

Internet of Everything, the future is coming

E-surfing Internet of Things Technology Co., Ltd.

June 2019



Digital China, IoE, 5G era, empowering the future

IoT undertakes the historical mission of building digital China



Dec. 2018, the Central Economic Working Conference

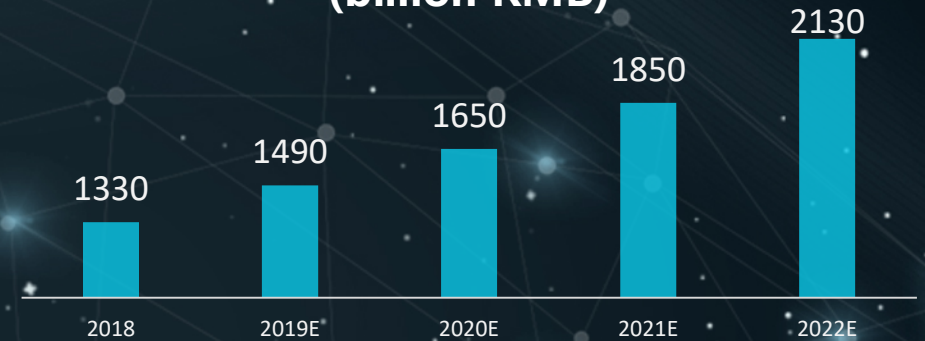
"...playing a key role in investment, improving technology transformation and equipment renewal of manufacturing industry, accelerating **5G** commercialization, enhancing the construction of new infrastructure such as **AI**, **Industrial Internet**, **IoT**, etc."



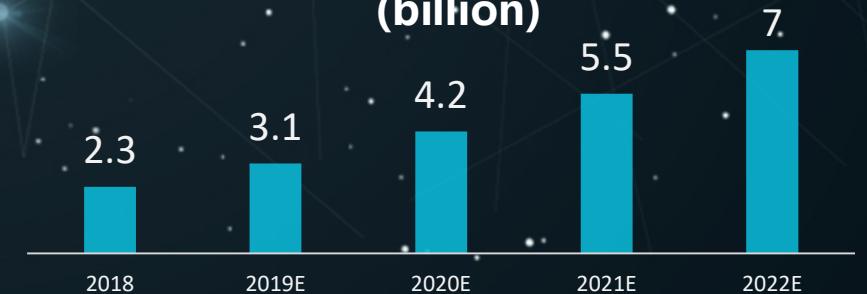
June 2019, 5G license officially released

"...focus on areas such as **Industrial Internet**, **IoT**, **Connected Car**, empowering more vertical industries, and promoting digitization, networking, and intelligent development of all industries."

2018-2022 China's IoT Industry Scale (billion RMB)



2018-2022 China's IoT Connection Scale (billion)



Source: Foresight Industry Research Institute <China Internet of Things Industry Segment Demand and Investment Opportunity Analysis Report>, 2018.4

Empowering Beijing International Horticultural Expo — integration of IoT technology and green nature

One-stop professional service



Unified portal

Unified identification

Integrated operation management

Unified decision management



Intelligent street light



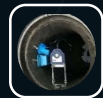
Environmental monitoring



Water quality monitoring



Tram management



Manhole cover monitoring



Intelligent sanitation



Intelligent smoke detecting



Intelligent irrigation

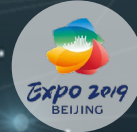
8 intelligent scenarios

7000+ intelligent terminals

Daily average wireless connection success rate **>99.5%**

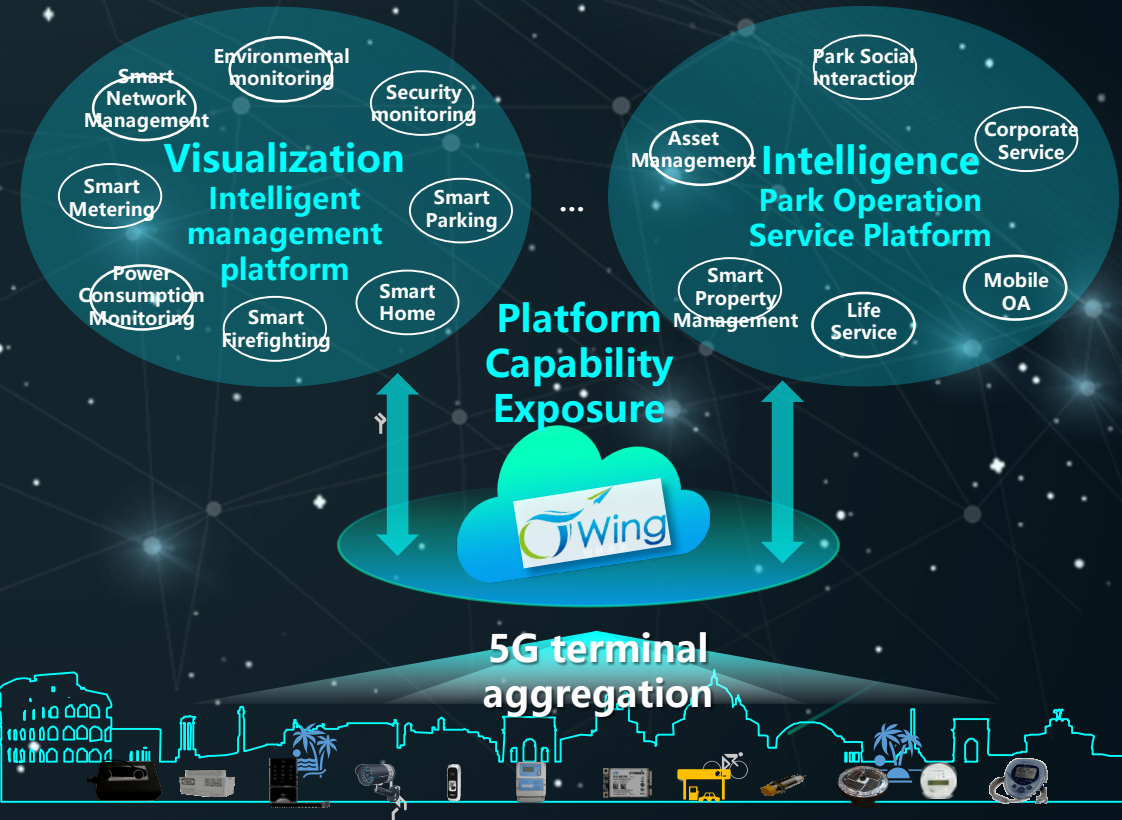
Terminal concurrency success rate **100%**

Warning success rate **100%**



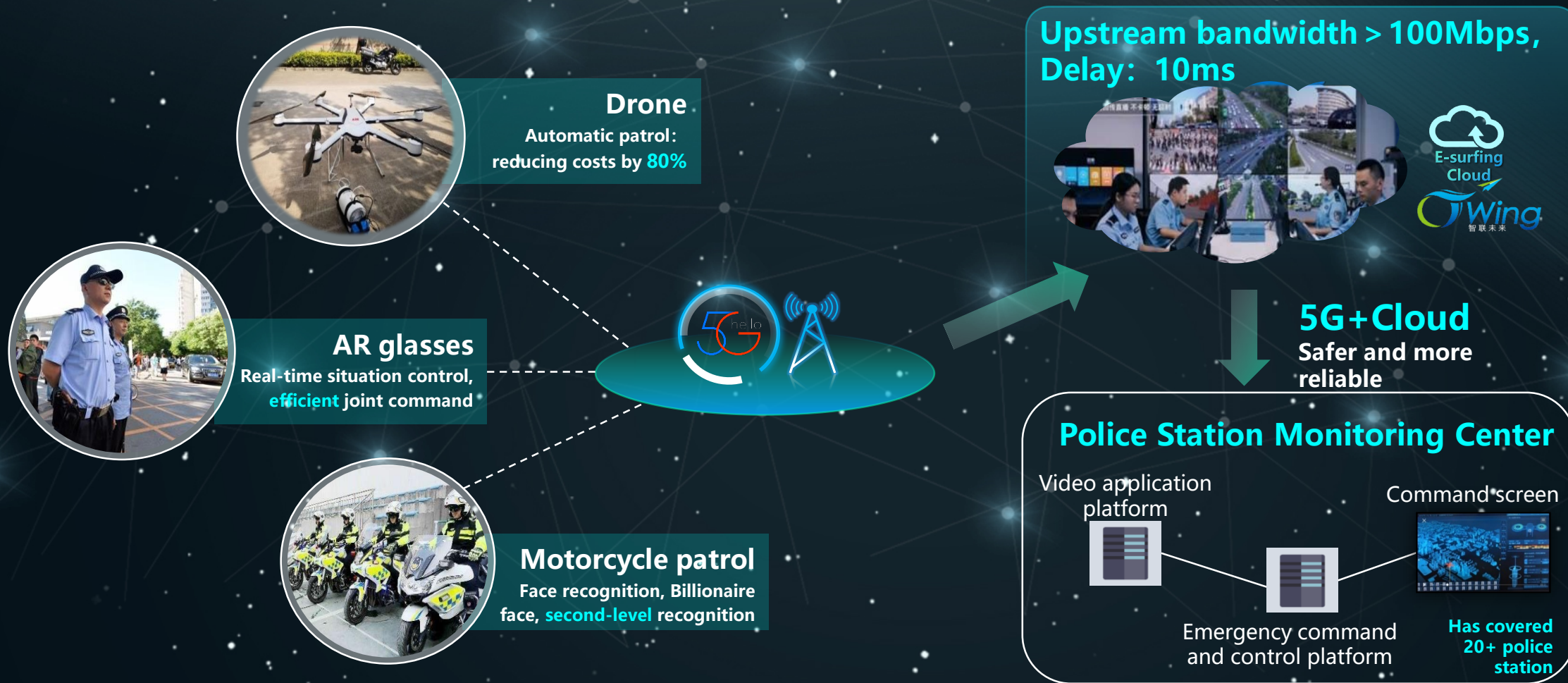
5G Smart Park Integrated Service Solution

◆ Industry Aggregation ◆ Intelligent Service ◆ Ecological Livability



International Horticultural Expo ➔ 100,000 communities ➔ Digital China

Empowering Shenzhen Police — Space-ground integrated three-dimensional police



Shenzhen Police ➡ 45,000 Police Station ➡ Digital China

Empowering National New District —— Human-vehicle-road-cloud Cooperative Intelligent Driving



Bus priority - signal control,
green wave pass



Intelligent scheduling
improve travel experience



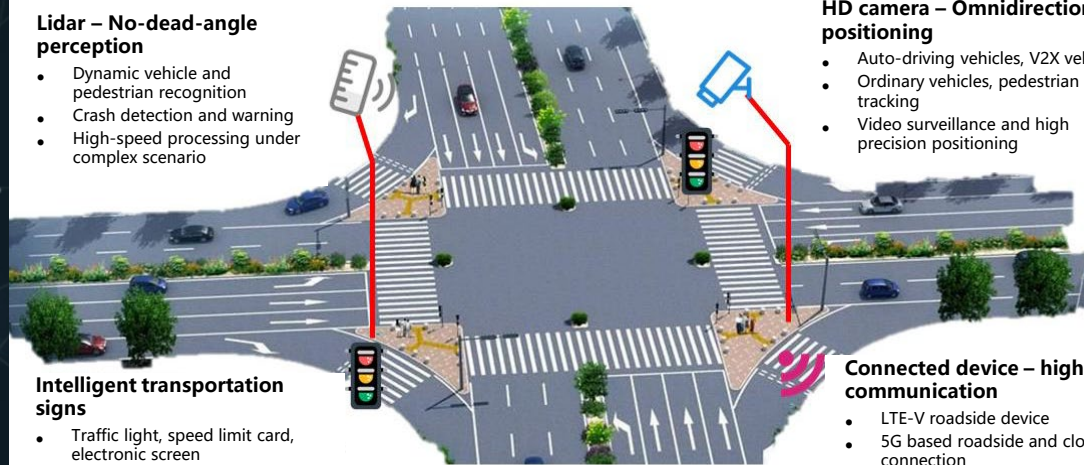
Getting road signals in the car

- ◆ Traffic control information acquisition
- ◆ Traffic signal information acquisition

RTK Base station signal,
5G Network communication signal

Lidar – No-dead-angle perception

- Dynamic vehicle and pedestrian recognition
- Crash detection and warning
- High-speed processing under complex scenario



Intelligent transportation signs

- Traffic light, speed limit card, electronic screen
- AI road situation recognition
- Cloud-based scheduling system

HD camera – Omnidirectional positioning

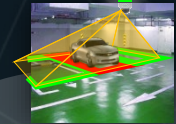
- Auto-driving vehicles, V2X vehicles
- Ordinary vehicles, pedestrian tracking
- Video surveillance and high precision positioning

Connected device – high-speed communication

- LTE-V roadside device
- 5G based roadside and cloud connection
- Channel management and protocol optimization



Smart logistics –multiplex branch line
and network-hailing bus ,
precise path planning



Smart parking - precise
positioning, reverse car search



Cashless bus – face-recognition
payment

National New
District



Remote driving



Bus-hailing: door-to-door
community service



Branch bus automatic
driving

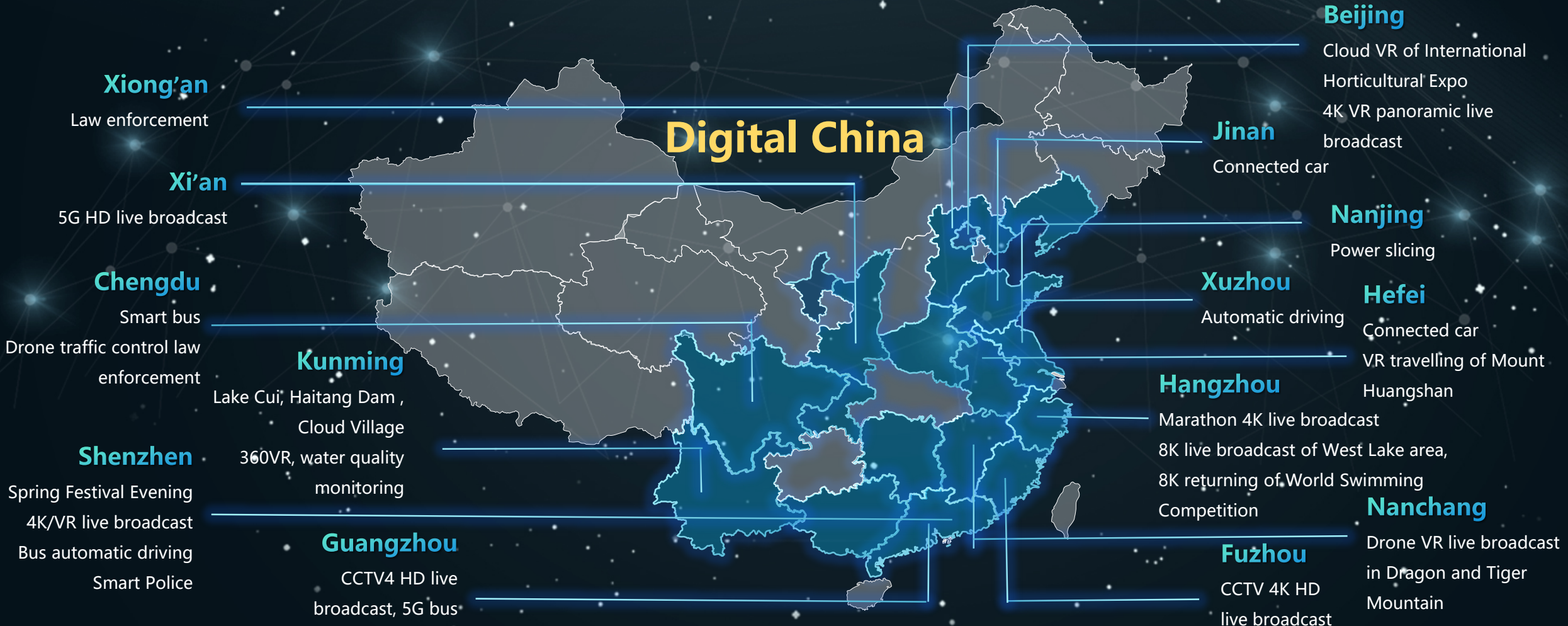
Digital China

Empowering industries — joint innovation of 5G IoT applications

20+ provinces

10+ vertical industries

200+ joint trial customers



Consideration of Telecom Operators in 5G IoT era

**Customer
Requirements**

Connection

Ubiquitous→Intensive

Service

Fragmentation→Scale

Data

Wasteland→Goldmine

Ecosystem

Supply chain→Ecosystem

5G era
Thing-cloud
Intelligent connection
solution

Smart Park
Smart Police
Smart Transportation
.....

Ubiquitous connection, Intensive management

for everything through 2/3/4/5G and non-cellular network

Coordinated development of
4G and 5G

NB-IoT long-term evolution, overall upgrading to R14



SA primary, SA/NSA
hybrid networking
**cross-provincial cross-
domain scale trial
network**



World's largest
FDD high quality
network

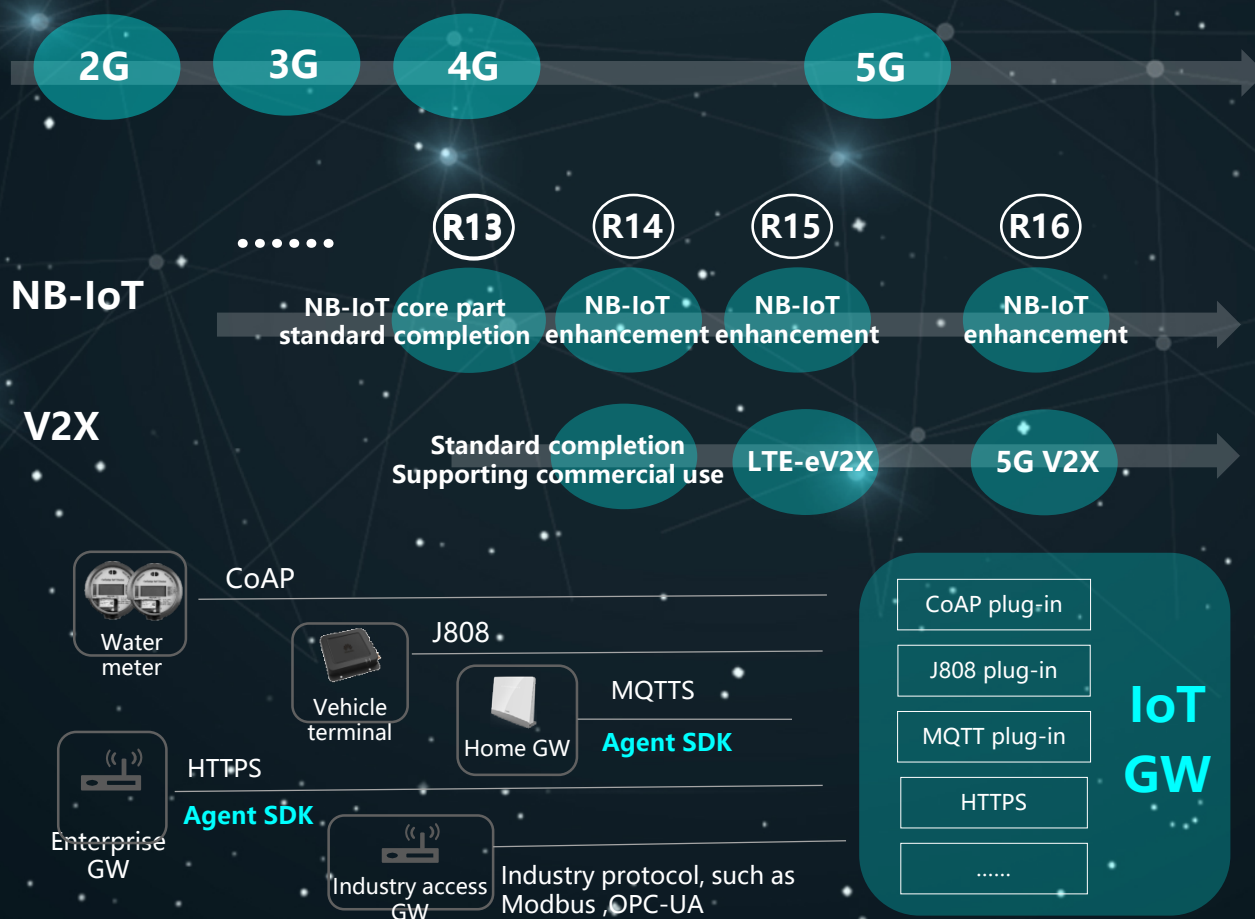
✓ **1.2+million** base
station
✓ **80+million** 4G
connection



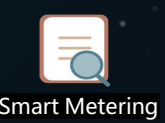
NB-IoT ✓ **Overall upgrading to
R14**

Connections exceed
27million

✓ Base station **400,000+**
✓ Covers **98%** population

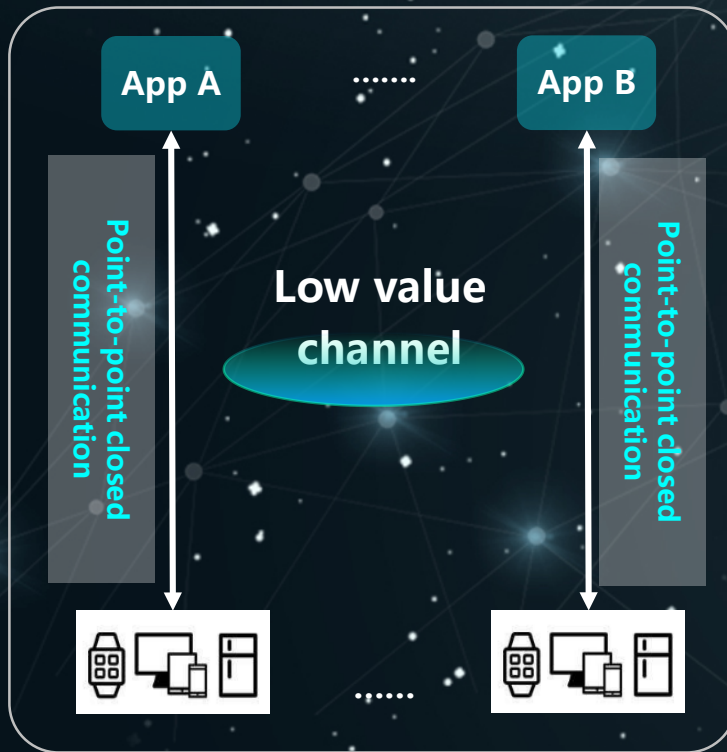


Connectivity Management
Platform



Platform converges things on a large scale

Fragmented stovepipe development and deployment



Reduce development difficulty

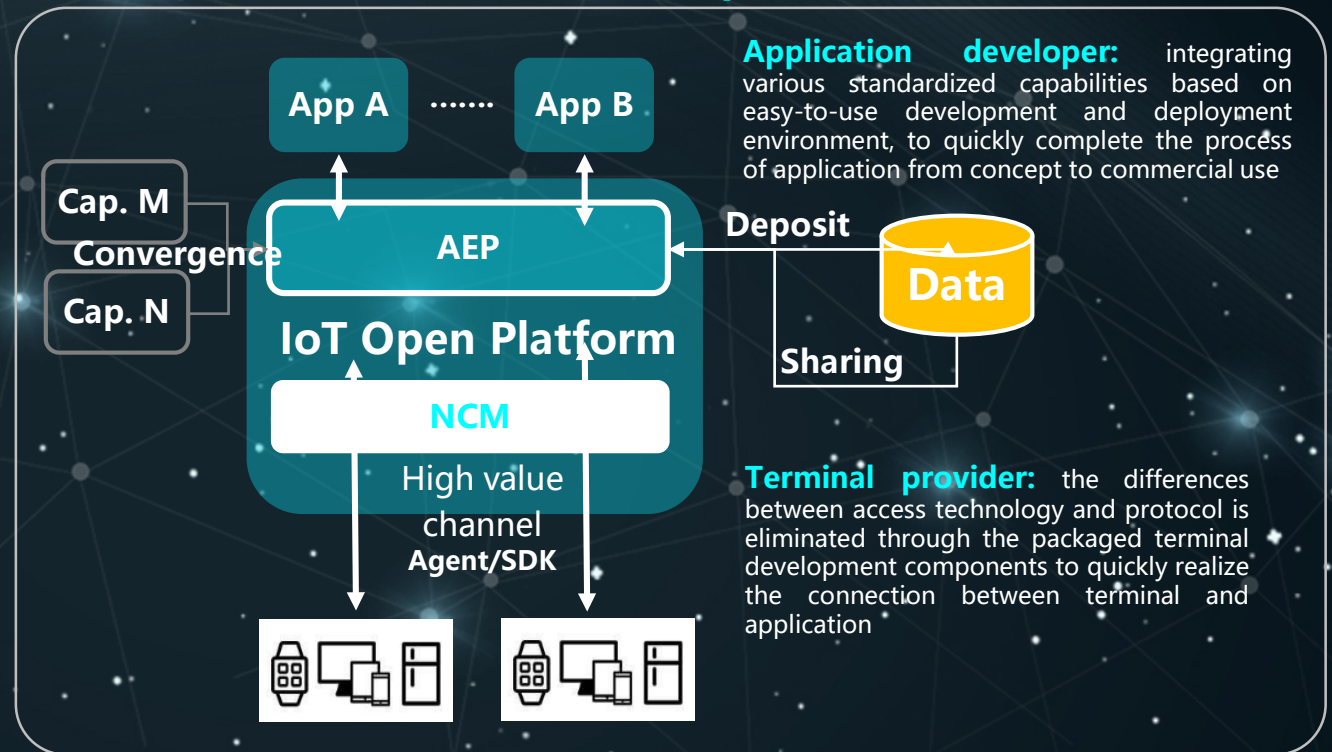
Reduce operation and maintenance costs

Massive terminal access

Reduce development time

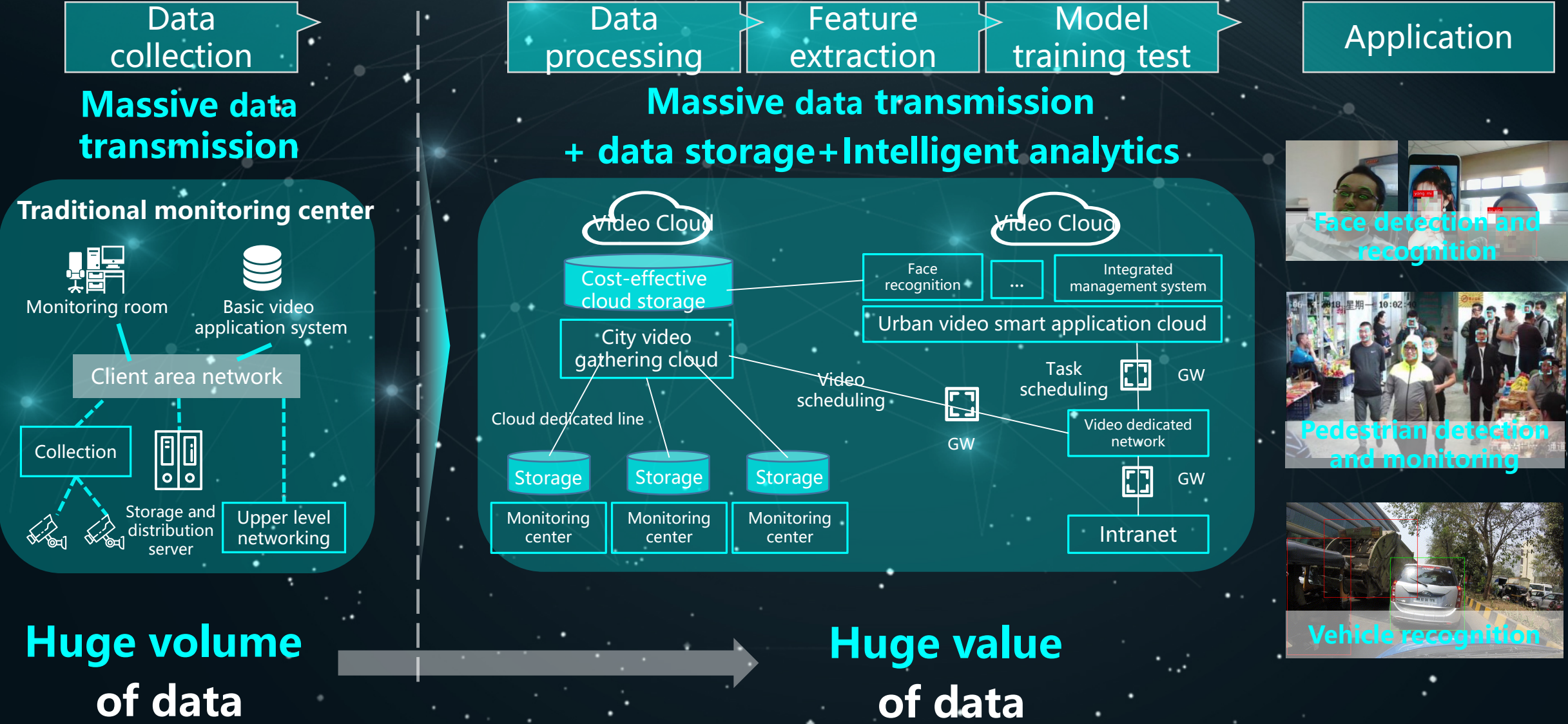
Increase scale efficiency

Large-scale development and deployment based on platform

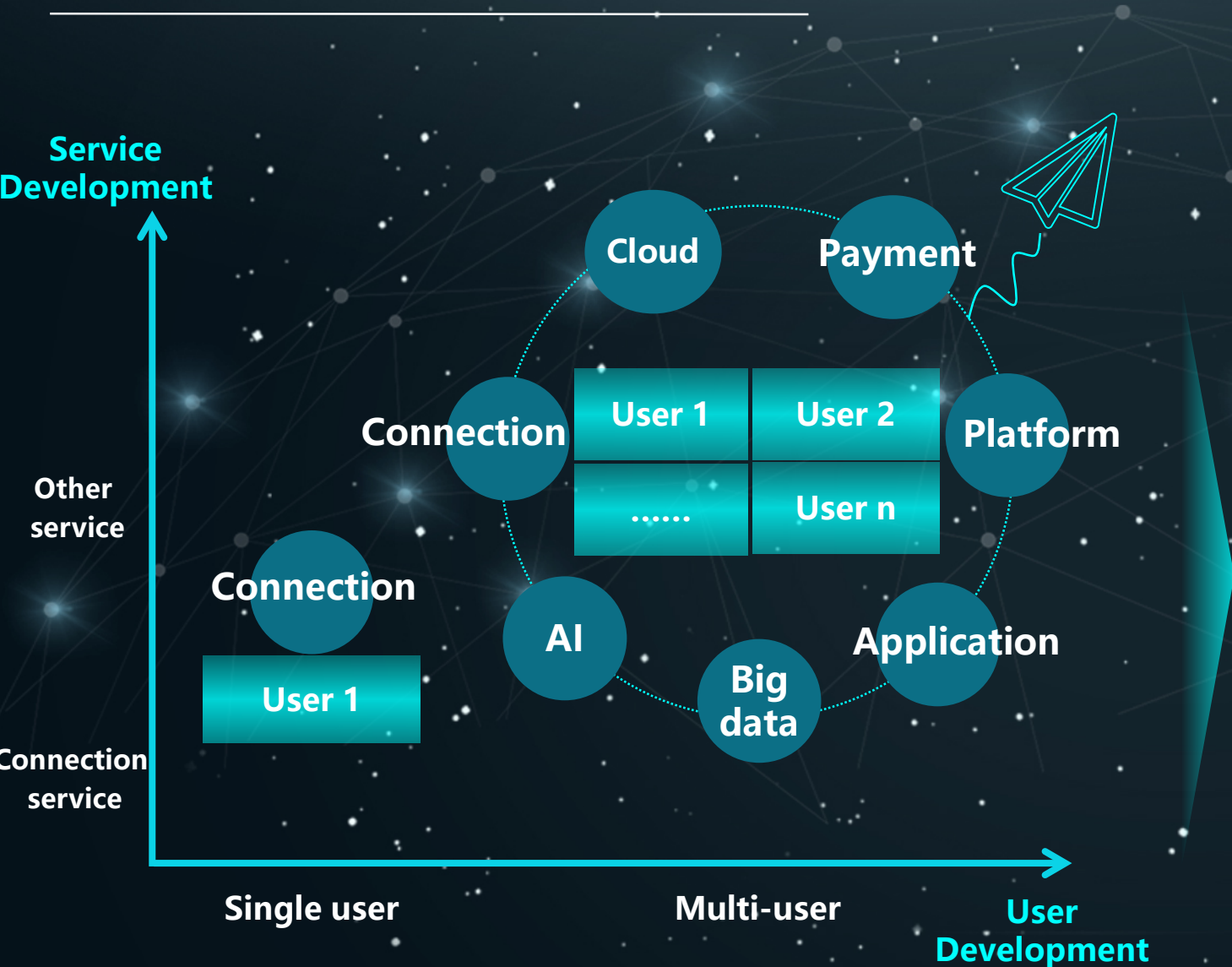


IoT open platform offers unified developing/testing/running environment for various industries, solving the problems such as massive terminal access, application development, high cost of operation and maintenance, service fragmentation, etc.

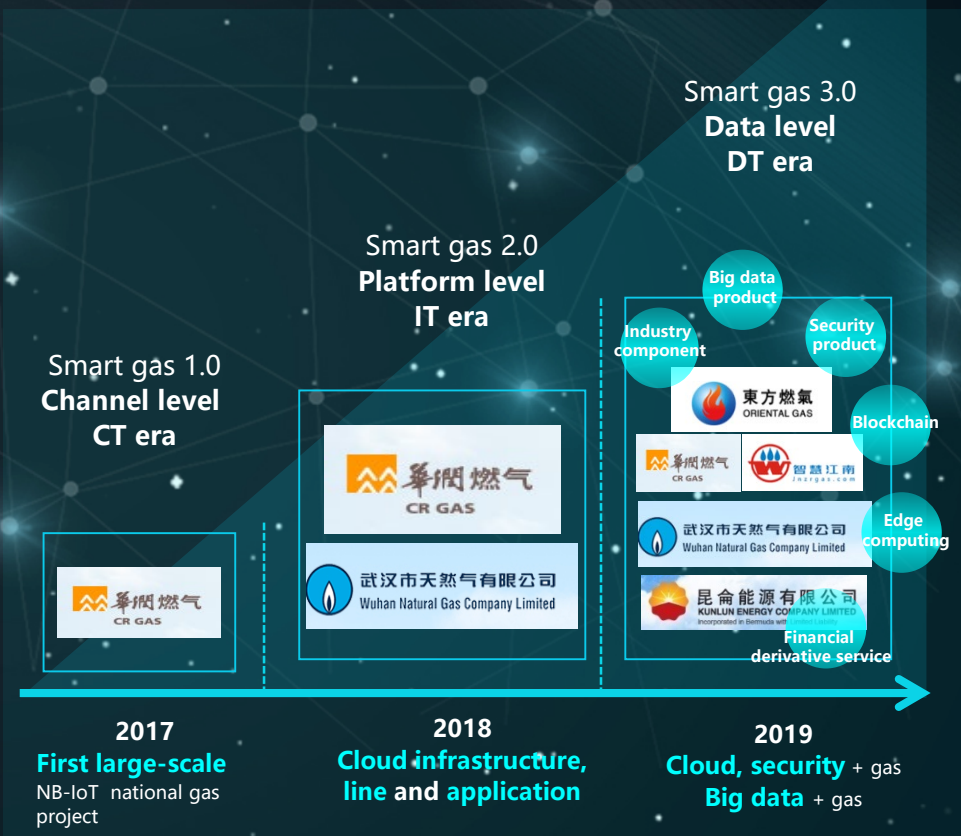
Data operation, showing value



From chain to circle, building a win-win ecosystem



Use case: Wuhan smart gas





Together with E-surfing IoT, making a better future!

