

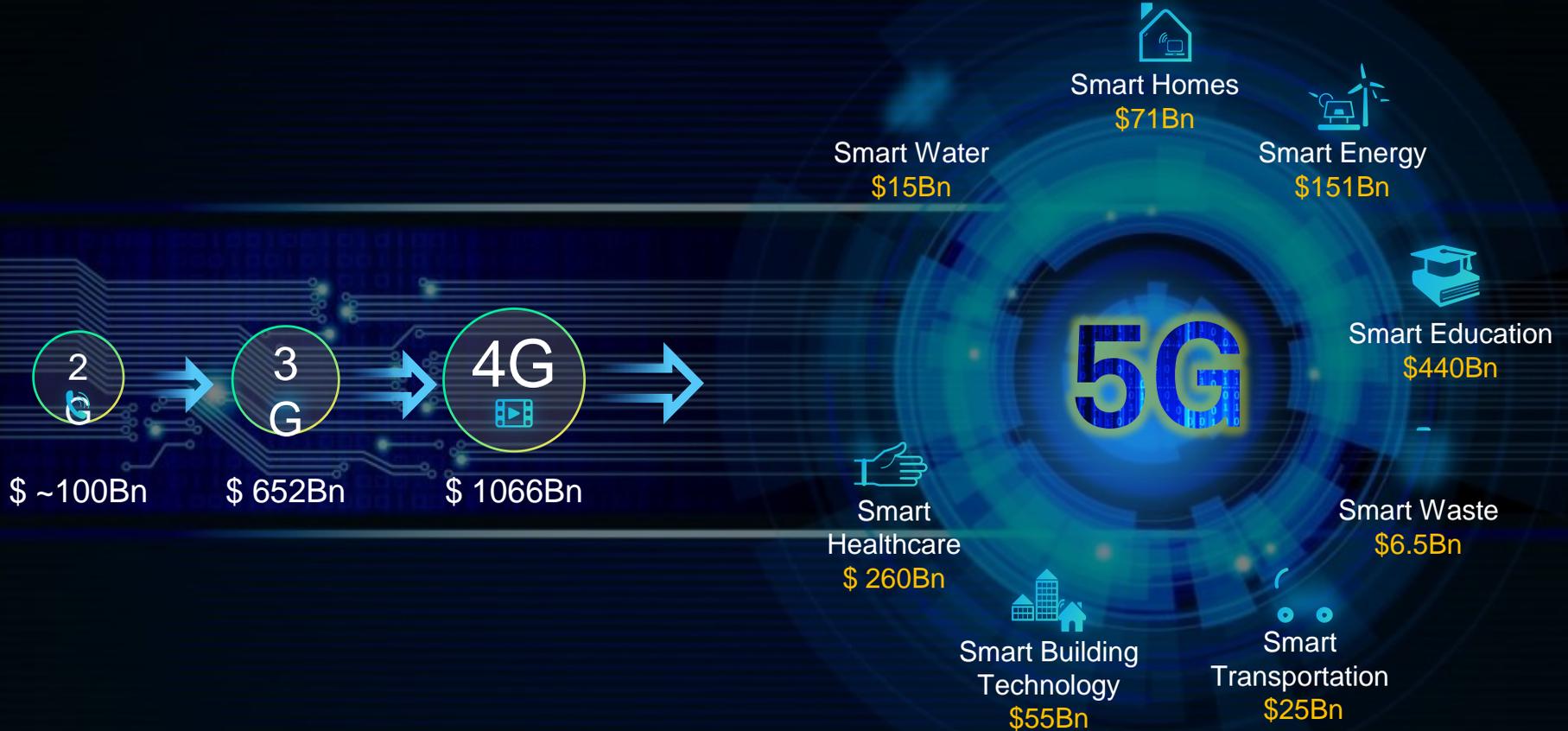


On the **Road to IoT**

— from Now to 2020

Fang Yi
Chief Product Manager
Cloud Core Network Solutions

IoT, Full of Potential and Possibilities



Source : 9 analytics agencies, eg. Ovum, IDC, Gartner, Forbes

IoT also has a lot of uncertainties, how to make it successful?

Industry Success Formula



Industry Success



Infrastructure

Infrastructure is Strategic Control Point



Operations

Operations Maximize Value



Ecosystem

Ecosystem Means Competitiveness

is Strategic Control Point

Infrastructure



New Infrastructure, New Experience



Human

Improving Experience to Lay Solid Foundation



U-MOS

Measure Video Experience



gmos

Measure Game Experience



AR

VR

MOS: Mean Opinion Score



Things

Defining Experience for Business Expansion

5-Dimension Experience of Things

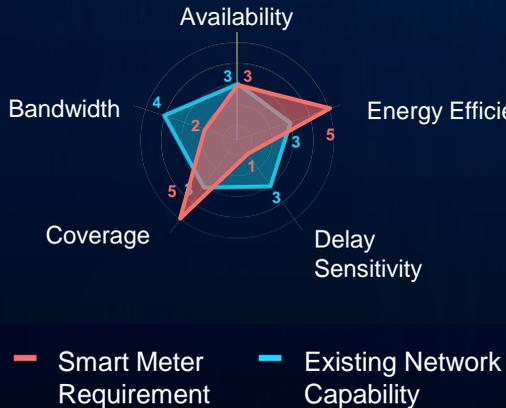


Source: <Future of Mobile Operator>

Start Now, Don't Wait Until 2020

Enhance Existing Infrastructure for New Experience, New Market

Low Power Wide Area Market



NB-IoT



• Smart Water Meter
2M since 2017

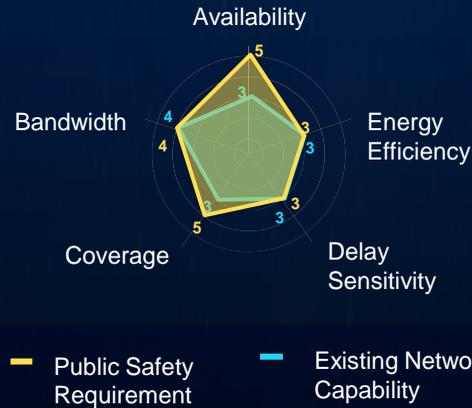


• Water Meter



• Air monitors
• Gas Meter

Public Safety Market



LTE Integrated Trunked Radio Access



Cost Saving
£1 Million / day

Public Safety
Users
300,000

Maximize Value

Operations



for New Experience, New Market

Operations Need Transformation

Human-Centric Service



B2C
Call duration + Traffic
Voice & Data
Self
Best Effort

-  Service Provision
-  Billing
-  Network Plan&Opt
-  Terminal Management
-  Service Level Agreement

Things-Centric Service



B2B2B & B2B2C
Connection + Session
Coverage & Battery Life
Network
Contract

Operations Support Network



Transformation



Operations Enable New Business

Start Now, Don't Wait Until 2020

Transforming to IES/BES/IoT Platform

2016 NB-IoT
Selected Services

Take 4 Years to Transform
Business Agility Model

2020 5G
Diversified Services



IoT Platform



BSS
Business Support System



OSS
Operations Support System

- 0 -> 1
- Local -> Cloud
- B2C -> B2B2X
- Operator -> Partners
- Manual -> Automation
- Network -> Service Oriented

Big
Data



Open

Agile

Automatic

Predictable Connections

Massive
Connections

Start Now, Don't Wait Until 2020

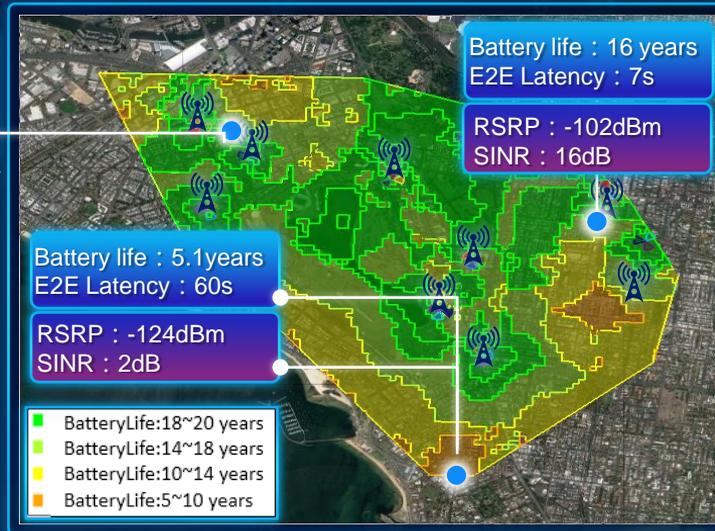
Building Up Operational Capability for Things

A Real Case of Operation in NB-IoT

Provision & Planning



Smart Water Meter Field test



Deployment & Maintenance



Input : water meter traffic model and battery information

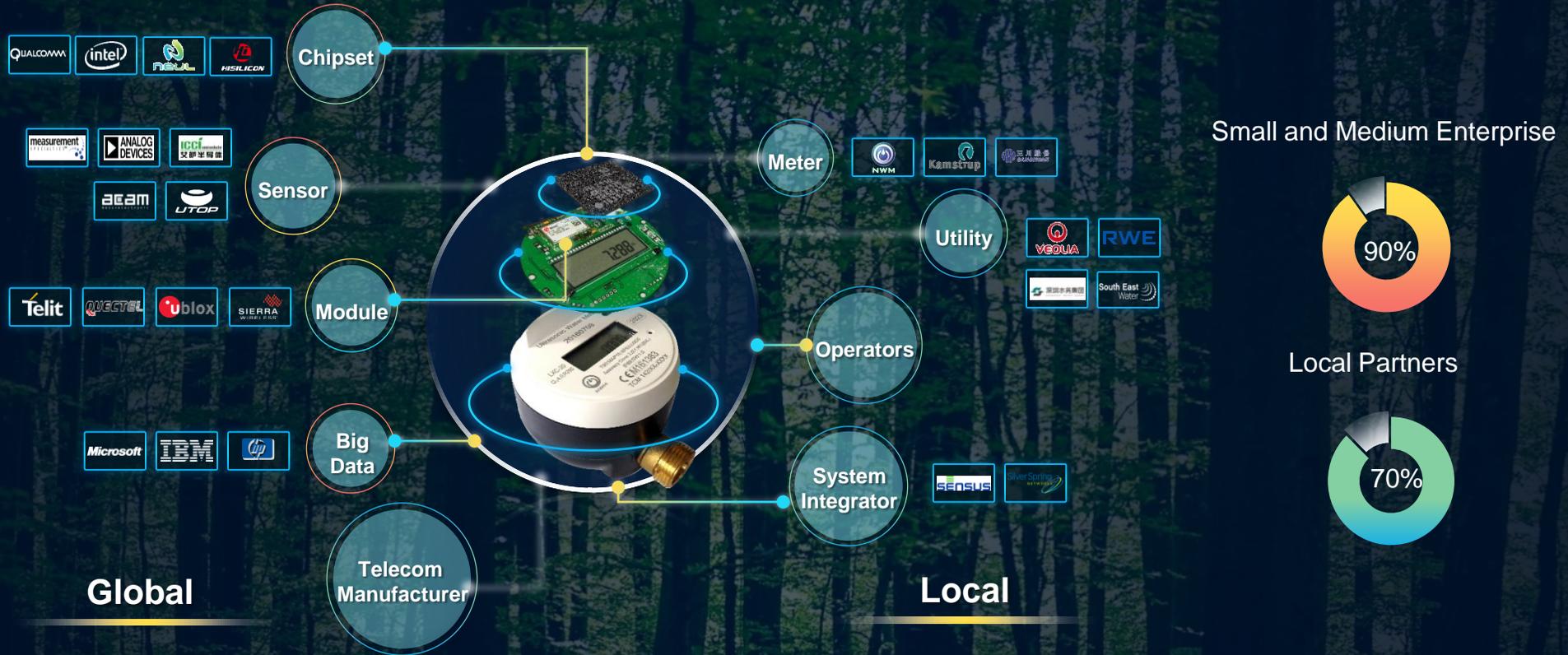
Input: Propagation Model for deep indoor, underground, height

Means Competitiveness

Ecosystem



Success of New Business Opportunities Depends on 'GLocal' Ecosystem Cooperation



Operators Need to Develop New Capabilities in 'GLocal' Ecosystem

Operators' Strength

-  Technology
-  Local sales network
-  Local service network
-  Credit

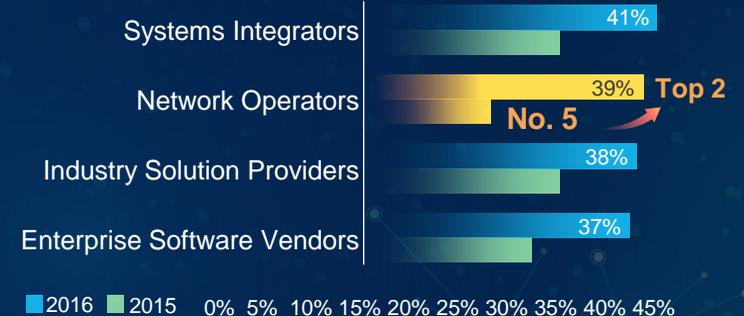
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New Capability

-  Vertical Market Understanding
-  System Integration
-  Ecosystem Management
-  Go to Market



Operators' Influence



GLocal : Global + Local

Source : Strategy Analytics, IoT Deployment and Usage Trend Survey, 2016

Start Now, Don't Wait Until 2020

Building up 'GLocal' Ecosystem One by One

Cooperate with Global Vendors

Build Alliances for Vertical Markets

NB-IoT Forum

Automotive Association

49

Members

100+

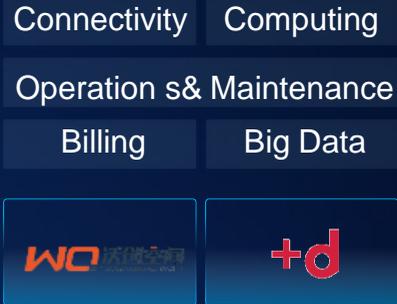
Partners

5GAA

Cultivate Local Ecosystem

Set Up Open Platform

Exploring Go-to-Market Strategy



Huawei supports operators to build up ecosystem



Developer Enablement Plan



1 Billion
In 5 years



Online and Offline Open Lab 8

IoT Partner TALK

Thailand Dec.2016
Europe/MEA
2017H1
...

X Labs
Wireless

Don't **W**ait it happen
Let's **M**ake it happen



**MBB
Success**

=

Infrastructure

×

Operations

×

Ecosystem

- Architecture First in Evolution
- All Cloud Strategy

- Transforming OSS BSS/Platform
- Things Coverage Methodology

- Cooperate with Global Vendors
- Cultivate Local Ecosystem

Thank you

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