Smart Cities: Envisioning a Sustainable Future

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Huawei at a glance

Who is Huawei

- A leading **global** ICT solutions provider
- A **private** company established in 1987
- A **Fortune Global 500** company

Employees

- **150,000+** employees worldwide
- **70,000+** engaged in R&D

Market Progress

- **$39.5 B revenue in 2013**
- **$ 5 B R&D investment in 2013**
- Serving **1/3** of the world's **population**

Business Areas

- **Carrier network**
- **Enterprise business**
- **Consumer devices**

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Challenges and drivers
Megatrends changing the world

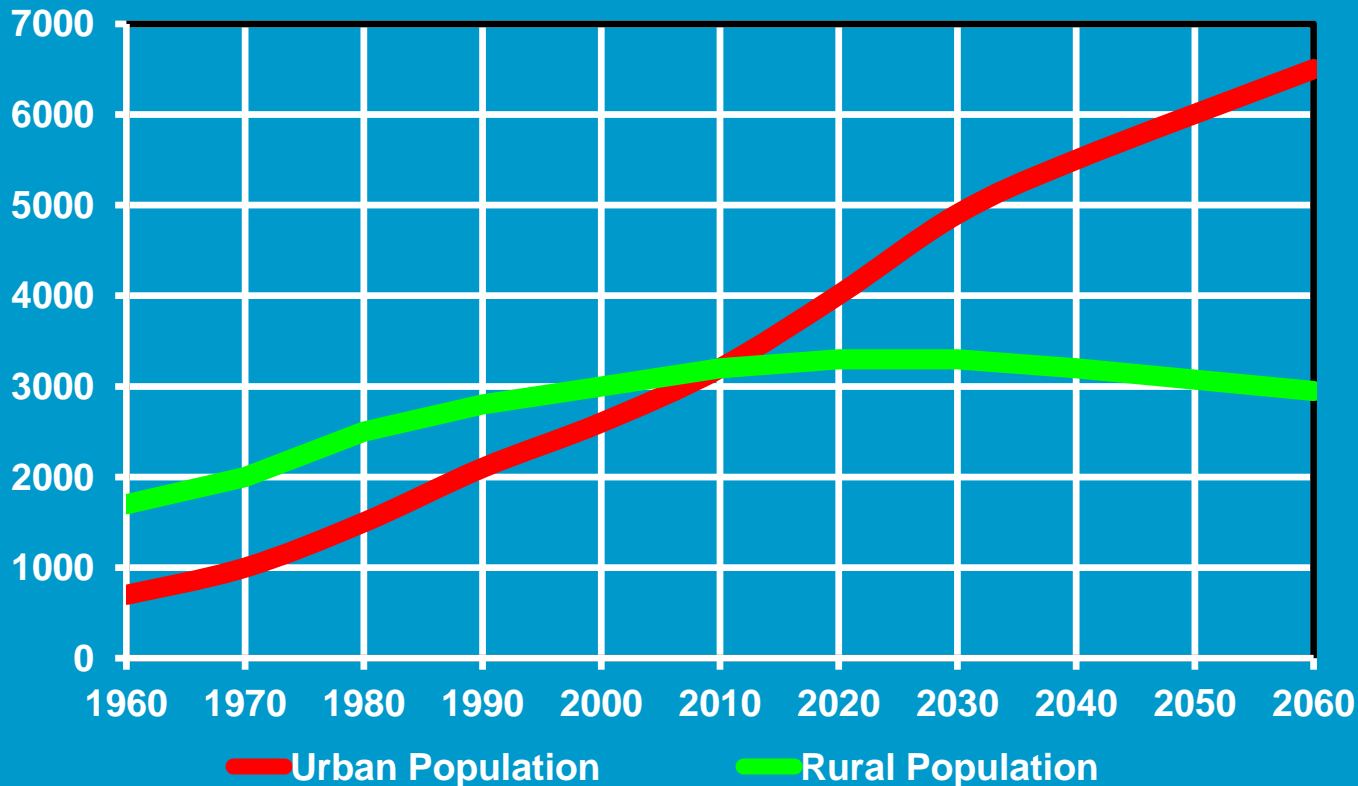Developed Countries' Labor Forces Substantially Age and Decline

Population Growth Increasingly Concentrated in Emerging Countries

Economic Power Shifts to Developing Nations

World's Population Becomes Urbanized

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Urbanization trends

Since 2011 **Smartphones** sales have been exceeding PCs

1.2B people working out of office in 2013

35% Global enterprise users are Mobile Users
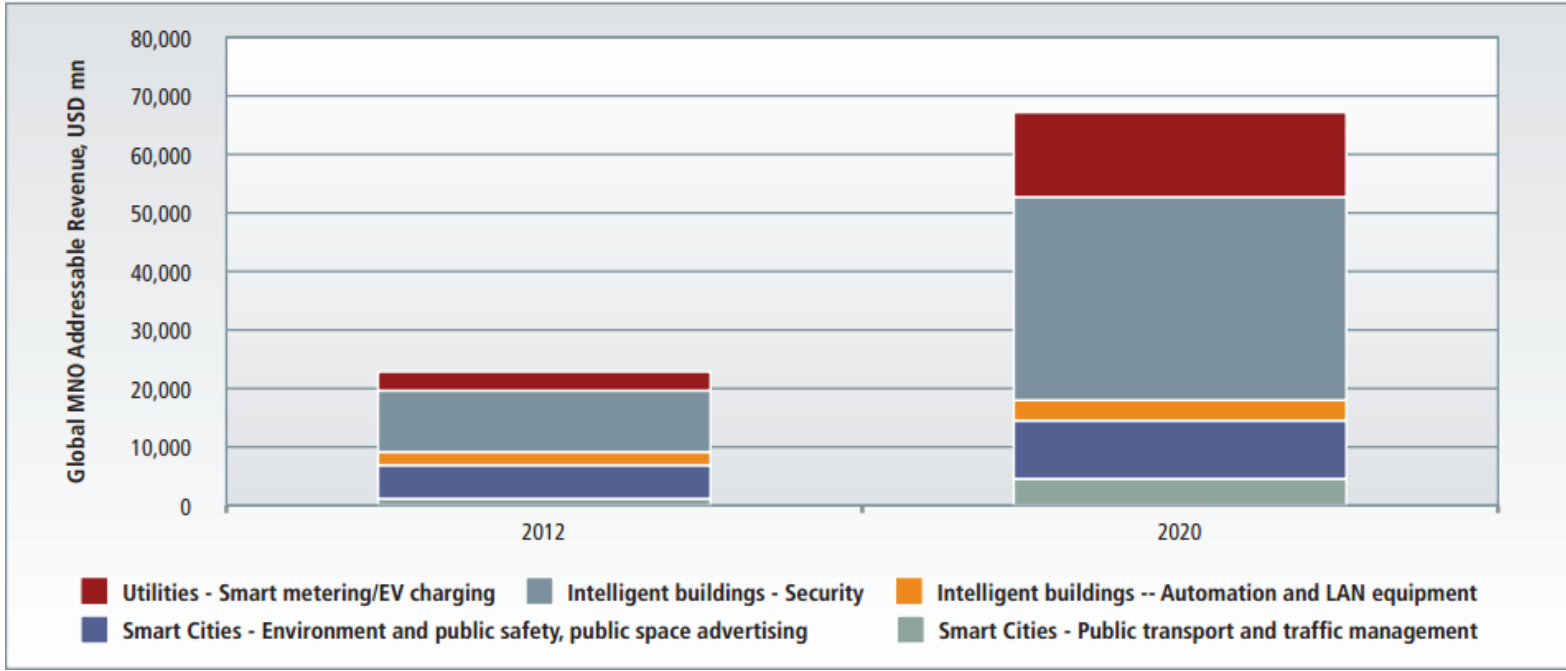
204M emails sent in last minute

1.3M YouTube Views in last minute

Global Smart cities market

The global mobile addressable market in smart cities, transport, utilities and intelligent buildings will amount to USD$67.1bn in 2020, up from USD$22.8bn in 2012, according to Machina Research.

Legend:
- Utilities - Smart metering/EV charging
- Intelligent buildings - Security
- Intelligent buildings -- Automation and LAN equipment
- Smart Cities - Environment and public safety, public space advertising
- Smart Cities - Public transport and traffic management

Source: Machina Research. January 2013

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Challenges Facing Our Cities

Public security

Traffic congestion

Energy shortages

Event support

Smarter City
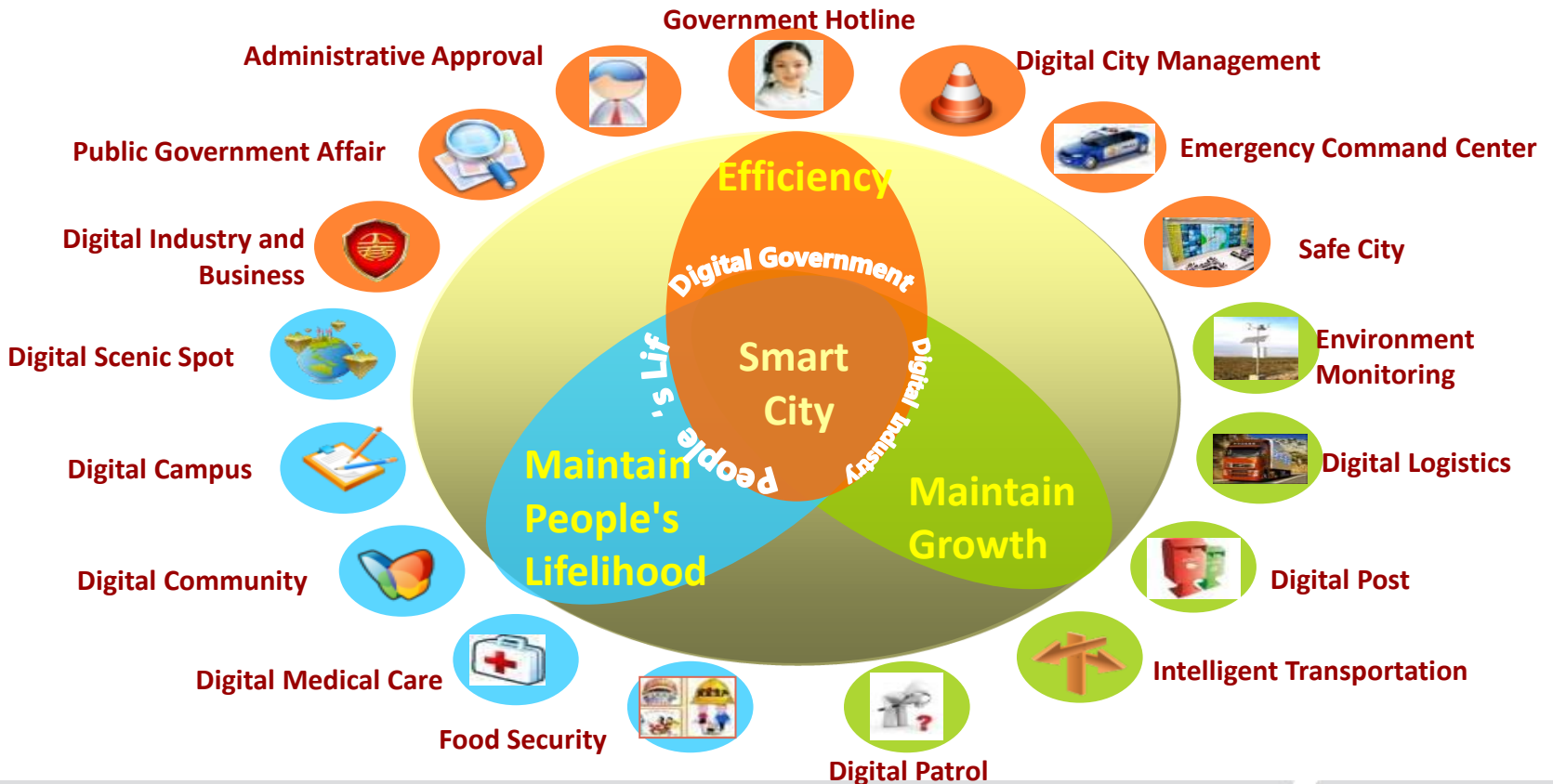

All in Control

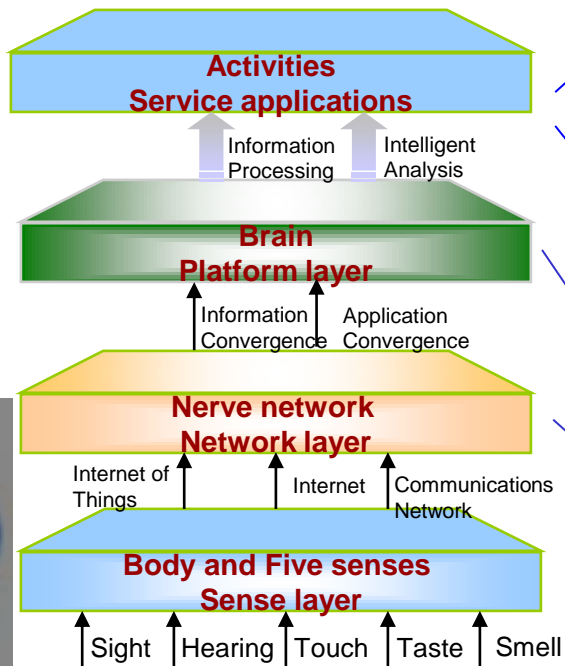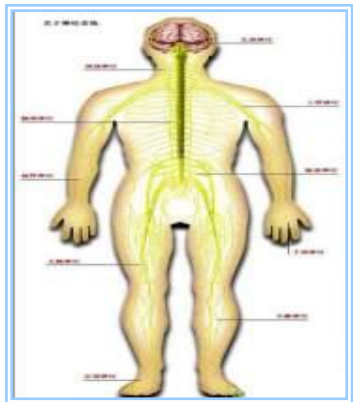Visible Command

Mobile services

Panorama of Smart City- Full View

Creating a sensing system

Sense and activities of an smart city

- Intelligent Traffic Solution
- Urban Emergency Solution
- Smart Industry Campus Solution
- e-Health Solution
- ....

- **Brain** of a smart city: Cloud Data Center
- **Nerve Network** of a smart city: communications network, Internet, and Internet of Things
- **Neuron** of a smart city: M2M terminals and gateways
- **Nerve Ending** of a smart : wireless sensing network (WSN),IVS

Activities
Service applications

Information Processing | Intelligent Analysis

Brain
Platform layer

Information Convergence | Application Convergence

Nerve network
Network layer

Internet of Things | Internet | Communications Network

Body and Five senses
Sense layer

Sight | Hearing | Touch | Taste | Smell

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Layer Perspective – Anatomize Smart City

Application Layer	**Efficient Government** · **Safe city** · **Green Industry** · **Happy Life**
Platform Layer	eSpace Collaboration Platform — IT Engine · CT Engine · M2M Engine · App Integration · **IDC** — **Cloud**
Network Layer	**Pipe**
Sensor Layer	**Terminal**

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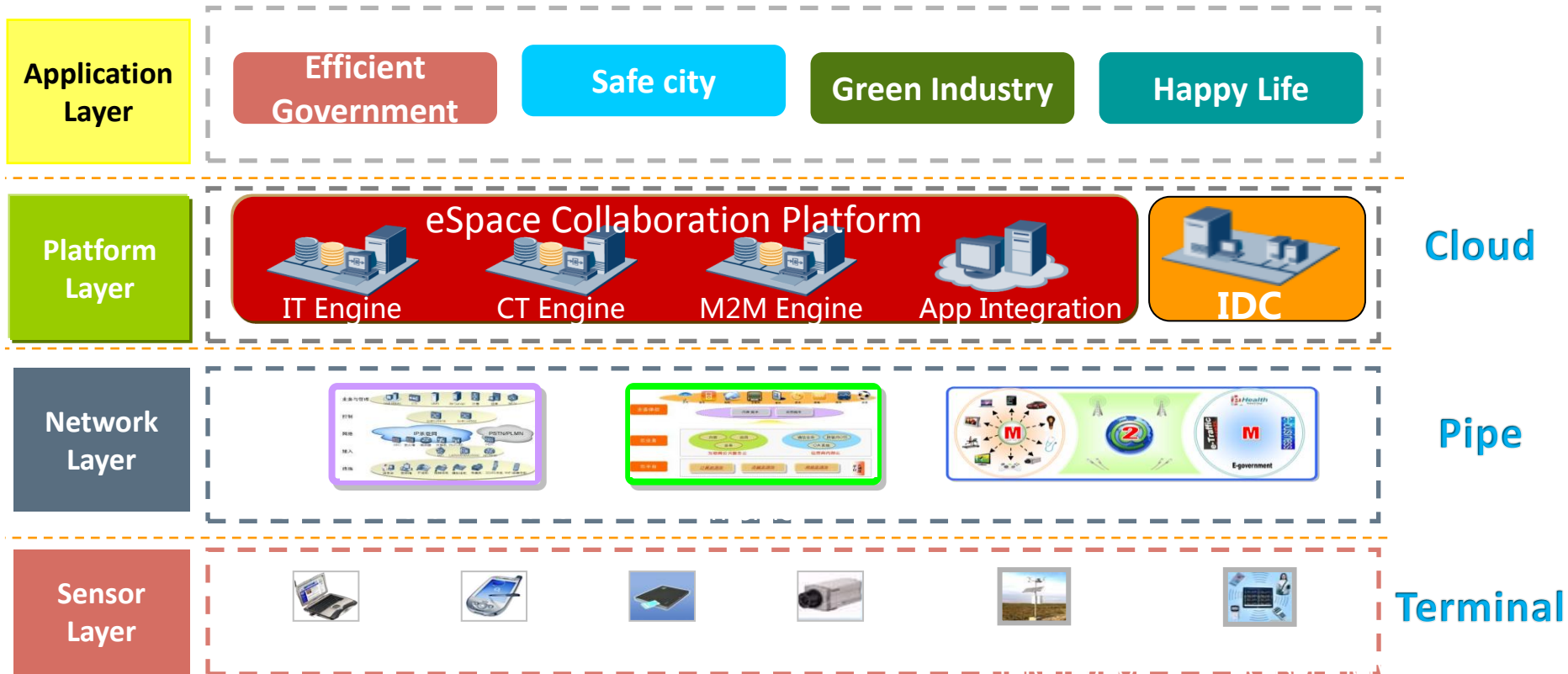
Smart Health- Make Life More Happy

Hospital Surveillance | Hospital Information release | Multimedia Patient room | Collaborative Communication | Collaborative Office | Remote Training | Emergency Call Center | Emergency Command

Remote Healthcare

Health Management

eSpace Collaboration Platform

Electronic Health Record

Electronic Medical Record

Remote Consultation

Remote Medical Education

Regional Sanitation

General Management | Public Service | Collaborative Healthcare

Community Healthcare Terminal

Family Healthcare Terminal

Hospital

Government

Citizen

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Smart Transportation-Make Life More Convenient

City Traffic

Railway Transport

Metro Transport

Highway

Key Facility Monitoring

Traffic Surveillance Center

Emergency Command

Road

Checkpoint

Highway

Wireless

Vehicle- GPS

Station

ETC

Sensor Network
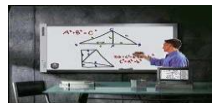
Traffic Light

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Smart Education-A Better Way To Learn

eCourse: Learning Resources Sharing

eLibrary: Digital Library System

eClass: Remote Interactive Learning platform

ePad: electronic schoolbag system

eClassroom: Multimedia Classroom

Communication Collaboration

Campus All-in-One Card

Campus Surveillance

Integrate and Extend Education Resource

Wildly Cover People

Enrich Learning Approach of Student

Government	Higher Education	General Education	Corporate Training	Social Training

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Remote Client - Services In Everywhere

Create Account   Remit Money   Countermand Account   Payment   Financial Service

Bank 7X24H
Non-Stop Services

VTM terminal   Remote Client Center

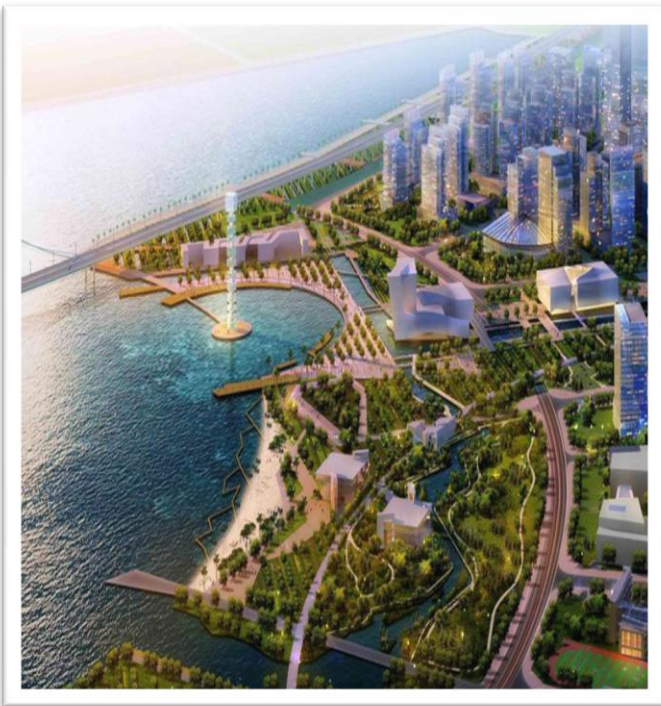Airport Lounge   Hotel   Rural District   Habitant District   Office, Market

Smart Business – Collaboration Work Park

Unified Communication

Contact Center

Cloud Desktop

Smart Park

One-stop ICT Service

Service On Demand

Hosting Service

Pay-as-you-use

Enterprises In Smart Park

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eLTE for Safe Cities: Building a Peaceful Society

Central London · UK

- Wireless Emergency Service Network based on 4G technology

- HD Video **real-time backhaul, all-round dimensional surveillance**

- Professional **Broadband Trunking**, "audio + video" multi-channel dispatching

Multiagencies operations

CPE, Smartphones, M2M, Videocameras

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The Global Practice

Huawei Safe City solutions serves **40+** safe cities in **30+** countries

Karamay Safe City

Moscow Safe City

Shanghai Safe City

Venezuela Safe City

Nigeria Safe City

Jiangsu Safe City

Ecuador Safe City

Angola Safe City

Pakistan Safe Ctiy

LAOS Safe City

Guangdong Safe City

Russia

Tajikistan

Mongolia

Turkey

Egypt

Pakistan

China

LAOS

Venezuela

Ecuador

Niger

Ethiopia

Zambia

Tanzania

Angola

Mozambique

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Openness - Cooperation - Win-win

1,100+
Solution Partners

5,100+
Channel and Service Partners

Open Lab

eSDK