





Create value in the IoT world

Huawei IoT Connection Management Platform

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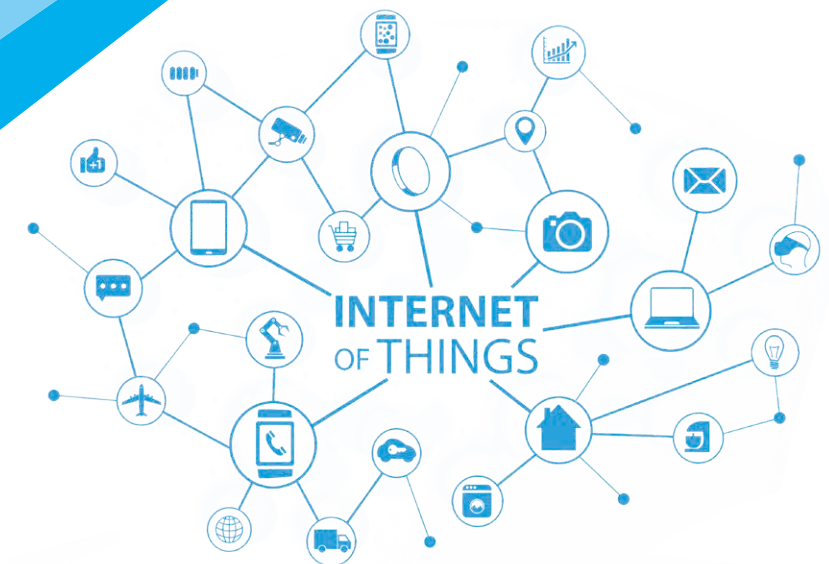
What's IoT?



The concept of Internet of Things (IoT) was first discussed as early as the 1980s. Now, having evolved from a concept into reality, IoT enables carriers to provide communication and data exchange between connected devices and people.

By its design, IoT integrates physical objects into the IT infrastructure. With continuous acceleration of global informationization, IoT is expected to offer advanced connectivity of devices, systems, and services and become an economic stimulus.

Deploying IoT apps on mobile networks is generally seen as the next step forward. This network architecture and business model promotes IoT apps and reduces network investment risks.





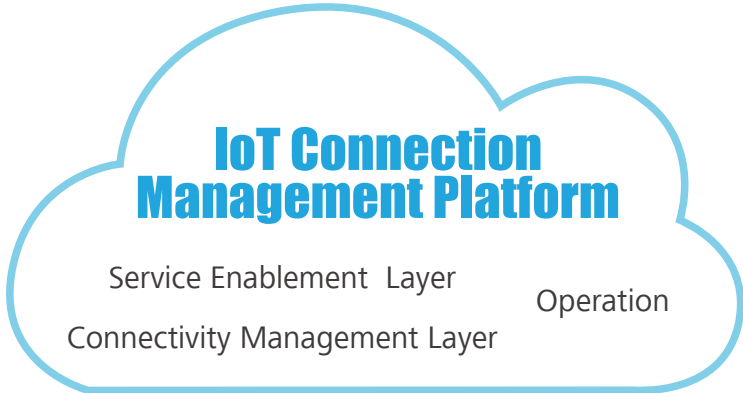
What's IoT Connection Management Platform?

Huawei core network complies with the development of the Internet of Things (IoT), designed as a unified connection management platform with the key abilities: Access agnostic, Carrier grade, Flexible and Open.

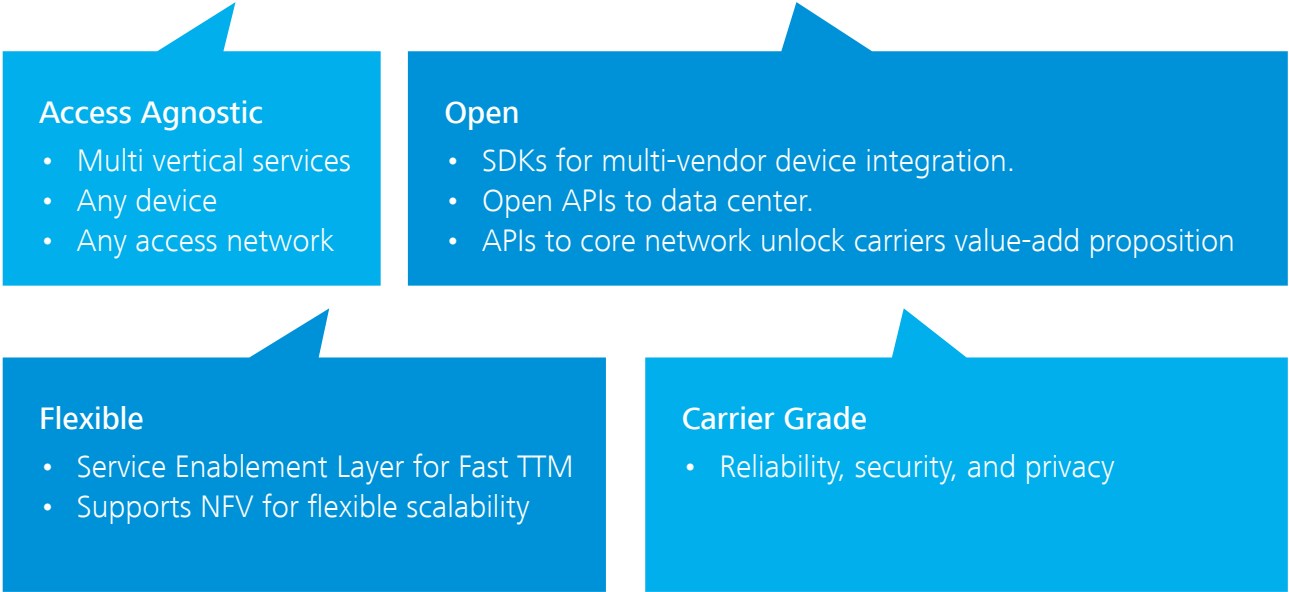
Huawei IoT connection management platform provides full connections between people and things and between things and things. Fast integration and support for multi vertical industry applications.

The Huawei IoT connection management platform meets the requirements of carriers, enterprises, and direct sales customers for an E2E IoT platform, helping them integrate industry services, accelerate service rollout, reduce integration costs, and increase revenue.

Built on the IoT connection management platform, the Huawei IoT solution integrates industry services and provides open APIs, service orchestration, and open data to implement a cost-effective and short product development cycle. The IoT solution also provides people and things-oriented Agent/SDK to provide real-time communication, data collection, and device control capabilities. Partners can apply for and use these functions to enhance their competitive edge and create new revenue streams.



Device/GW Agent



Why IoT Connection Management Platform?

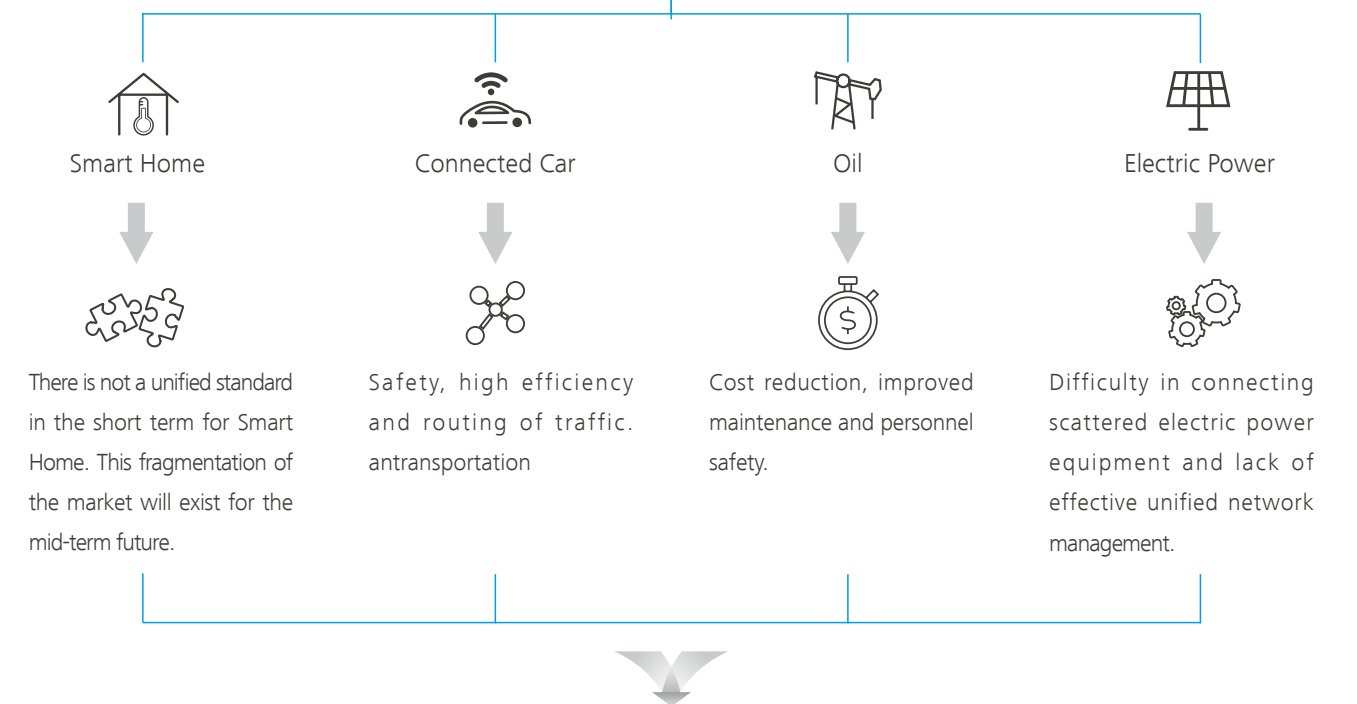
In the real world, M2M is changing people's life. New technology connects people and things, making things smarter and people's lives more convenient.

But facing the various vertical industries, and various requirements, customers still have many troubles to face:



According to operators' pain points, Huawei IoT solution provides an access agnostic, open, flexible and secure connection management platform to help operators construct an ICT cloud based, strong ecosystem, E2E one stop solution.

Industry challenges



- Cross-Vertical Industry, unified connection platform. Rapid terminal integration with IoT Agent. Open API to enable aggregation of IoT ecosystem partners. Open APIs and Pre-integrated sensors to support operators TTM for enterprises and consumers customers.
- Big data analysis and real-time intelligence. Cloud platforms, layered design of terminal and edge gateway for control and intelligence. Platform provides rules engine and intelligent analysis tools.
- Carrier grade security scheme. Layered security design, covering the business layer, platform layer, access layer, and terminal layer. Device appropriate encryption algorithm matching stringent terminal power and memory resources requirements, while always ensuring industry standard levels of security.

IoT Connection Management Platform



Huawei Corporate IoT Strategy: 1+2+1



Huawei Corporate IoT Strategy is divided into three layers:

1 Interface Specification

Open sourced LiteOS to optimizes sensors and terminals for low battery consumption and small memory footprint.

2 Access Modes

Support wireless and fixed access including gateways that support WiFi, Zigbee ,Zwave PLC,RF,Bluetooth etc.

1 IoT Connection management platform

Designed from ground-up for horizontal multi-service enablement



Smart Home



Oil



Electric Power



Connected car

1 IoT Connection Management Platform



Cloud Data Center



Device Management

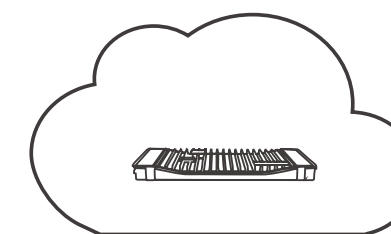


Operation

2 Access Modes

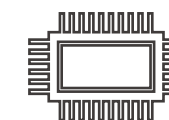


Wireless (eLTE/NB-IOT/5G)

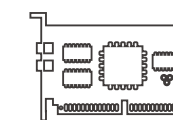


IoT Gateways (all Fixed)

1 Interface Specification



Agent/SDK/LiteOS



Huawei IoT Connection Management Platform High Lights

Access Agnostic

Any Network

- Fixed/Mobile/Cable
- Licensed/Unlicensed

IoT Angent/LiteOS

- Any Device
- Any sensor

Carrier Grade

Ideal User Experience

- Immersed Interaction
- High security and Availability

Flexible

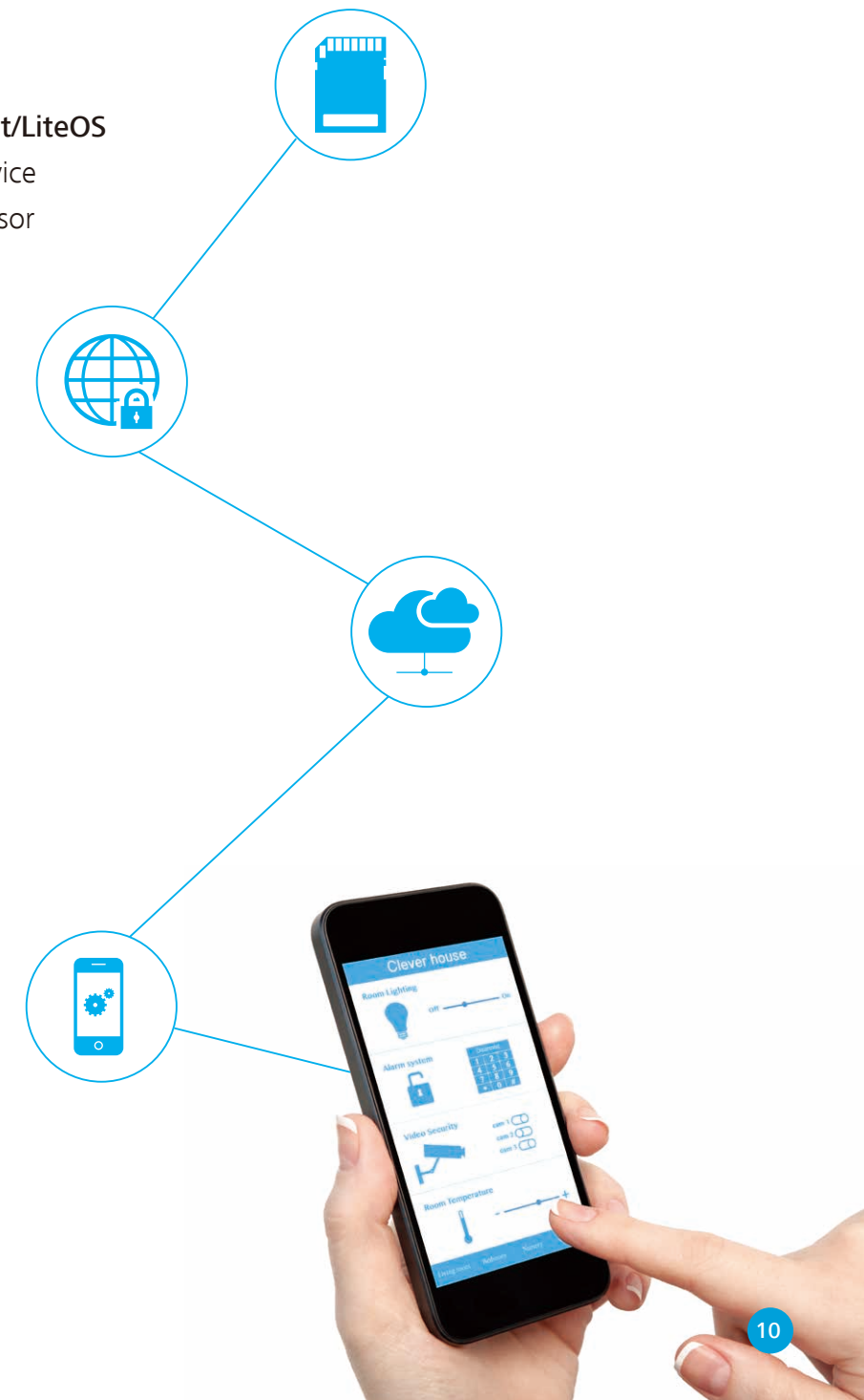
End to End Innovation

- Self Connecting & Self Networking
- Fusion ICT Technology
- Joint Innovation Center
- Plug & Play

Open

Fast Time to Market

- Cloud-Based, Easy Deploy
- Open Eco-System
- New services on Fly
- Standard APIs





Typical Scenario: Smart Home



Huawei Smart Home solution provides carriers a reliable, secure and easy to deploy one stop solution for end-user home security and home automation value added services.

Huawei Smart Home solution is based on the Huawei IoT connection management platform and has the benefits of high reliability, capability exposure, and service orchestration.

Huawei Smart Home solution allows for rapid service deployment utilizing carrier selected pre-integrated sensors and applications. Huawei Smart Home solution is also easily extensible to add new sensors and allow for user defined service applications, providing full flexibility for service operators to monetize various scenarios of Smart Home.

The common use cases in Smart Home include:

- Home Surveillance
- Home Security
- TV Communication
- Home Energy
- Home Health

Huawei Smart Home key differentiators

Powerful integration ability and ecosystem

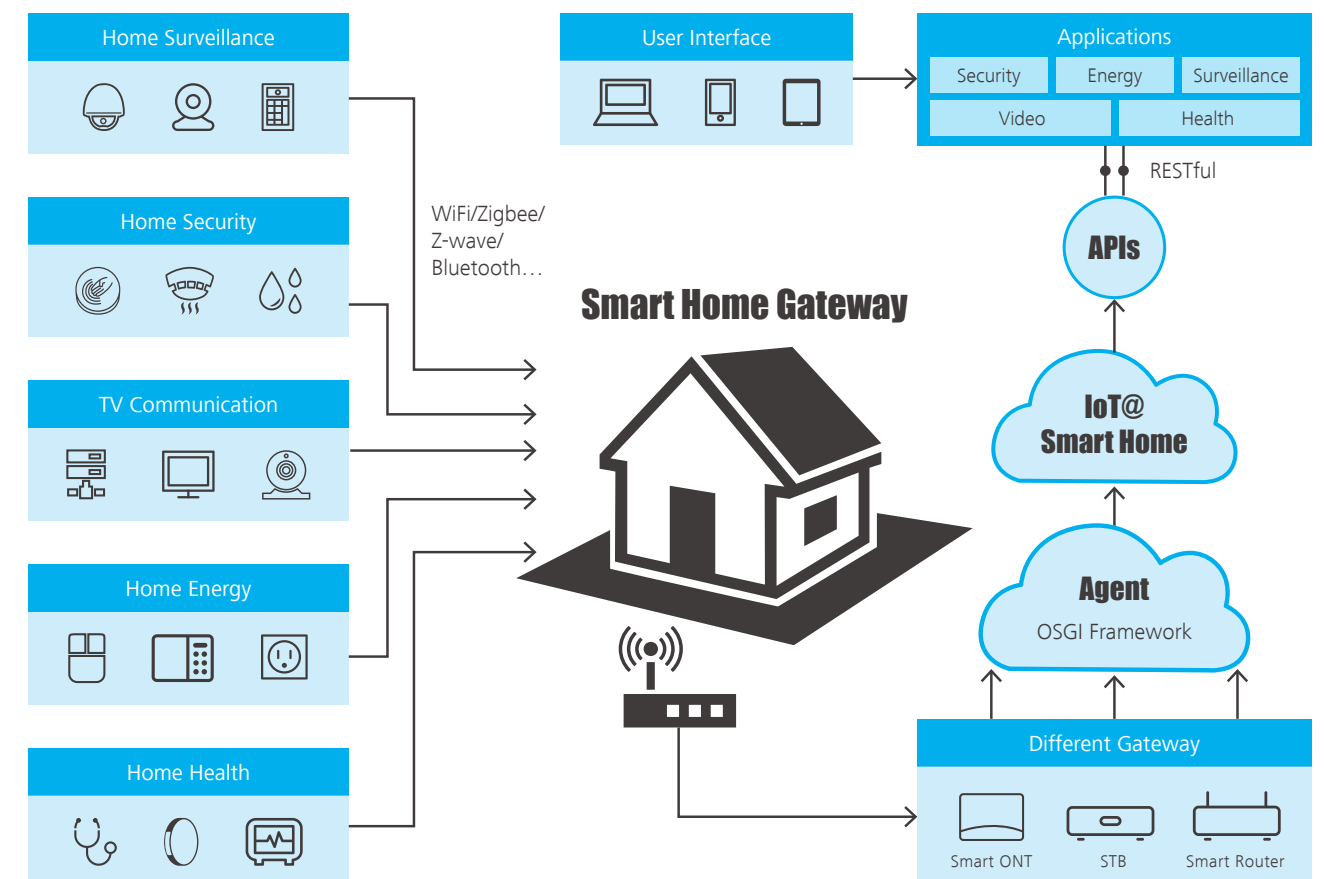
- Multi Pre-integrated sensors from different protocols
- Light weight Home Gateway Agent based on OSGI
- Rich API interface and powerful developer portal
- Over 200+ partners from tier1 smart home vendors

Carrier grade platform to support Massive human & things connection

- 99.999% availability based on NFV platform
- High scalability to enable quick expansion
- Carrier grade operational portal to support massive subscribers

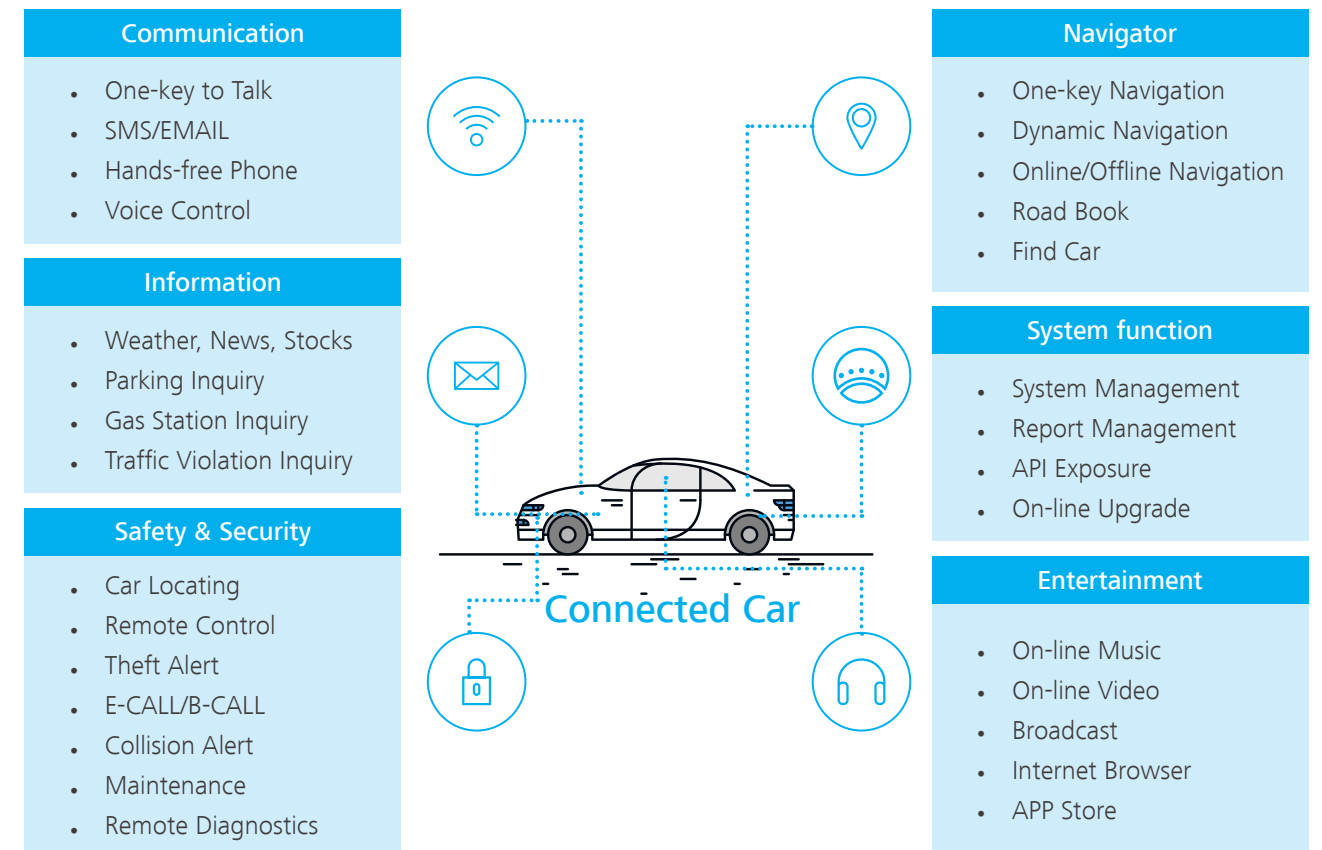
High Security and best voice/video quality to ensure the user experience

- Carrier grade auth. technology to ensure user data privacy
- E2E security protocol design to enable data transmission security
- Best voice /video quality based on Huawei 27 years CT experience

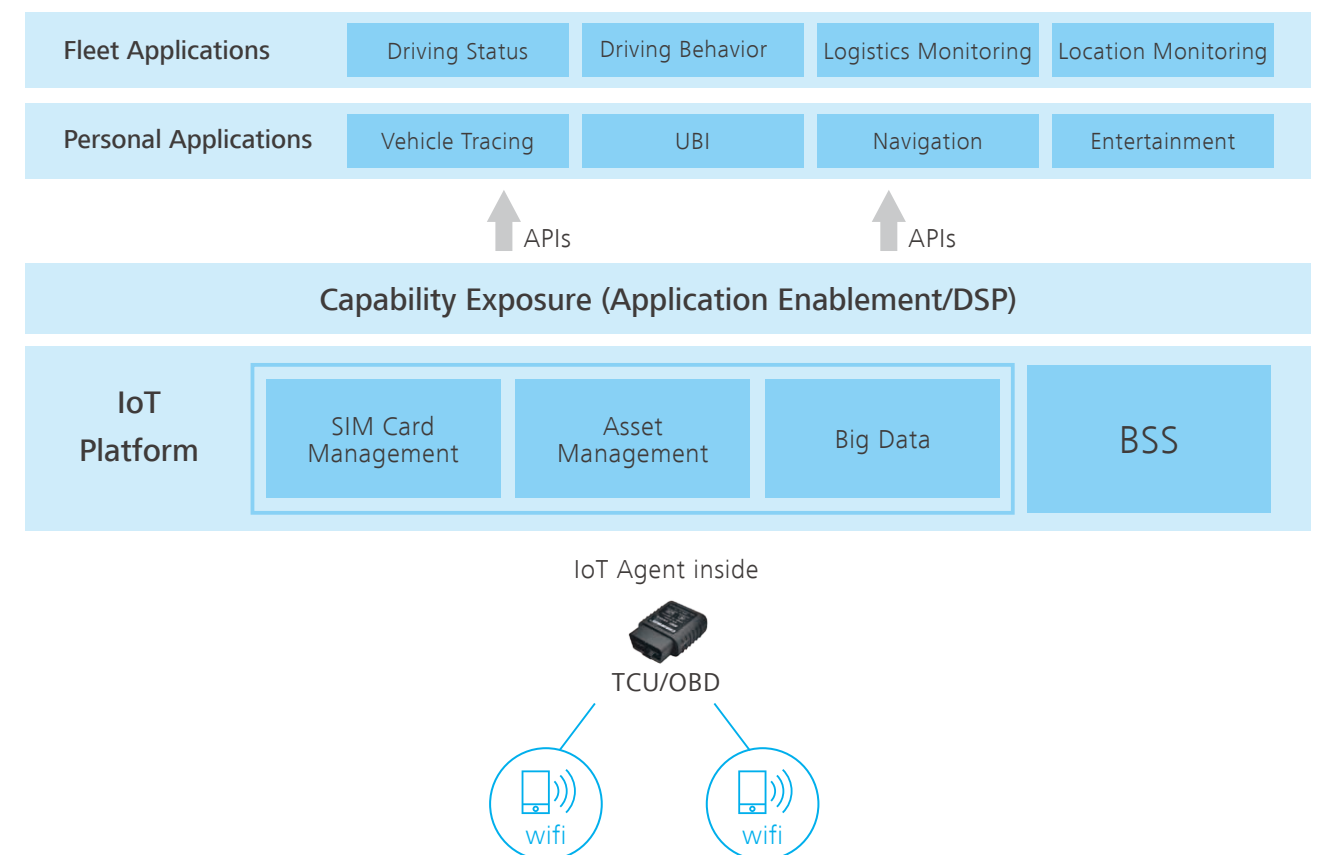




Typical Scenario : Connected Car



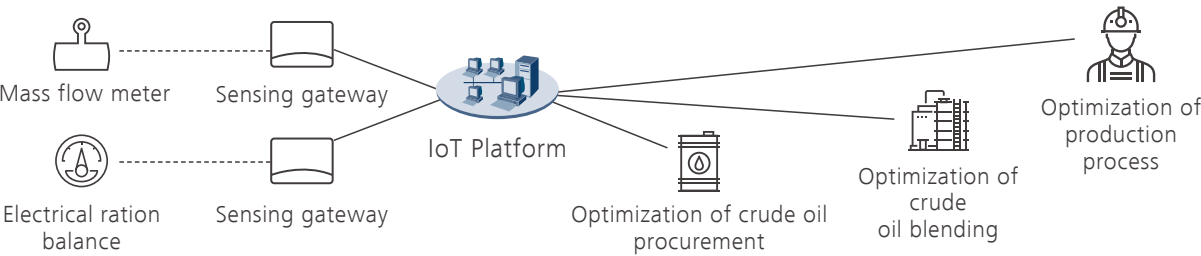
Pre-integration Services of Connected Car



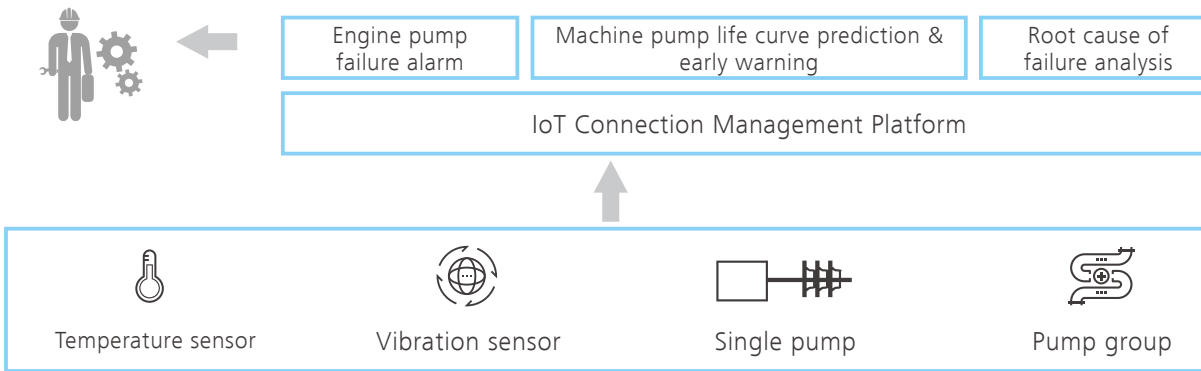


Typical Scenario : Oil

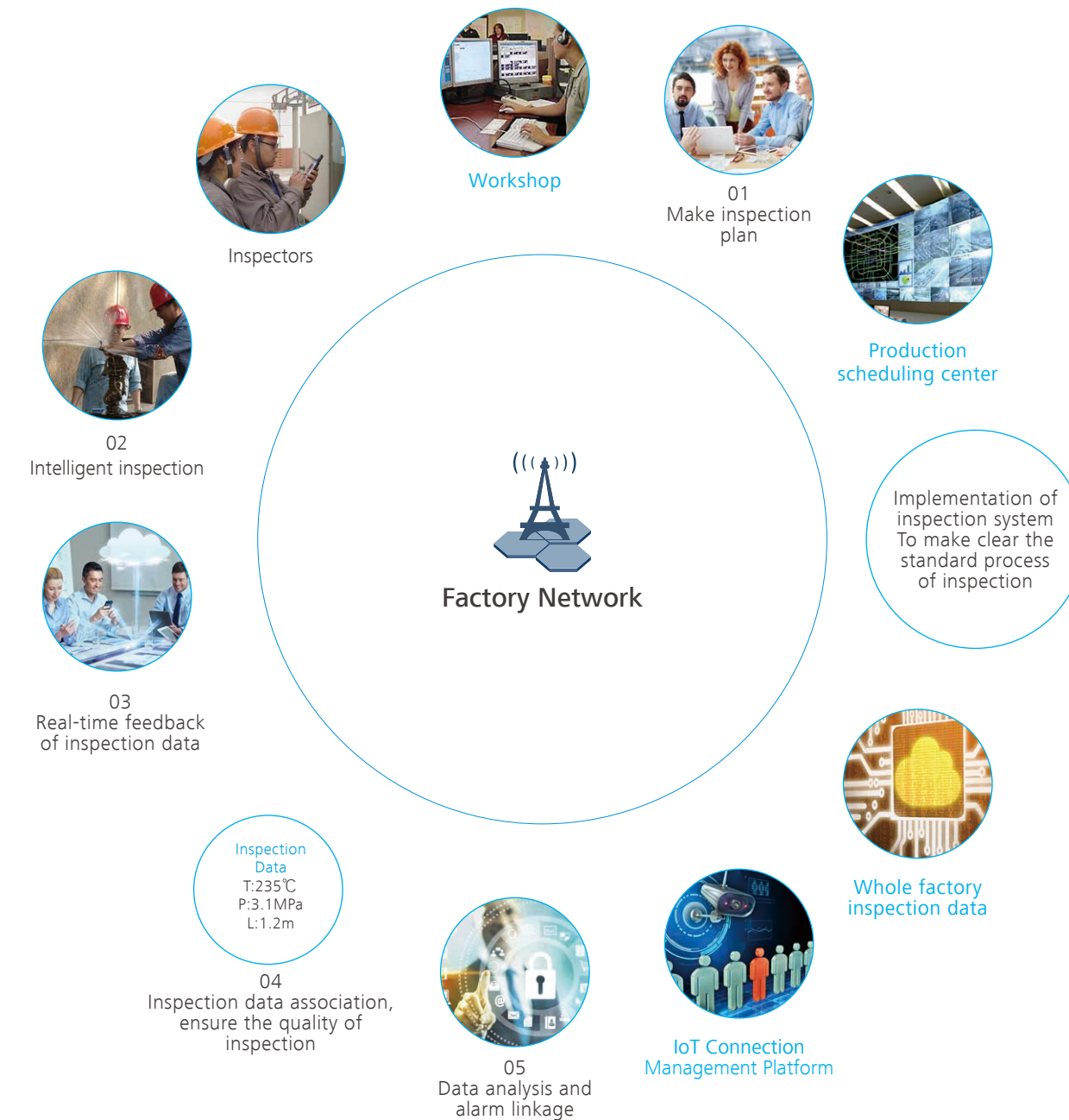
Real-time measurement data collection, improves refinery production management



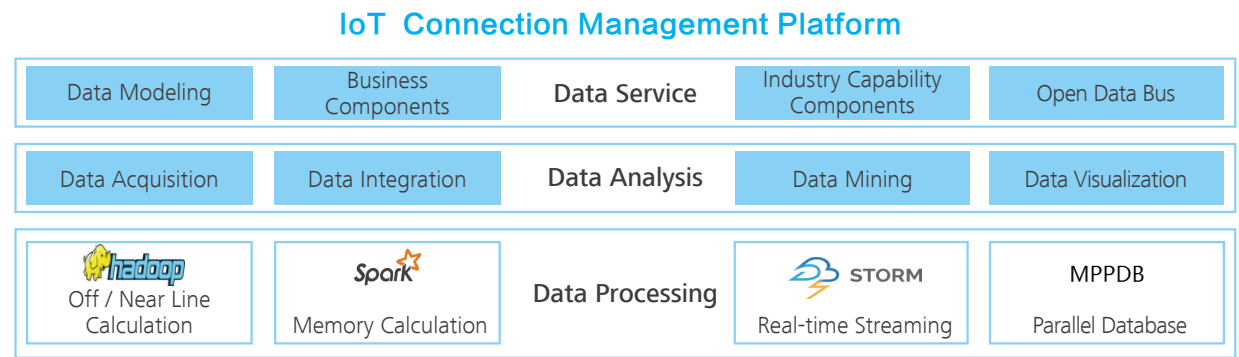
Online monitoring solutions, achieve intelligent warning and predictive maintenance



Intelligent inspection can improve the quality and efficiency of inspection, reduce security risk

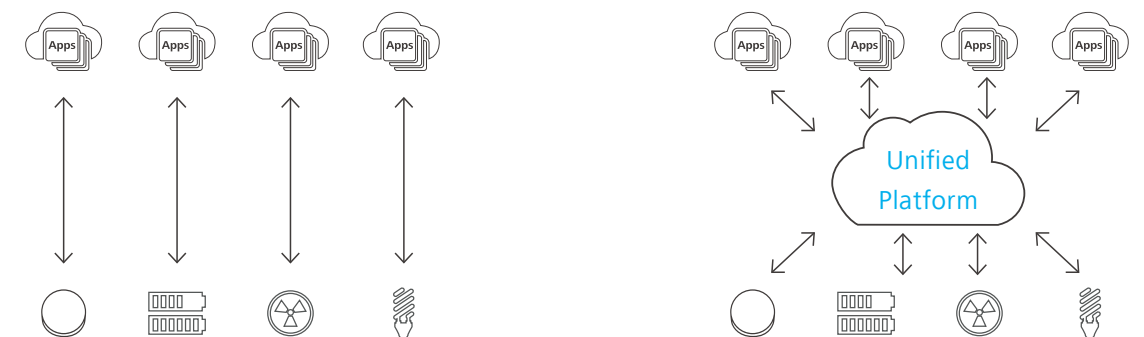


Big data acquisition and analysis capabilities to enhance operational management capabilities



Typical Scenario : Electric Power

Unified connection management platform's effective network management



Data acquisition and analysis ability meets electric power industry needs thmasllection and storage of electric power



IoT agent / LiteOS for rapid integration of diverse terminal ecosystem



Agent / LiteOS Rapid Integration

End to end integrated network security solutions build a full range of power connection security

