Huawei overview & Digital Strategy

Corporate Strategy Dept.
Huawei Technologies Co., Ltd.
12/12/2017

Huawei at a Glance

180,000

Employees

80,000

R&D employees

170+

Countries

14

R&D institutes
@ **50+** cities
in 18 countries

No. 70 in

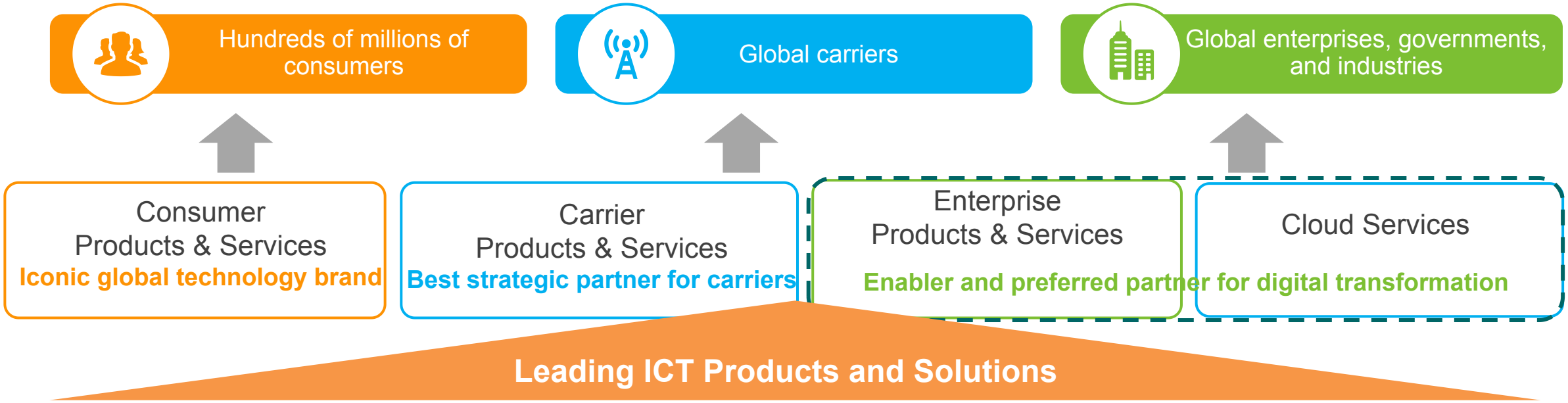
Interbrand's Top 100

Best Global Brands

No. 83 in the

Fortune Global 500

Serving 3 Customer Groups with ICT Solution



5 year forecast

~$36-> 80 billion

~20% YOY

~$44-> 55 billion

~5% YoY

~$8-> 30 billion

~30% YoY

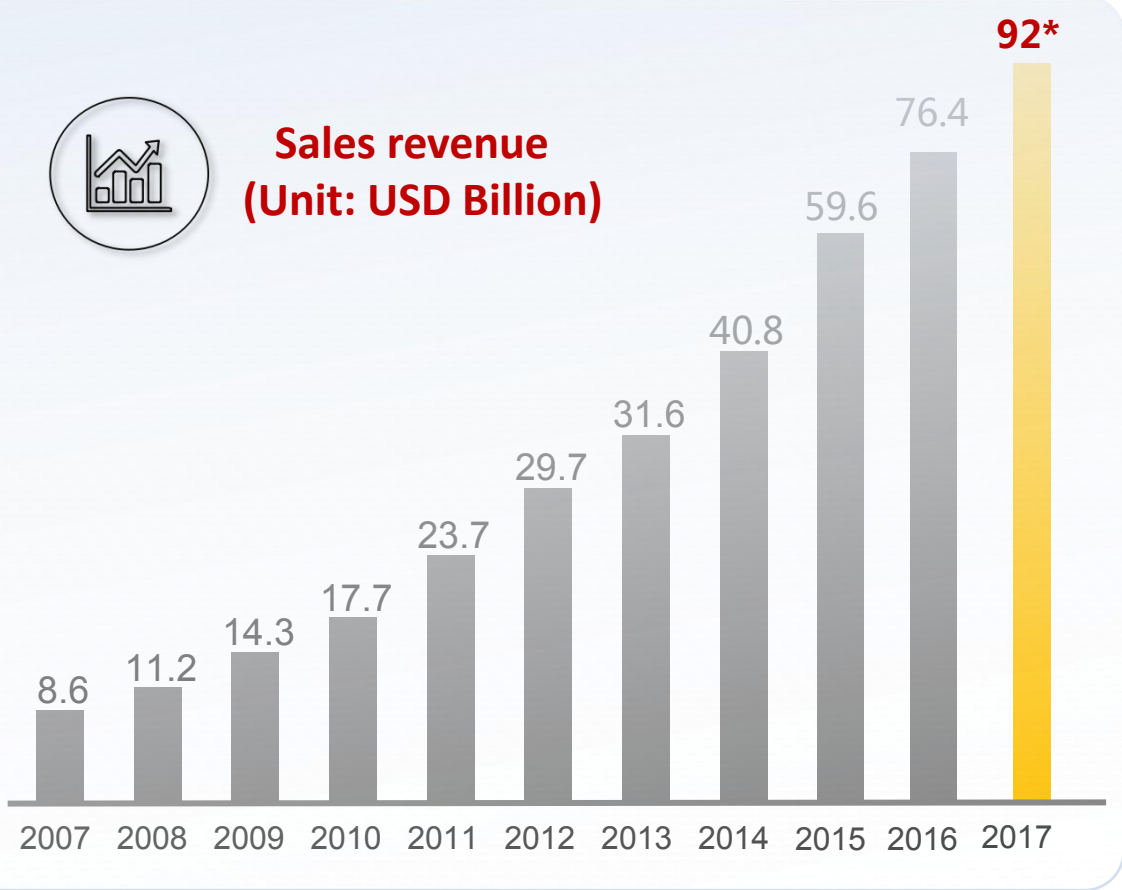
Ongoing Strategic Investment

14.6% of 2016 revenue spent on R&D
Make the company more competitive. Move the industry forward. Drive advances in technology

R&D investment over past decade:
CNY310+ billion

Annual R&D investment going forward:
upto US$20 billion per year
(10-15% of revenue)

+investment to explore the fundermental **technologies and science** for the intelligent world future

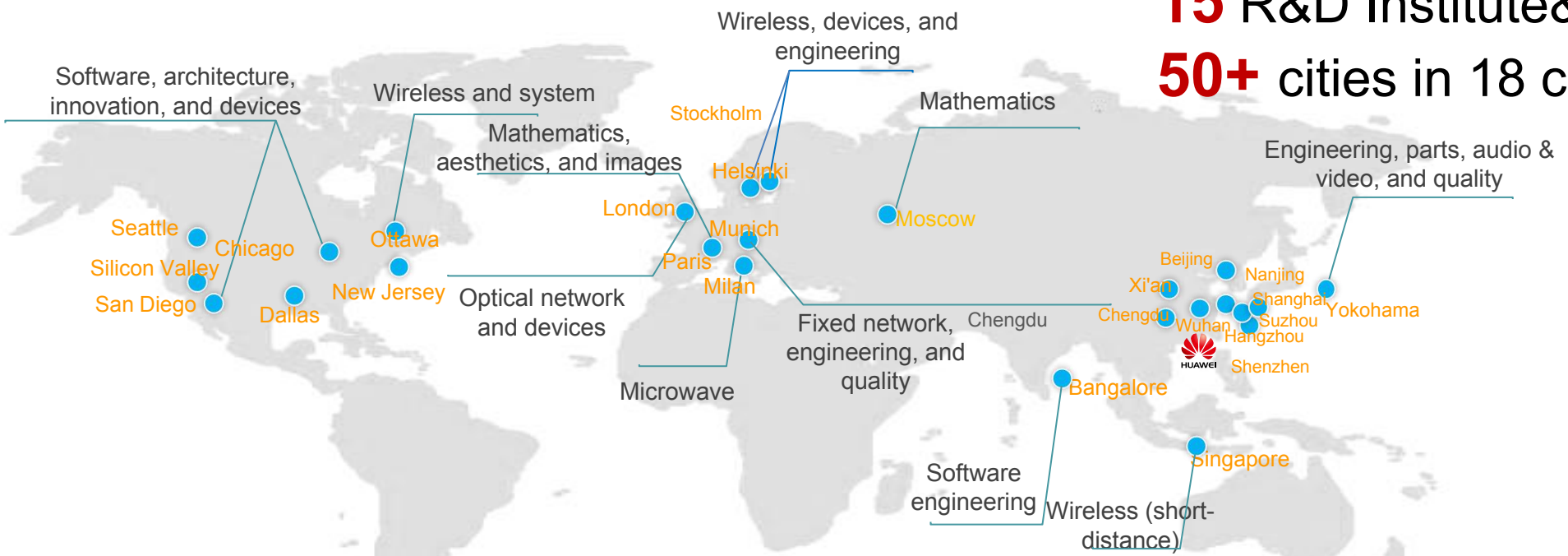


Turning Today's Investment into Tomorrow's Competitive Edge

R&D Institutes/Centers Worldwide

15 R&D Institute&centers

50+ cities in 18 countries



Shanghai, China

France

Sweden

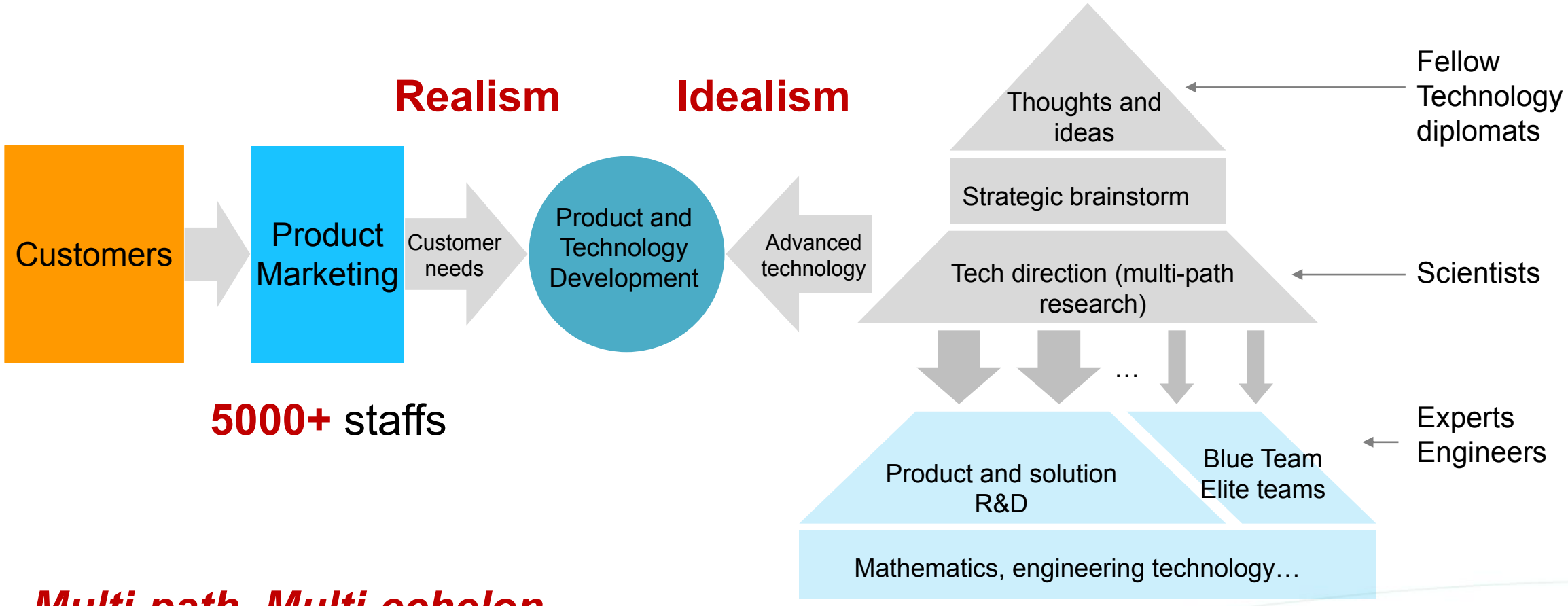
Germany

Russia

Hangzhou, China

Using the Best Innovation Resources to Serve Customers Better

R&D and Innovation Philosophy



Multi-path, Multi-echelon Intensive investment

We Are Entering an Intelligent World

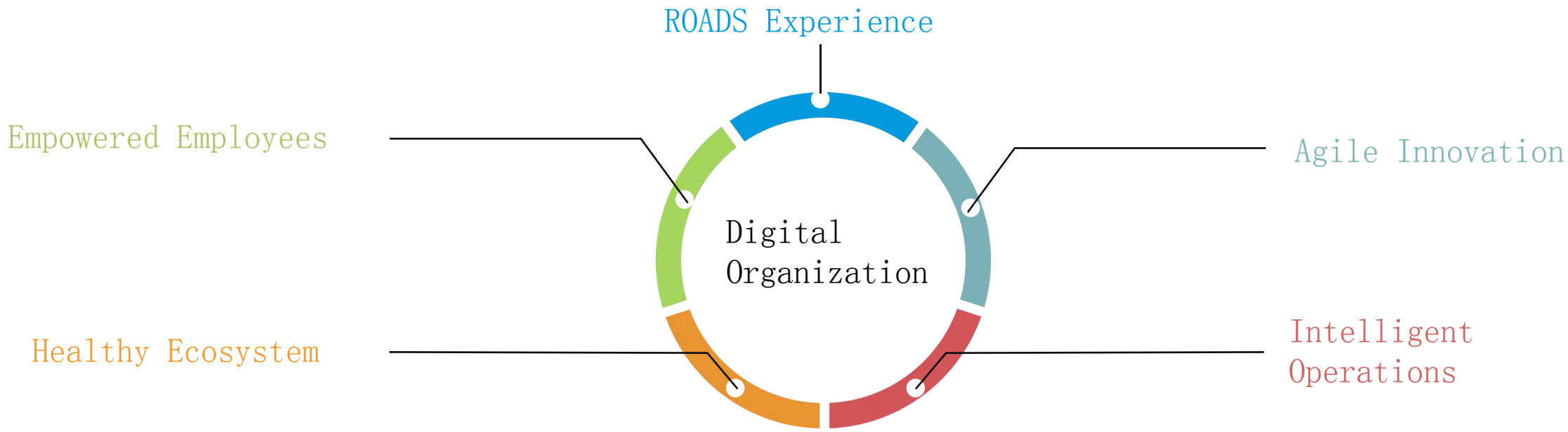
All Things Sensing

All Things Connected

All Things Intelligent

Huawei aims to become an enabler and driver of the intelligent world

Digitization: A Must, Not an Option



- **R**eal Time，**O**n-deman，**A**ll on line，**D**IY，**S**ocial

ROADS: New Standard for User Experience in Every Industry

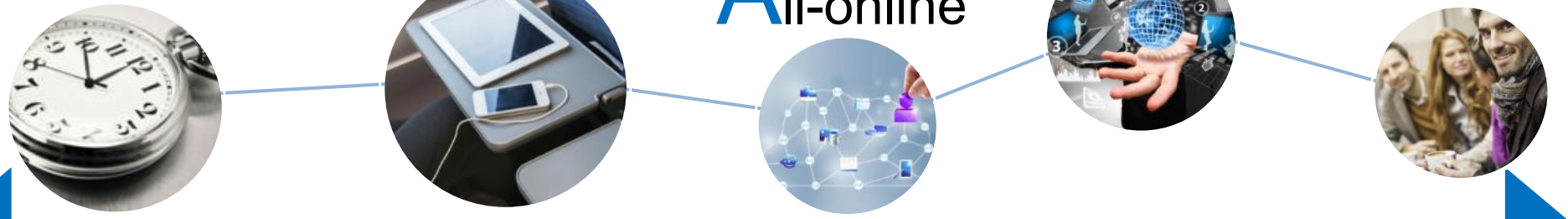
Real-time

On-demand

All-online

DIY

Social



Work, health, entertainment, shopping, communication, payments…

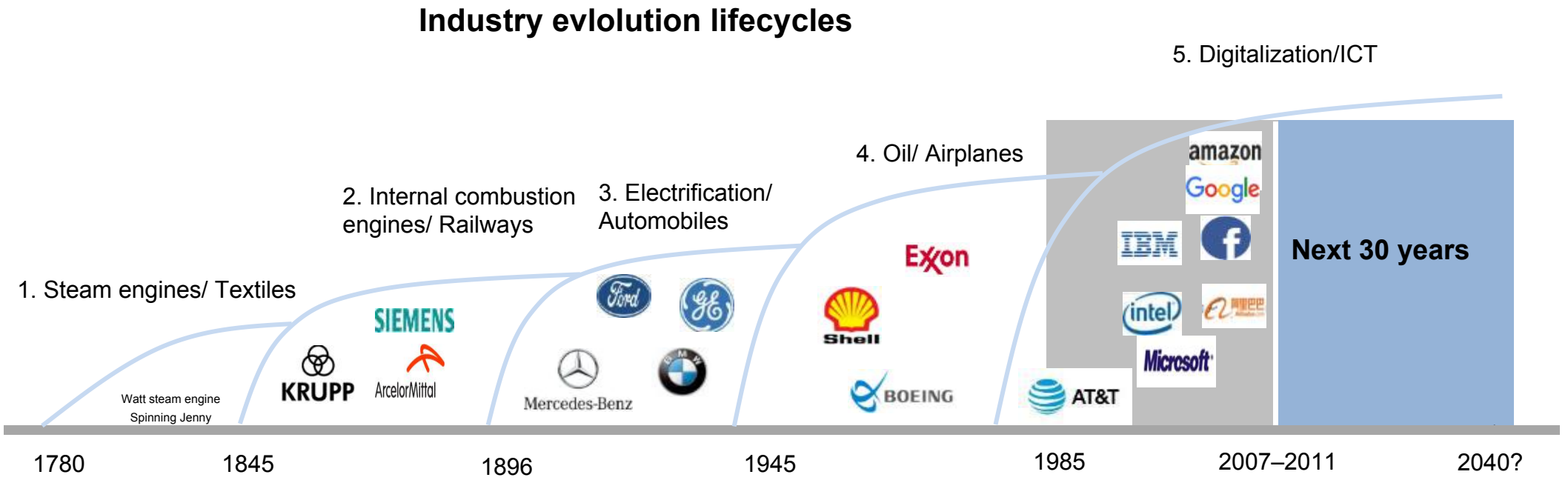
ICT infrastructure: faster, higher bandwidth

Scenario-specific services: instant, on-demand

Real-time content: fast response & sharing

Smart devices: multi-screen, multi-mode

Critical Moment in Digital Transformation:



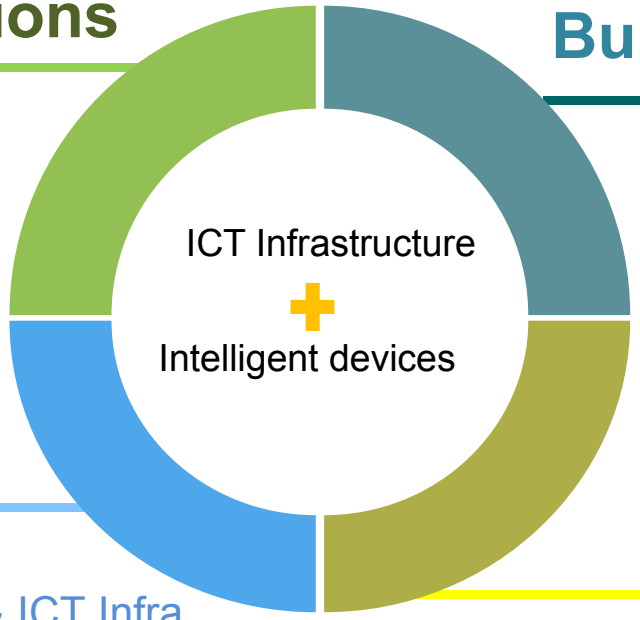
- A new phase of Industry evolution lifecyce， in which every industry goes digital.
- ICT Is Becoming a General Purpose Technology
- All enterprises face the same problem: How can they adapt and flourish as their industry goes digital?

Vision and Mission
Bring digital to every person, home and organization
for a fully connected, intelligent world.

Focus on ICT as a Platform, Enable Digitalization

Create more connections

- Connect the unconnected
  - People 44%->77%
  - Home: 40%->75%
  - Things: 16bn->100bn
  - Indoor : 80% data traffic
- With better experience



Build Open& Trusted Cloud Platform

- All-Cloud infrastructure evolution
- Huawei Cloud Service + Open Alliance
- OT Partnership：enabler, instead of disruptor

Empower broadband

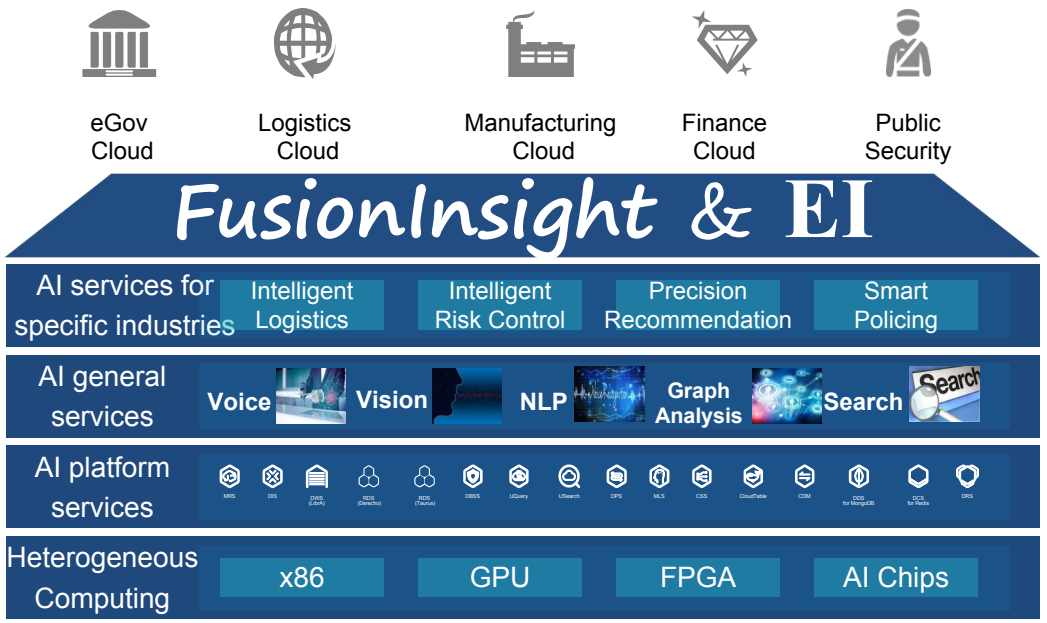
Best Video experience Network & ICT Infra.

- Video as a basic Carrie service (4K,VR)
- Video-driven digital Tx verticals（compute vision）

Build ultimate user experiences ecosystem

- All scenario experience oriented
- Chipset – device - cloud synergies
- AI driven services

Artificial Intelligence



EI: Enterprise Intelligence

+

Mobile AI = On device AI + Cloud AI

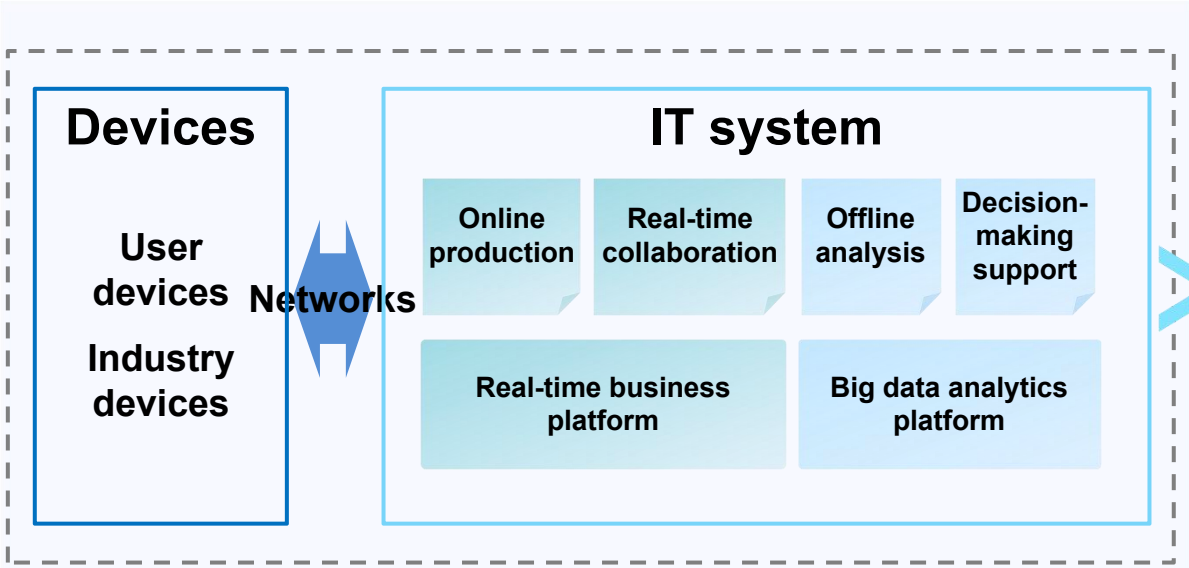
Huawei views AI as an enabling technology:

- Enhance the competitiveness and capabilities of products and solutions
- Improve internal operating efficiency and quality
- Transform smartphone into personal assistent

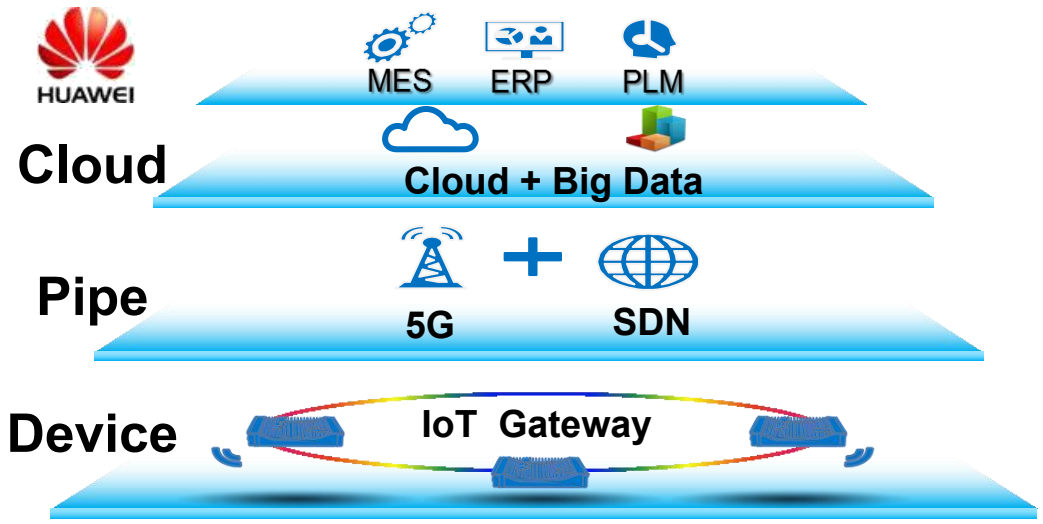
…Increasing the Value of Our Business

New ICT Architecture, Driving Industry Digitalization

IT system for future digital enterprises



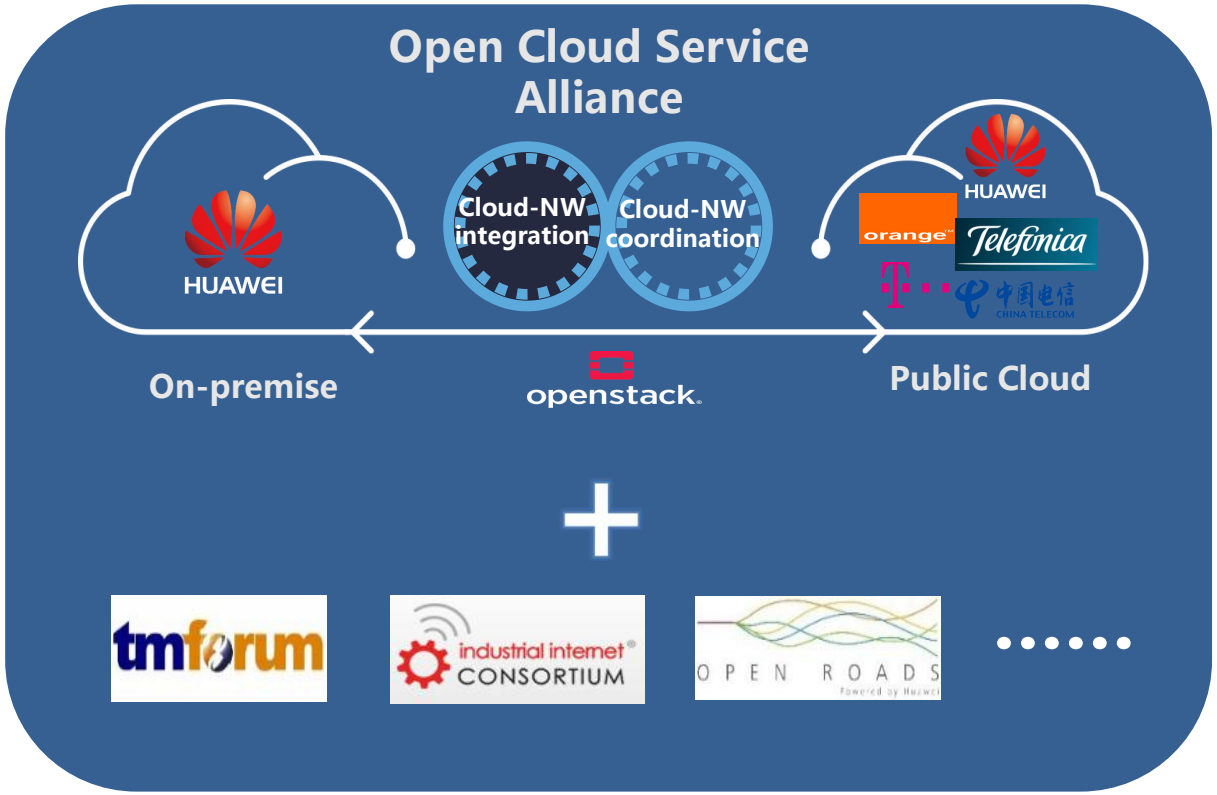
ICT system: End-to-end restructuring and innovation



New ICT architecture with cloud-pipe-device synergy powers in-depth integration of production systems and ICT technologies.

Enabling Digitalization:

Building Digital Huawei, Digital Telco, Digital Industries



Enable digital transformation for customers to achieve business success

- All-Cloud Strategy + online service of ICT Infrastructure
- Open cloud service alliance，focus on ICT infrastructure to enable the verticals, Offer the most advanced technologies via **"IOT+ Cloud platform"**
- OT Partnership, building an open & healthy digital ecosystem with industry alliances

Digital Huawei

Agile Innovation

- Compute Cloud, 2x R&D efficiency
- Lab as a Service, instant customized R&D environment provisioning

Empowered Employee

- "Big platform , Elite staff"
- ISDP brings 50+% higher delivery efficiency and streamline Huawei with customers and partners.

ROADS Experience

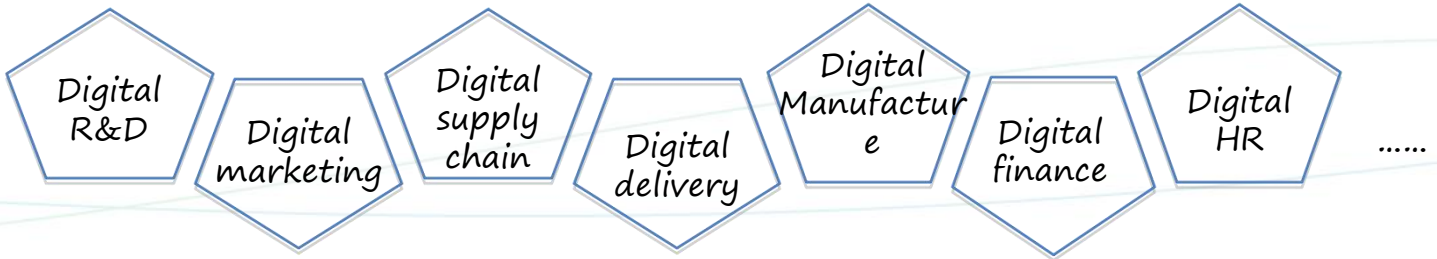
- "One Access , One Space"
- WeLink , the unified office platform

Intelligent Operation

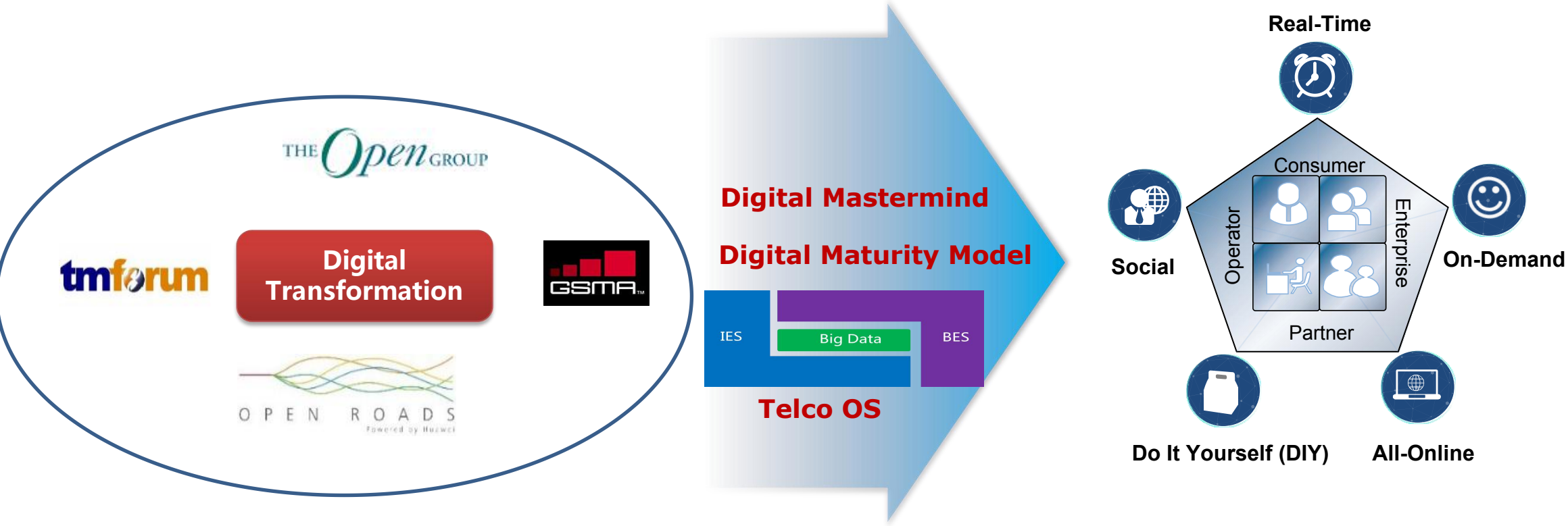
- Bridge AI/Bigdata with specific business scenarios
- Quasi-automated payment of 5 million invoice a year

Healthy Ecosystem

- Industry alliances
- Commercial alliances
- Open-source communities
- Developer platforms

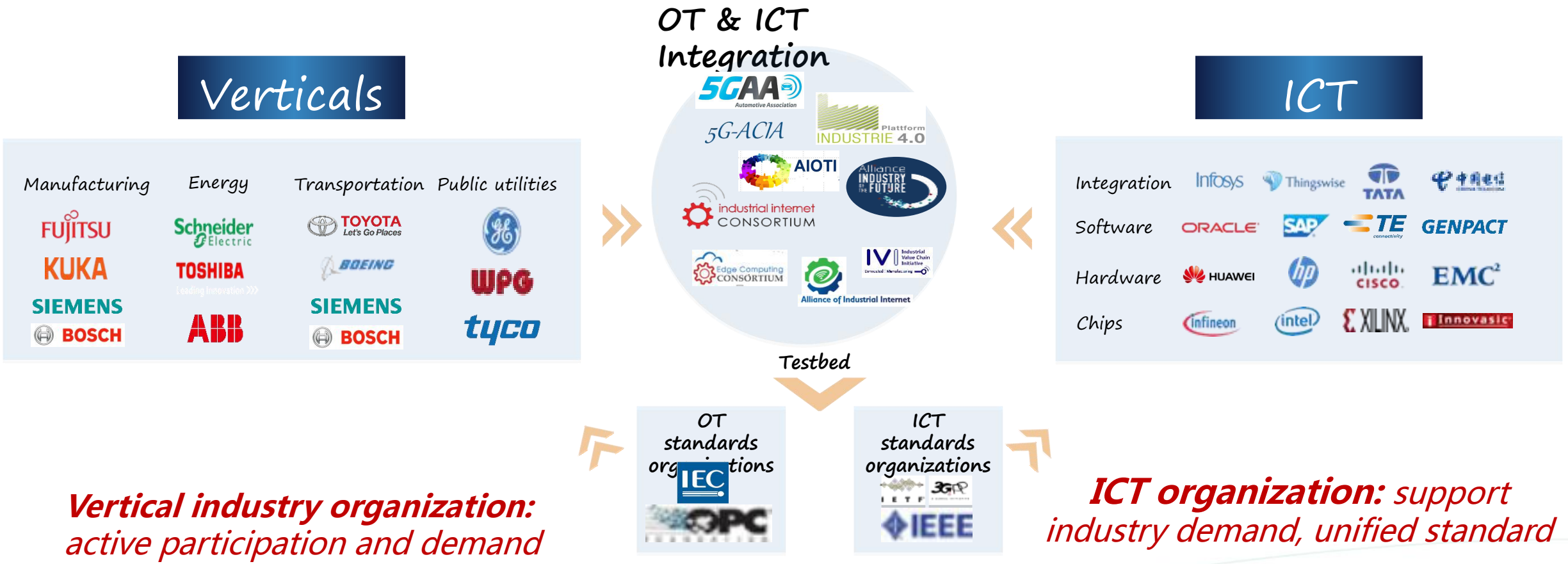


Digital Telecom



- ***Developing ROADS core value proposition and forming industrial consensus***
- ***Unified digital transformation framework and process***
- ***Building an ecosystem***

Building a New Digital Ecosystem with Industry Alliances



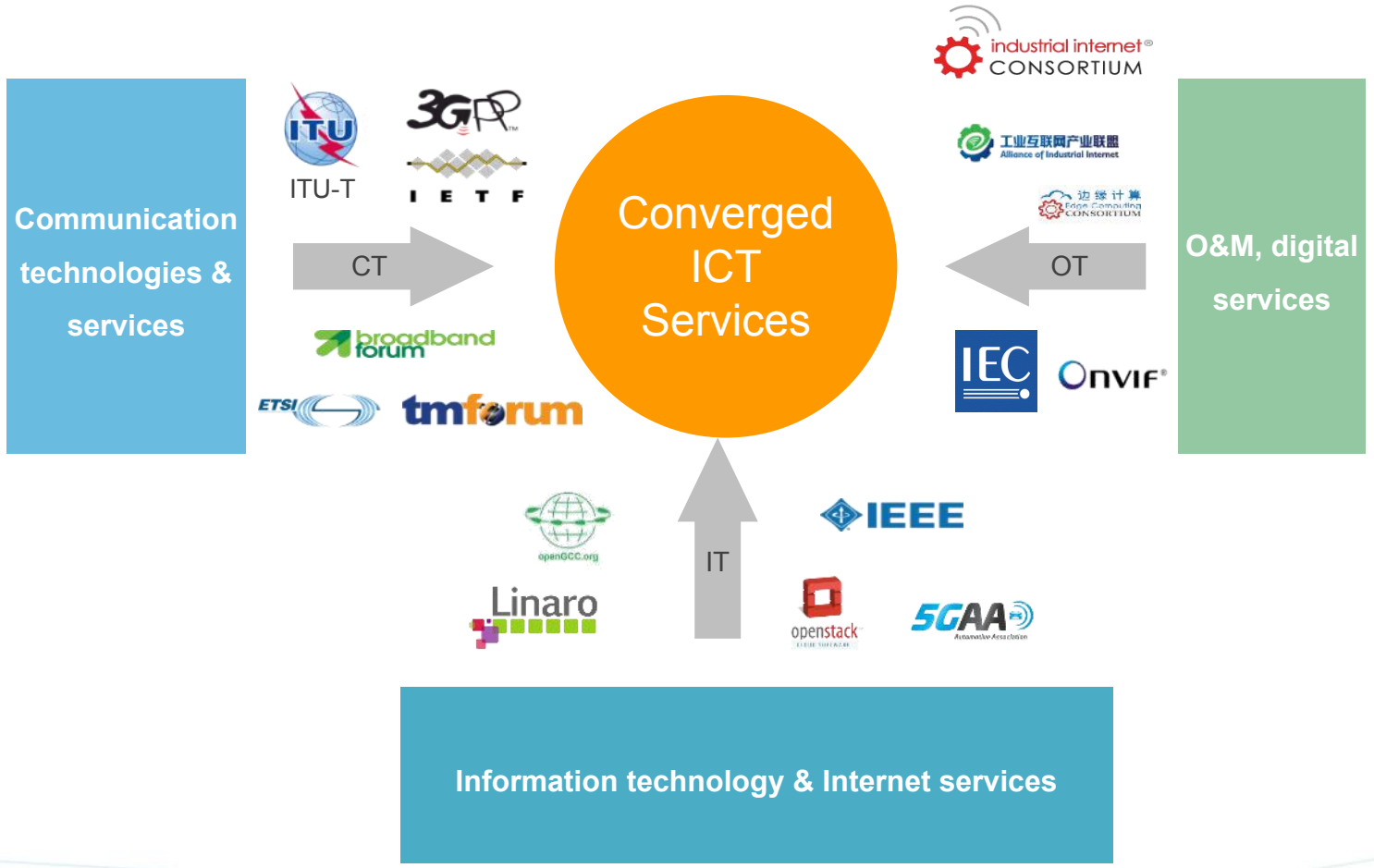
Vertical industry organization: *active participation and demand mining*

ICT organization: *support industry demand, unified standard*

ICT & OT integration organization:

active construction, strategic matching

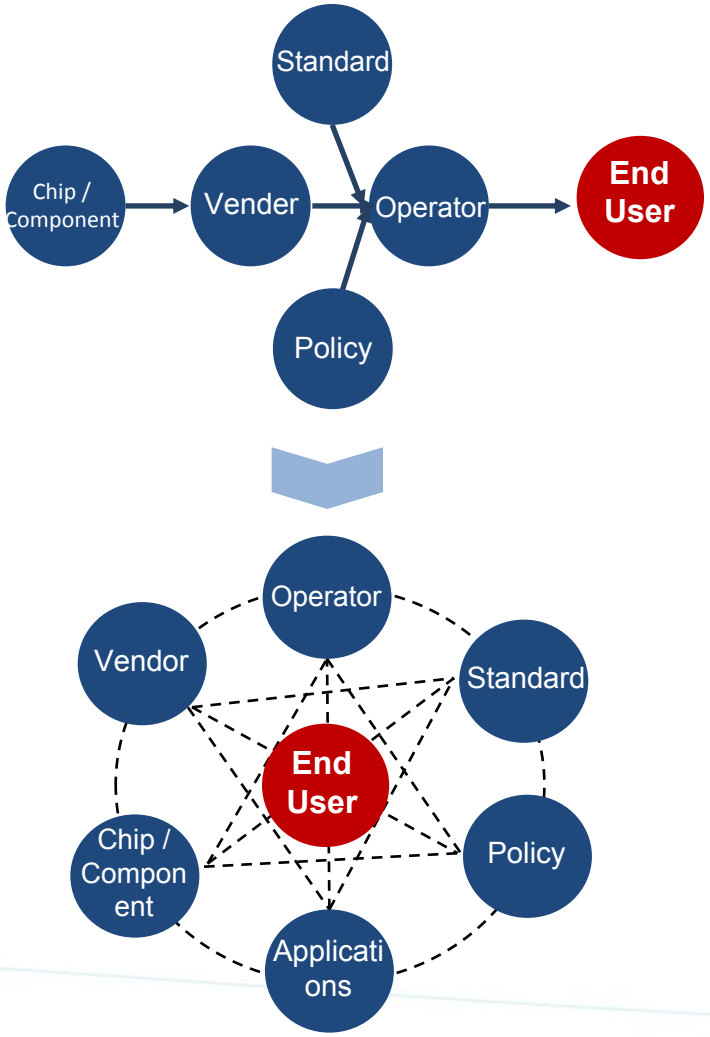
Advancing ICT Standards and Industry Development



Membership in industry organizations	Organizations founded by Huawei	Key positions	Proposals
380	25+	300+	54,000

- Key contributor to ICT standards and industry development; committed to growing the industry together with major standards bodies and industry alliances
- Holds 300+ key positions: board member of IEEE-SA, BBF, ETSI, TMF, Openstack, Linaro, OPNFV, and CCSA
- Active player in key industry projects on 5G, video, and IoT; driver of cross-industry collaboration

Construct a New Type of Strategic Cooperation



Quality:

- Extend quality management to suppliers and partners, to make HUAWEI a synonym for high quality in the ICT industry

Innovation:

- **Depth:** From product technology innovation to product technology + quality + digital operation and so on all-round innovation
- **Breadth:** From chain cooperation and innovation to the customer as the center, and the industrial chain multi-cooperation and innovation

“Glocal” OpenLabs, Creative Ecosystem

Industry Solution Innovation hub. + Development Center + Test Center + Experience Center = OpenLab

X Labs: testbeds to accelerate industry adoption

Building 5G ecosystem around 5 use cases

Connected drone

Connected vehicle

Cloud virtual/ augmented reality

Connected healthcare

Wireless robotics

XLabs Wireless

Laboratories
Simulated 4G/4.5G commercial networks

Test environments for end-to-end interoperability
Chips, modules, devices, systems, etc.

5G environment
Verifying key 5G technologies with applications

5G field trials
Initial verification of 5G applications

Consulting committee

Special Interest Group (SIG)

Digital Sky | Wireless Factory | Connected Healthcare .....

- X Labs explores the demands and challenges of new use cases, and explores new opportunities.
- X Labs has a record of deep market insights and innovative communications solutions that address carriers' problems.
- Today, X Labs is researching future use cases to help accelerate industry adoption of wireless technologies.
- **50+ top carrier partners with us at 9 joint/ mobile innovation centers**
- **271+ industry partners**
- **47+ innovation projects**
- **Top Ten 5G Use Cases white paper**

Thank You.

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