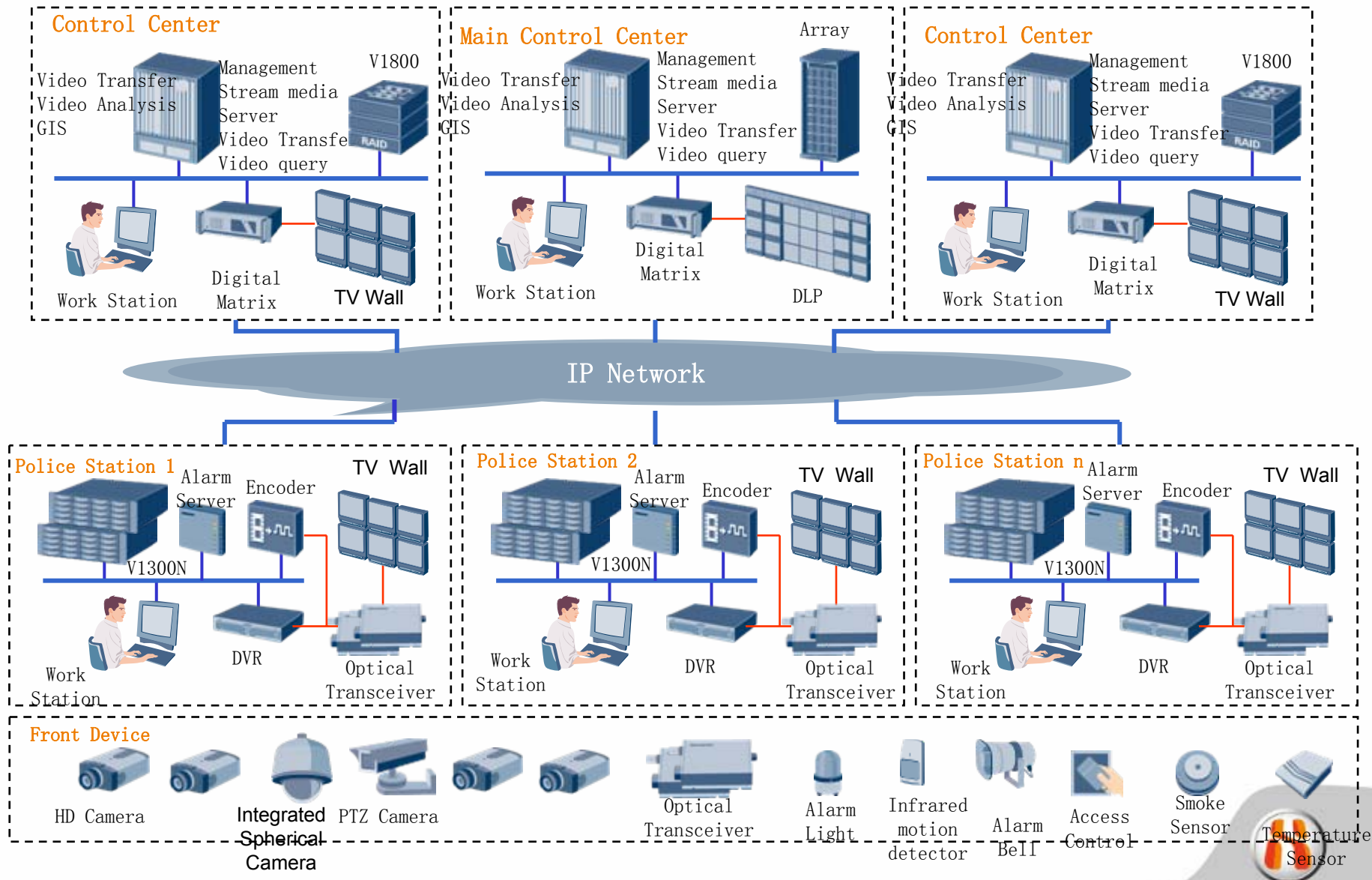
- Shanghai World Expo will be held from May 1, 2010 to October 31. In the six-month exhibition period, it is expected to host more than 70 million overseas visitors from more than 200 countries worldwide, to witness this remarkable event together. This session of the World Expo will be the largest in the history .
- The construction project includes 13,000 video monitoring points, 6 sub-control centers, and 1 main control center. 10Mbps high-definition digital video camera with HD (1080p) H.264 live video streams will be first time used in such a scale level.

□ Highlights

- A huge amount of data storage, HS won the major share of it (=10PB Storage)
- Up to 13000 HD cameras to be deployed
- Typical application in high-density Campus surveillance scenario.



Case Study - Shanghai World Expo 2010



Case Study - Banking System in Asia

❑ Background

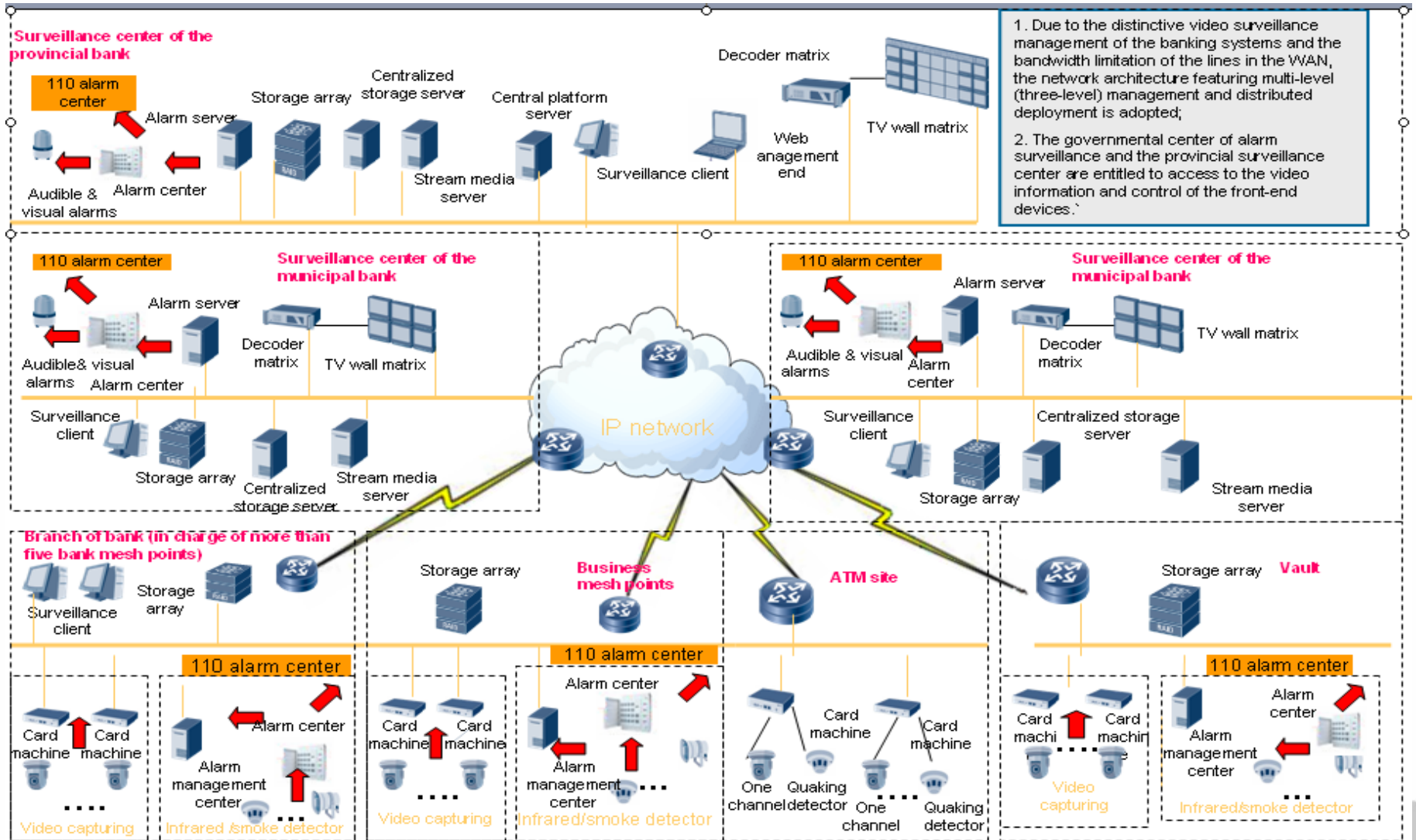
- Typical video surveillance adopted industrial PC + encoder card + analog cameras (DVR) solution, which can not provide high reliable storage, meanwhile, can not provide Hi-definition video streams.
- Bank is facing more and more hi-tech crimes, and internal control management problems, which requires an effective video surveillance solution to prevent crimes.

❑ Highlights

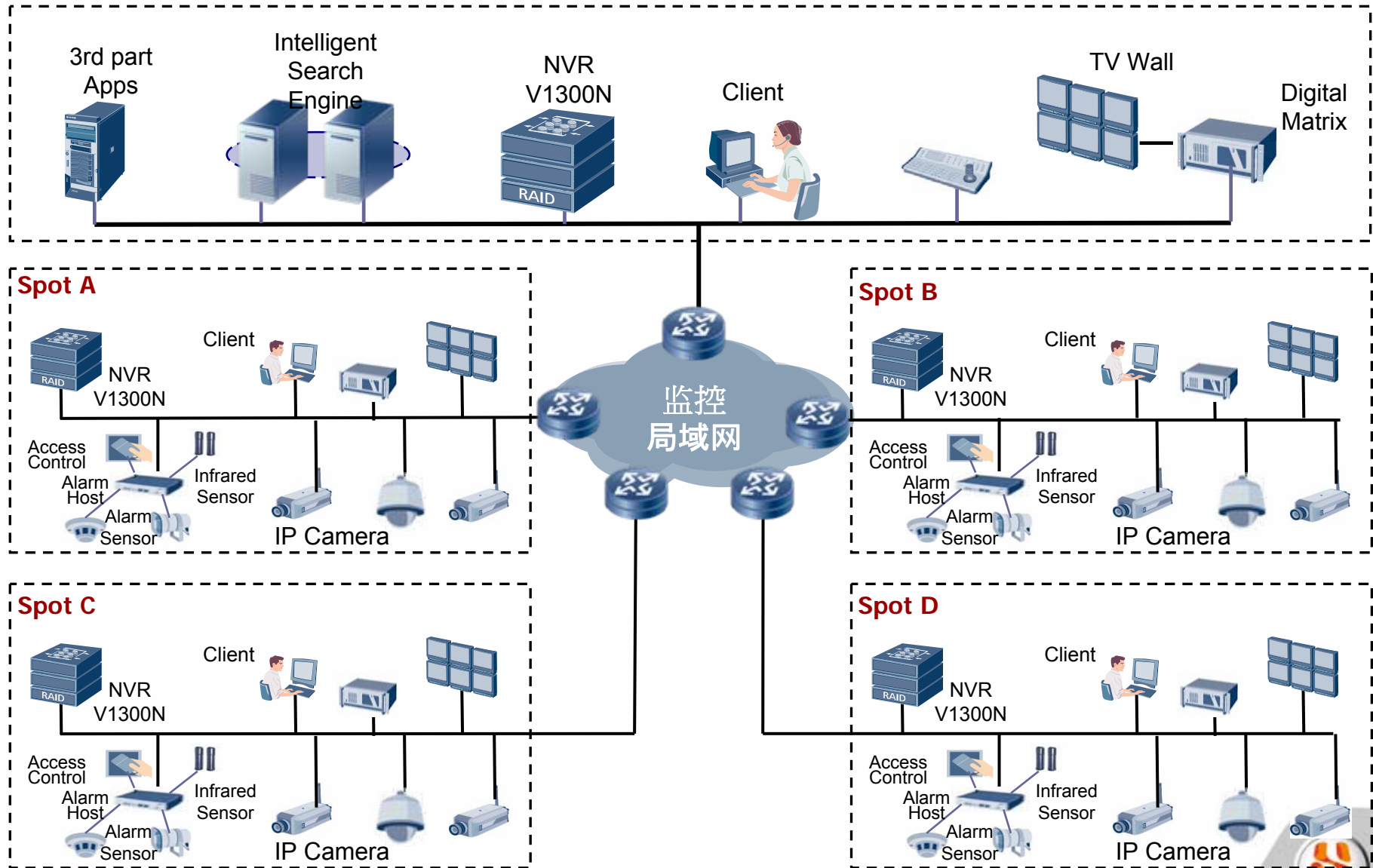
- Carrier class professional NVR device ensures the high reliability
- IP network based solution increases customers' ROI
- Hi-definition video capture devices brings extra benefits to internal control



Case Study – ICBC Sichuan



Case Study - Bank of China in Indonesia



Case Study - Pakistan Safe City

□ Background

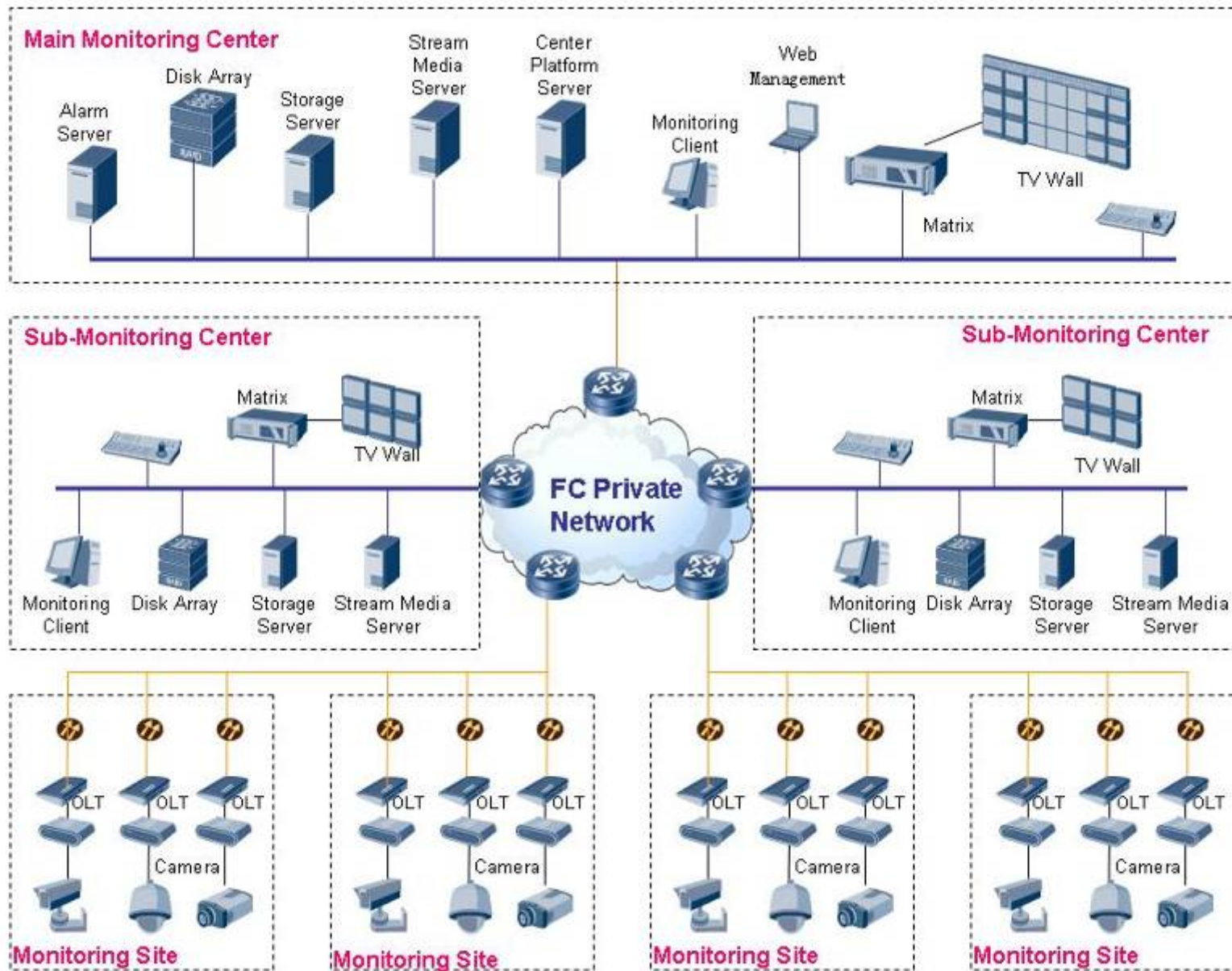
- There is no complete video surveillance system in Pakistan to ensure the city security.
- This is the first phase project of the whole Pakistan safe city.

□ Highlights

- Total video surveillance solution.
- More than 1000 monitoring sites, including two-lever monitoring center.



Case Study - Pakistan Safe City



Case Study - Shenzhen Convention and Exhibition Center

□ Background

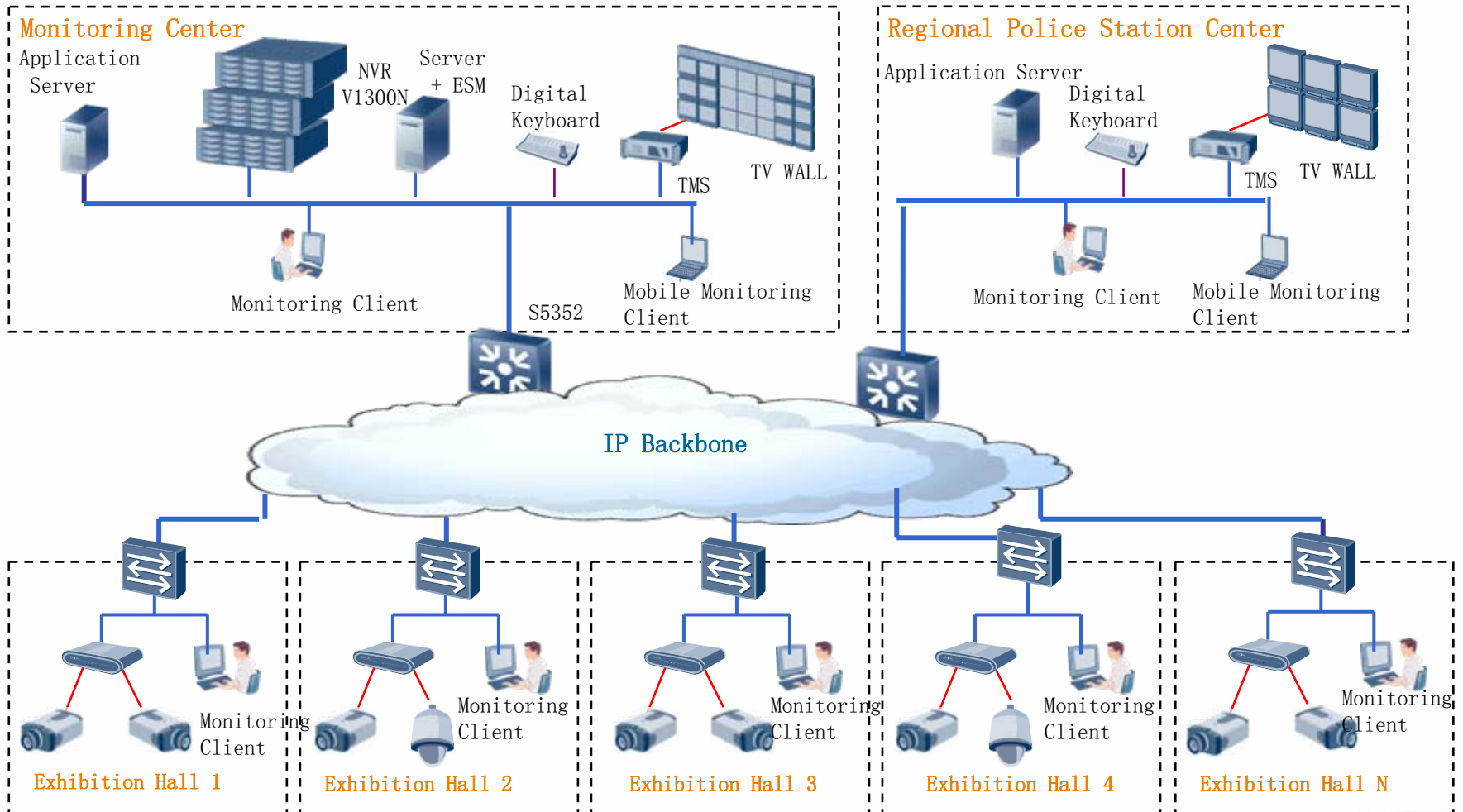
- The existing surveillance system has been installed for many years, it needs to conduct a comprehensive reform.
- Construct a new intelligent digital video surveillance systems in Shenzhen Convention and Exhibition Center, and form a private security network to realize the access of video, audio, data, Ethernet, alarm, access control and other multi-functional integrated services..

□ Highlights

- Advanced IP based video network.
- Typical application in Intelligent Building.



Case Study - Shenzhen Convention and Exhibition Center



Case Study – One Country Gas-Pipeline

□ Background

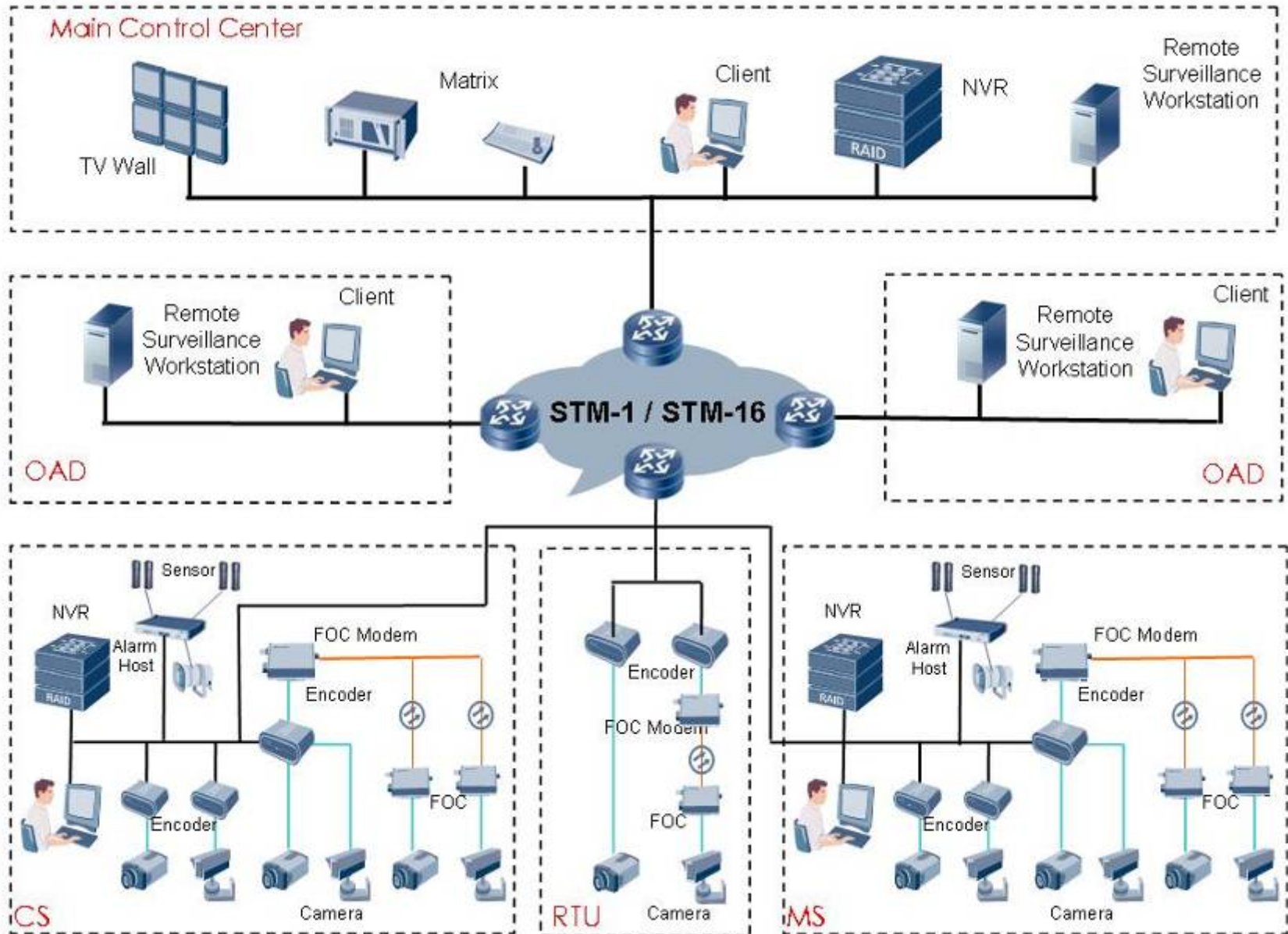
- In hopes of improving management level to build modern and high-tech gas pipelines with ensured safety and create safe environment for resource transport, a reasonable and effective security surveillance system should be established.

□ Highlights

- Total security solution, including Video Surveillance System, Perimeter Alarm System, and Public Addressing System.
- Typical application in OIL& GAS field, including 1 Main Control Center, 4 Compressor Stations, 3 Operation Administrative Departments, and 34 Block Valve Stations.



Case Study – A Country Gas-Pipeline



Thanks!

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