



# Nigeria Smart City Deployment Drives Digital Economy & Growth



# Huawei: Leading Global Provider of ICT Infrastructure and Smart Devices



Bring digital technology to every person, home and organization for a fully connected, intelligent world

Huawei's end-to-end portfolio of products, solutions and services are both competitive and secure. Through open collaboration with ecosystem partners, we create lasting value for our customers, working to empower people, enrich home life, and inspire innovation in organizations of all shapes and sizes.

At Huawei, innovation focuses on customer needs. We invest heavily in basic research, concentrating on technological breakthroughs that drive the world forward.



**188,000**

Employees



**80,000+**

R&D employees



**170+**

Countries and regions



**68** in

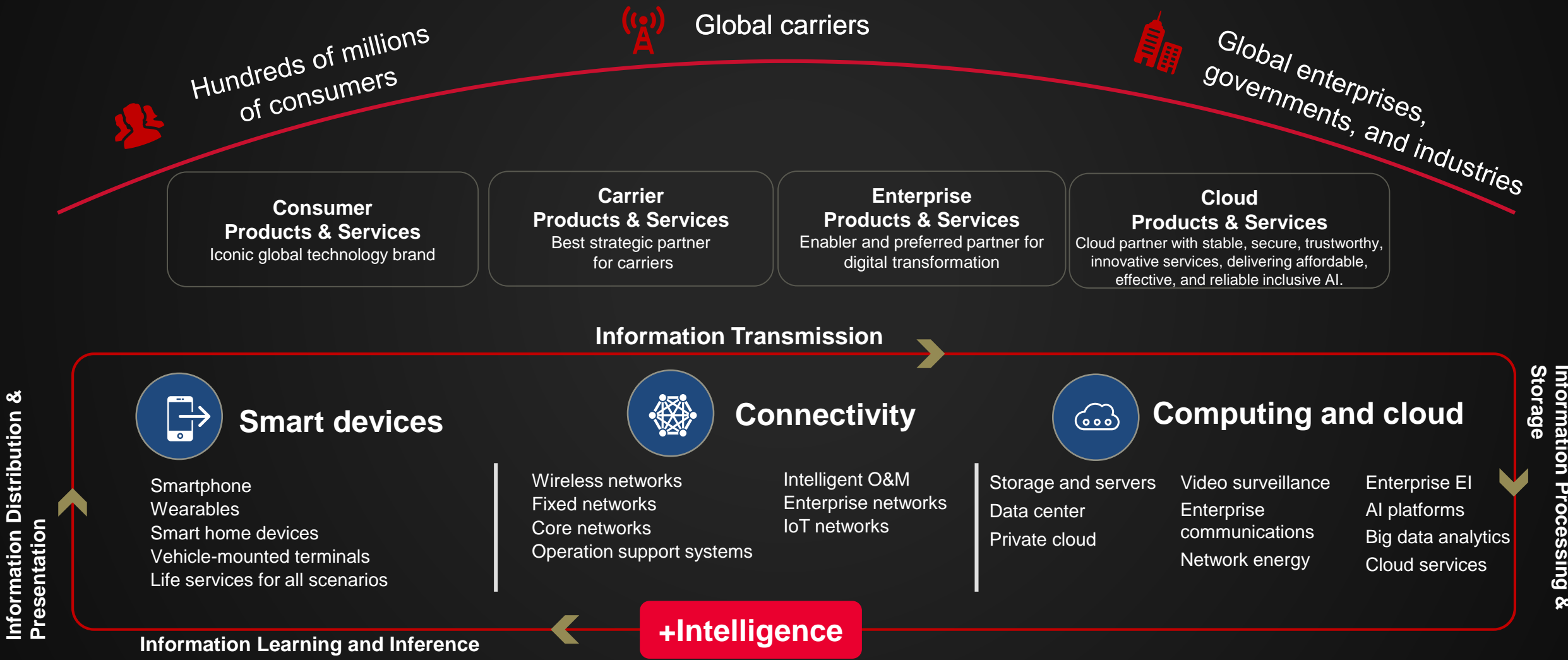
Interbrand's  
Top 100  
Best Global Brands



**72** in

Fortune Global 500

# Focusing on Smart Devices, Connectivity, Computing, and Cloud; Providing Products and Solutions for Three Customer Groups





# We Are Entering an Intelligent World



## All Things Sensing

Sensing the physical world, mapping it to digital signals

Temperature, space, and touch  
Sense of smell, hearing, and vision



## All Things Connected

Data goes online to power machine intelligence

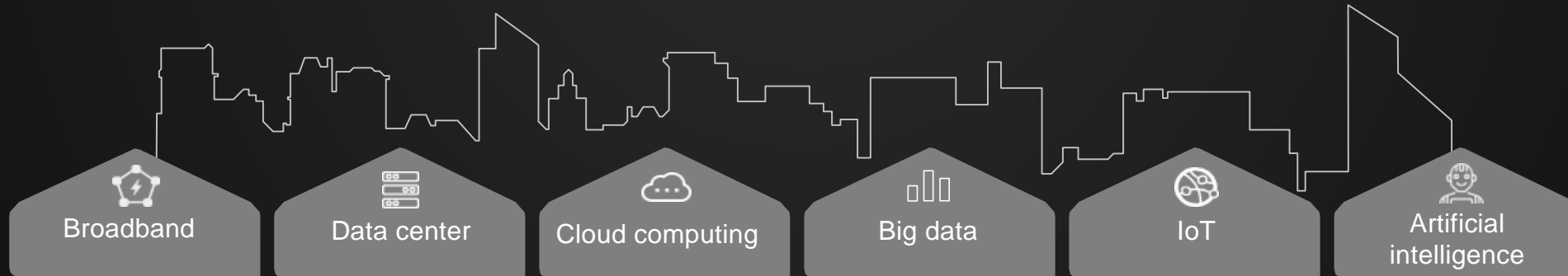
Ubiquitous connections, wide connections,  
multiple connections, and deep connections



## All Things Intelligent

Big data and AI power new applications

Digital twins  
Digital survival



**ICT infrastructure will be the foundation of the intelligent world**

# Smart Cities Are Booming Around The Globe



# Smart Cities Bring Comprehensive Positive Changes

## Efficient Municipal Governance



- Social security
- Emergency response
- Utilities management
- Urban planning
- ...

## High-Quality Public Services



- Public transportation
- Education
- Healthcare
- Government services
- ...

## Sustainable Economic Development



- Industrial parks
- Tourism
- Logistics
- Agriculture
- ...

# Social and Economic Value of Smart Cities

## New jobs



### Smart Yanbu in Saudi Arabia

The big data and smart brain supports Saudi Arabia's Vision 2030.

18% ↑ Investment

18K ↑ Employment

## Convenient public services



### Smart Longgang in Shenzhen, China

60+ government agencies are integrated to support online applications and single-window service.

50% ↓ Waiting time

29% ↑ Handling efficiency

About 8% ↑ Travel experience

## Public safety



### Safe City project in Kenya

Thousands of HD cameras and handheld terminals are used by 9,000+ police officers in 195 police stations in the capital of Kenya.

46% ↓ Crime rate

0 incidents Major events

14% ↑ International tourists

## Environmental protection



### Smart streetlights in Weifang, China

Over 40,000 LED streetlights are controlled by the IoT platform.

6.8 million kWh Annual electricity saved

45% ↑ Efficiency

25% ↑ Lighting rate

## Healthcare



### Telemedicine in Henan, China

The world's largest telemedicine website covers 18 cities and over 130 towns.

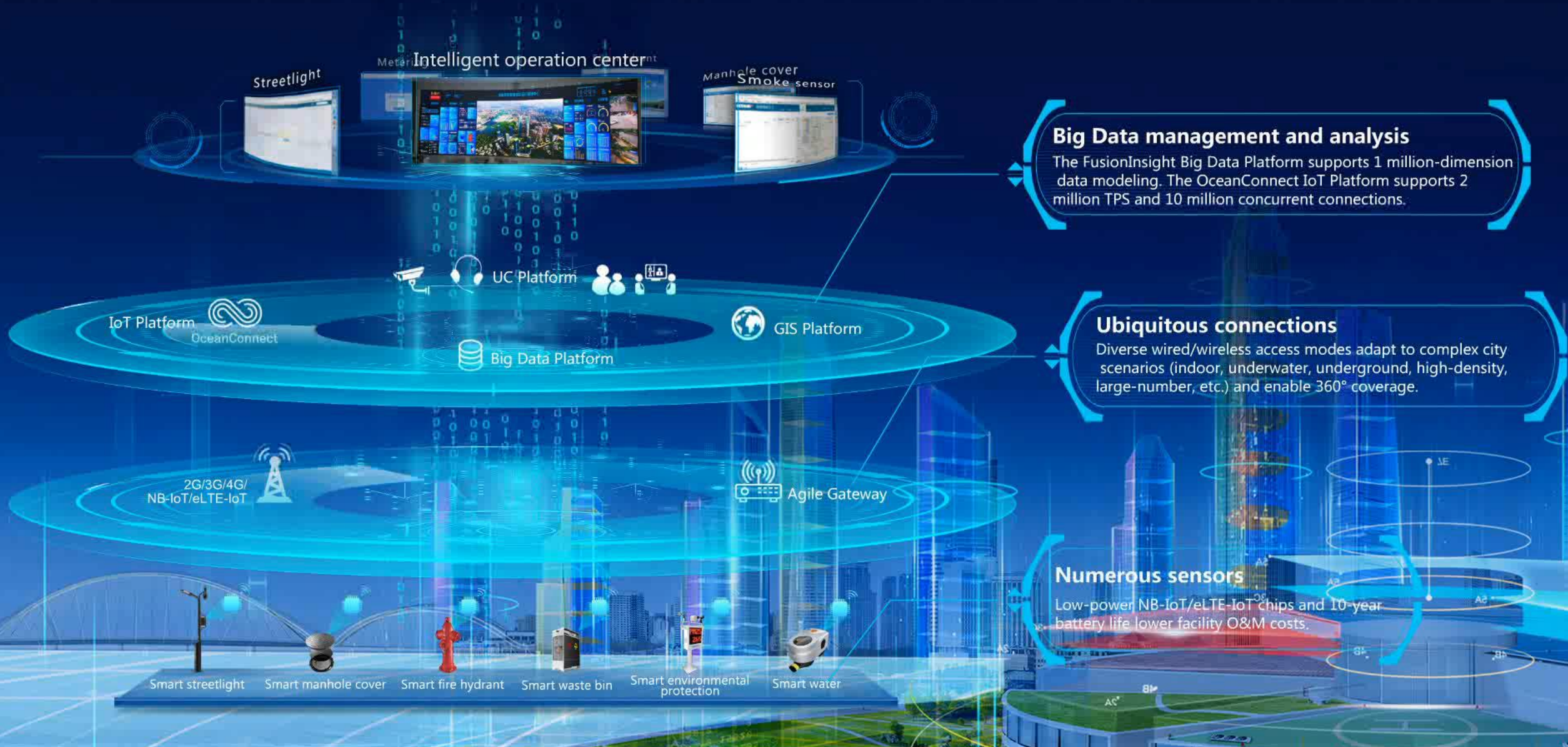
120K Patients every year

CNY1 bn Cost reduction

97% Satisfaction



# Nervous System, Building a Smart City with All Things Sensing, Connected, and Intelligent







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**Sensing**  
Connection  
Intelligence

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# NB-IoT/eLTE-IoT, the LPWA IoT Technologies Best Suited for Smart Cities



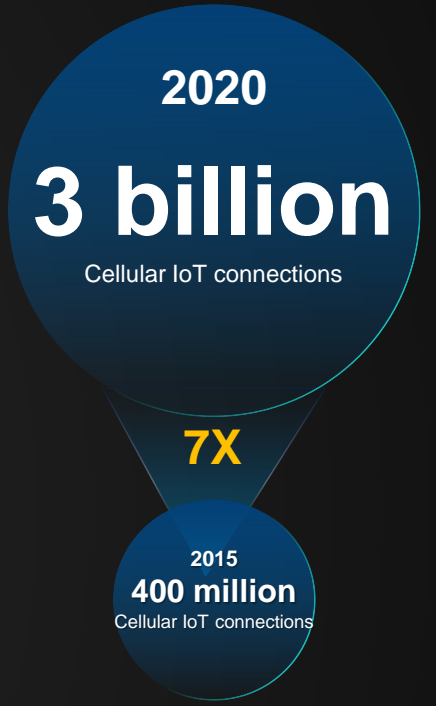
100,000 connections/cell (100 times that of 4G)



Battery life of 10 years (5 times that of 4G)



Unmatched signal penetration (workable in water or underground)





# Smart Streetlight, Ideal for Energy-Saving City Construction

More than **40,000** streetlights in Weifang have been reconstructed based on NB-IoT. As a result, the O&M efficiency is improved by **45%**, the lighting rate is increased by **25%**, and the annual electricity consumption is reduced by **6.8 million** kWh.

- Natural light sensing control
- IoT policy control



Information  
release/billboard



Air monitoring



Public Wi-Fi  
coverage



Video  
surveillance



Emergency  
call button



# Smart Parking, Delivering Brand-New Parking Services Downtown



Regulate drivers' behavior to ensure reasonable usage of parking space.

Parking space query



Reservation on mobile phone



Driving navigation



Quick payment



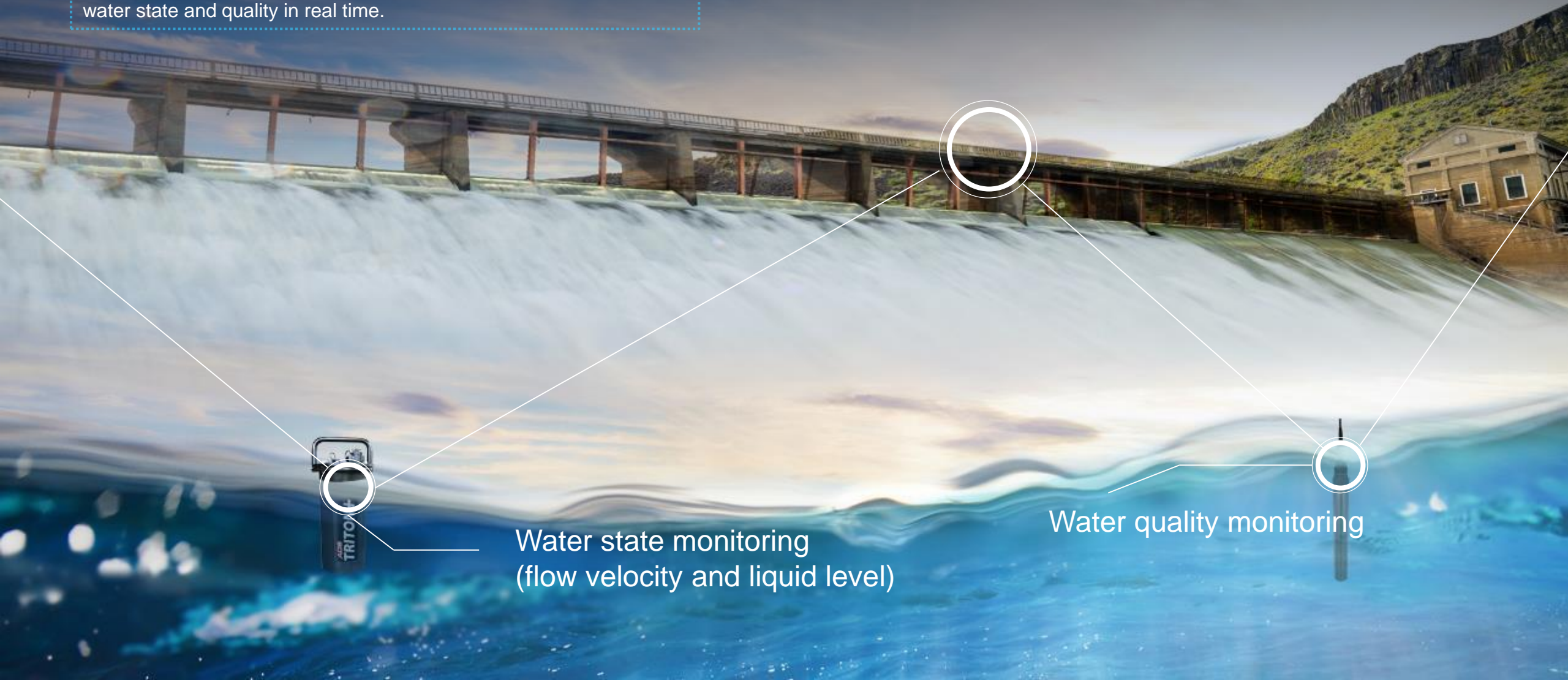
Accurately and quickly detect parking space occupation status.



Yanbu, Saudi Arabia: By using the eLTE, the city has improved parking space utilization by **25%**, and reduced labor costs by **30%**.

# Smart Water, Giving a Real-Time Full Picture of the City Lifeline

Weifang promotes 'smart river chief' solution based on eLTE to know water state and quality in real time.



Water state monitoring  
(flow velocity and liquid level)



Water quality monitoring





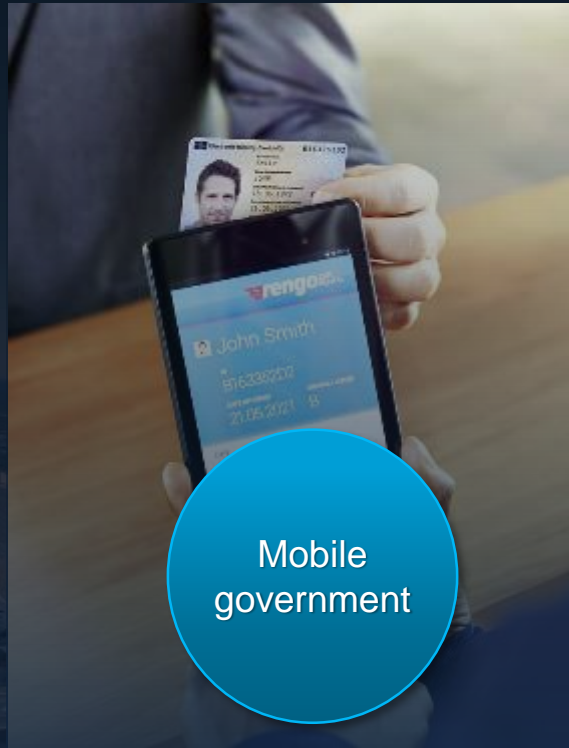
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Sensing  
**Connection**  
Intelligence

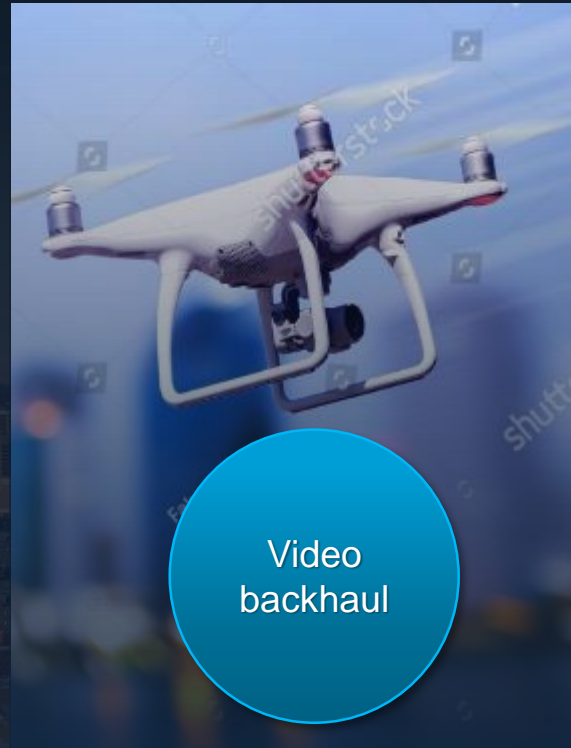
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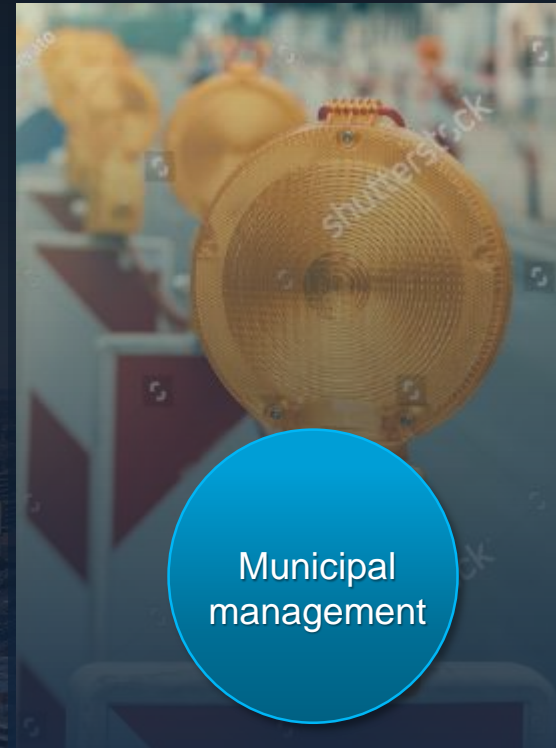
# eLTE, Building a Secure and Reliable Government Private Network



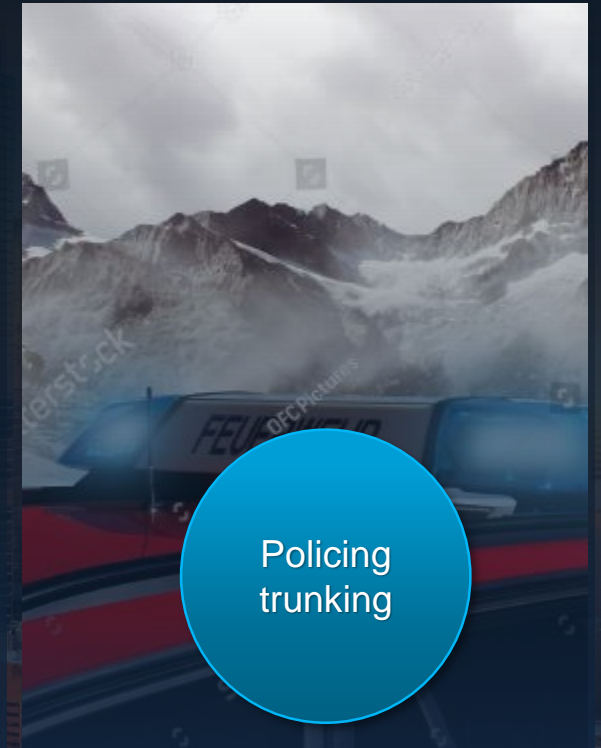
Mobile government



Video backhaul



Municipal management



Policing trunking

**Broadband and narrowband integration based on 4.5G technology; wireless IoT with licensed and unlicensed spectrums**

**Large-capacity narrowband IoT, 50, 000 connections per base station**



# High-Density Wi-Fi, Improving Wireless Broadband Access Experience

AMSTERDAM  
**Arena**

**80,645**  
spectators

Ultra-large scale  
and ultra-dense

**24,000** concurrent  
connections

Concurrent  
connection rate 50% ↑

**100%**  
coverage

Without  
blind spots



# Agile All-Optical Network, Supporting Smart Life, Office, and Business

## Simple

- One fiber for multiple services
- Simplified architecture and easy O&M

## Reliable

- Active devices replaced by passive devices
- Copper cables replaced by optical fibers

## Flexible

- Open cloud access
- Centralized device management

Project Name: **Guangfu Community**

Total land area: **0.66 million square meters**

Total construction area: **1.6 million square meters**

Residence: 5, 000

Store: 1000

Large shopping mall: 1

4-star hotel: 1

Office building: 7

5-star health center: 1

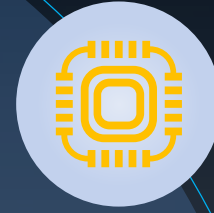
School: 2

Parking spot: 10, 000

Population: 100, 000–

120, 000





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Sensing  
Connection  
**Intelligence**

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# IOC Acts as the City Brain and Supports Scientific City Management and Decision-Making based on Big Data.





# Big Data Requires Big Pipes and Large-Scale Computing Capabilities.

In the future, information pipes will become as wide as the Pacific Ocean.

IoT Data – **starry sky**



Internet data – **ocean**



Management data – **river**



Open, flexible,  
and secure



High bandwidth  
and low latency



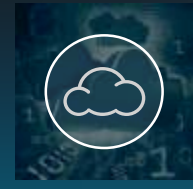
1 million-level data  
modeling



# Strategic Partnership with MoC to Build Smart City in Nigeria



## Platform



National Cloud Platform  
Virtual Data Center & Cloud Services  
Big Data Platform



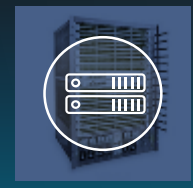
Server  
Hyper Converged Infrastructure  
Virtual Machine



High Availability Storage  
Storage Services



## NDC



Modular Data Center Facilities  
Disaster Recovery DC  
Backup DC



Campus Switch  
Data Center Switch  
SDN



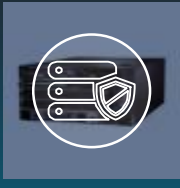
Data Center Router  
Data Center Firewall



## NBB



Backbone Network  
Metro Network  
LTE Coverage



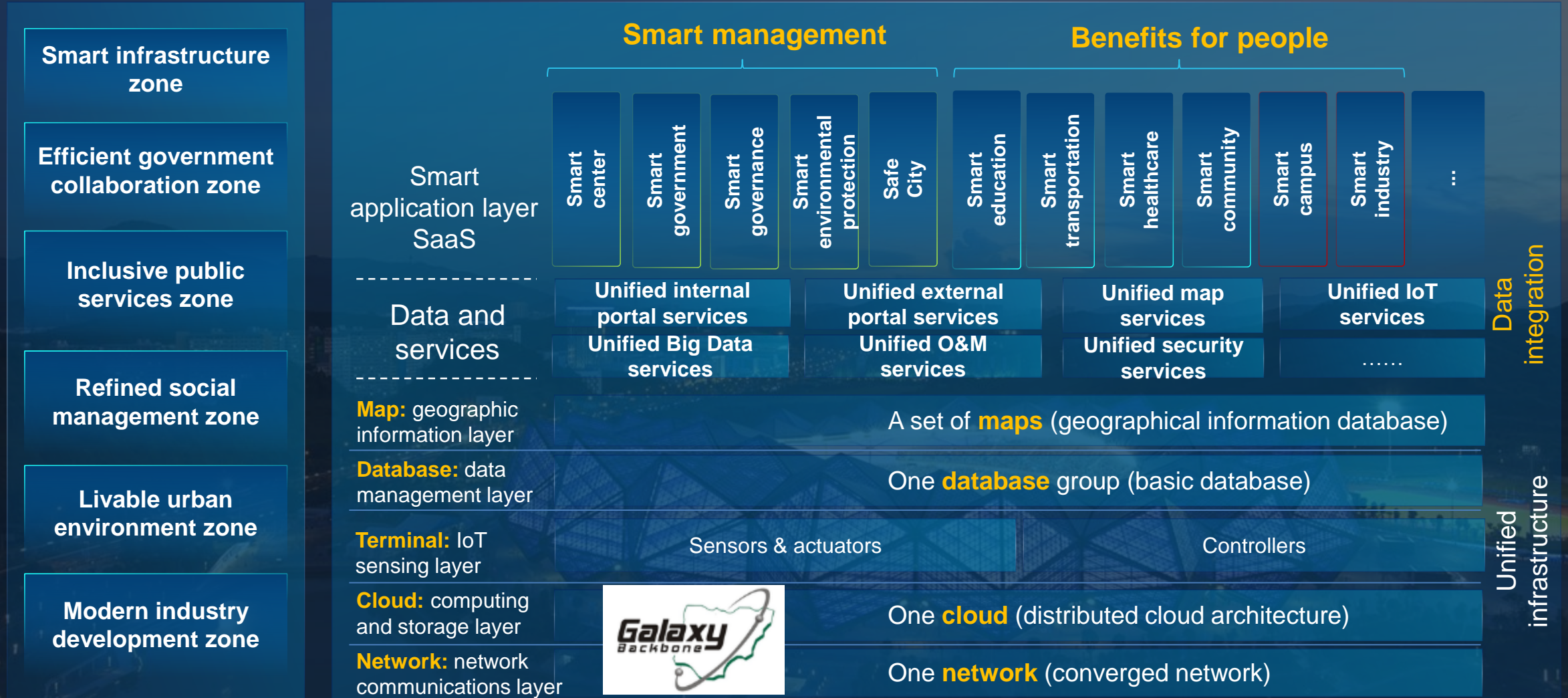
Cyber Security product & Solutions



WLAN Coverage  
FTTx & GPON



# Galaxy Will Be the Basement of Smart Nigeria



# Huawei Smart City Strategic Vision: Platform + Ecosystem, Building Better Smart Cities

**Focus on customer requirements and  
provide a holistic set of Smart City solution.**



## Platform strategy

Open, elastic, flexible,  
and secure



## Ecosystem strategy

Co-existence, mutual-  
growth, and regeneration



# Cooperative, Win-Win, and Open Ecosystem worldwide

High-level design	System integration	Investment and financing	Operations	Platform		Application	
 <b>accenture</b> 埃森哲	 <b>CEIC</b> 中国电科	 <b>国家开发银行</b> CHINA DEVELOPMENT BANK	 <b>COSIC</b> 航天科工智能产业发展有限公司	 <b>esri</b> China ESRI INC		<b>Honeywell</b>	
	 <b>TAIJI</b> 太极计算机股份有限公司 TAIJI COMPUTER CORPORATION LIMITED	 <b>中证城市发展</b> CITIC SECURITIES City Development				 <b>北明软件</b> BEIMING SOFTWARE	
 <b>CEIC</b> 中国电科	 <b>COSIC</b> 航天科工智能产业发展有限公司	 <b>DHC</b> 东华软件股份公司 DHC Software Co., Ltd	 <b>iSOFTSTONE</b> 铁通印刀	 <b>SuperMap</b> 超图软件	 <b>LEADOR</b> 立得空间		
 <b>iSOFTSTONE</b> 铁通印刀	 <b>DHC</b> 东华软件股份公司 DHC Software Co., Ltd			 <b>Fludaque</b> — 华做数据 —	 <b>未来国际</b> Future International		
		 <b>Cybernaut</b> 赛伯乐投资集团	 <b>DHC</b> 东华软件股份公司 DHC Software Co., Ltd	 <b>太极云软</b> — TVKY —	 <b>Epoint</b> 断点软件	 <b>ENJOYOR</b> 银江股份	
 <b>国家信息中心</b> State Information Center	 <b>神州数码</b> Digital China		 <b>eHualu</b> 易华录	 <b>Westone</b> 卫士通	 <b>CIC</b> 中国信息通信集团；控股   有限公司 CHINA ITS HOLDINGS CO., LTD	 <b>AUGUR</b> 奥格	



# Leading New ICT, Building a Smart City Nervous System





# THANK YOU

The background is a vibrant blue gradient with a curved horizon line. It features numerous white and light blue icons and light trails. On the left, there are musical notes and a treble clef. In the center and right, there are icons for a train, a city skyline, a tower, an airplane, a robot arm, and an oil pumpjack. The overall aesthetic is high-tech and dynamic.

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