Harnessing ICT technology to build a Better Connected World

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Where there is vitality, there is the center of the world

Steel

Pittsburgh City

140 Years Ago

Automobile

Detroit City

70 Years Ago

?

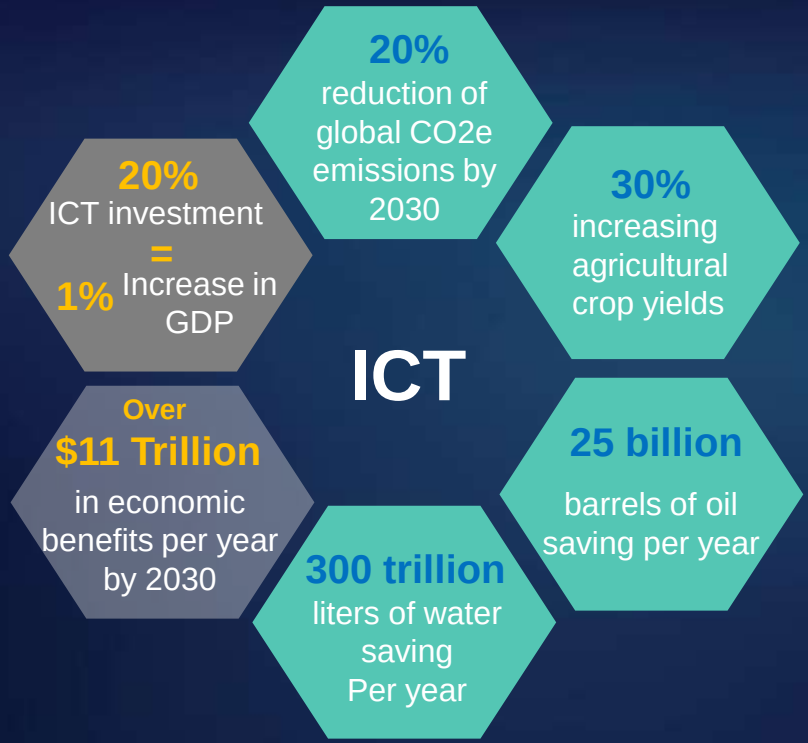
Digital Information Era

ICT is our new vitality, creating a decentralized world

- Shatters the limits of time and space
- Promotes global sharing
- Drives inter-disciplinary innovation

Distributed vitality creats a decentralized world, bringing more opportunities to the margins of society

ICT drives Digital Economy and Competitiveness

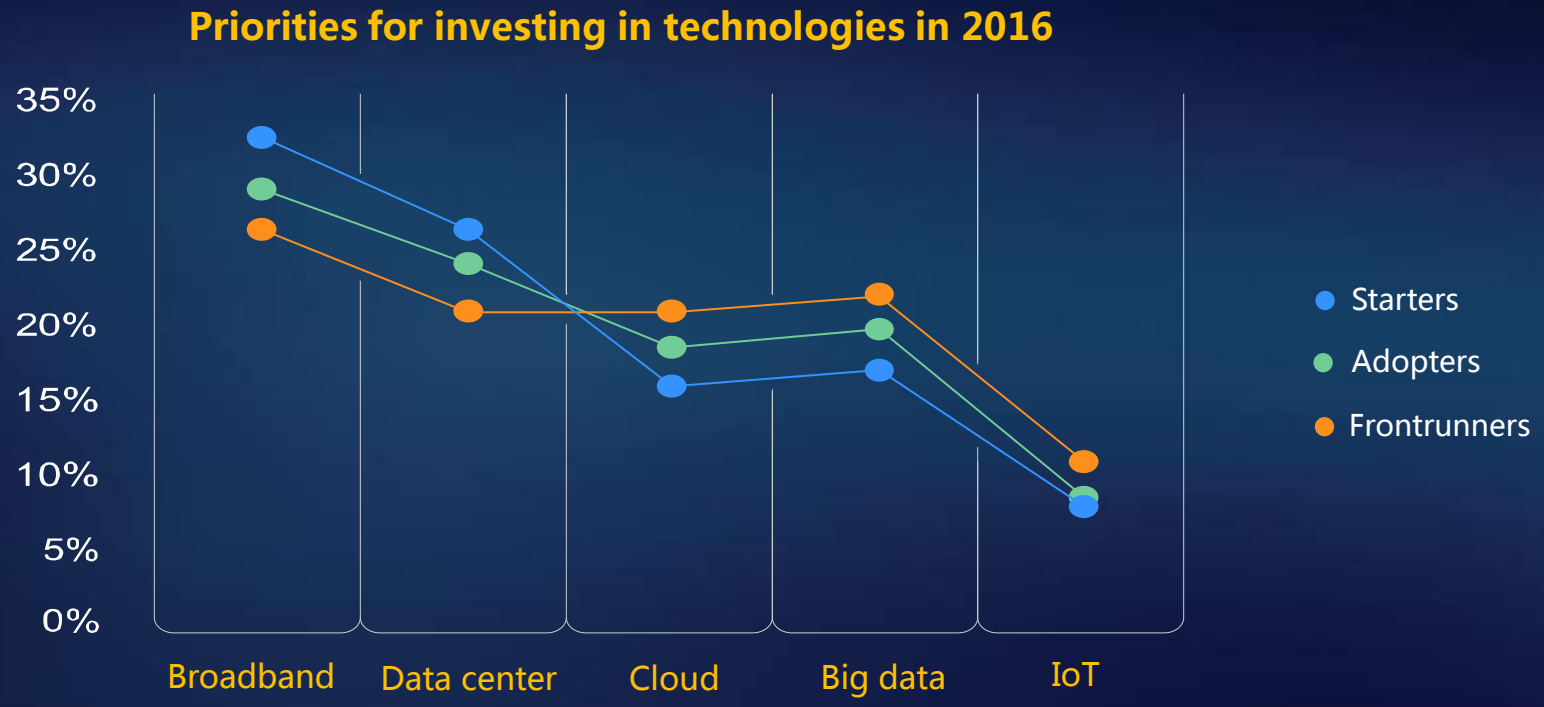


- **China**: Turnovers of e-commerce exceed CNY18 trillion, bypassing the credit card stage and directly entering the e-payment era, 12.7% of the total retail sales of consumer goods

- **Malaysia**: MyTeksi enables mobile taxi booking and goods delivery, mitigating traffic jams and enhancing efficiency

Source: WEF 2015, GCI 2016, GeSI

Broadband stands out among the five key tech enablers



Source: Huawei CGI 2016

Global Connectivity Index (GCI) quantifies countries' digital transformation

Compared with 2015, in 2016:

Global digital transformation is gaining momentum

5% Global connectivity

2 GCI Score (45.5)

Countries in the Asia Pacific get excellent GCI rankings

Malaysia 4

Philippines Indonesia New Zealand 2

- Increase ICT investment to improve 4G coverage and mobile broadband affordability
- Malaysia invested more in cloud services and DCs

Source: Huawei GCI 2016

Synergy of Three Factors Drives ICT Development

China: Going digital by increasing ICT demand

Going digital by increasing ICT demand

Launched Broadband China strategy. By 2020:

- High-speed broadband to reach 98% of rural villages
- Urban broadband access to hit 50 Mbps while rural access to reach 12 Mbps
- FTTH to deliver 1 Gbps speeds in its most modern cities

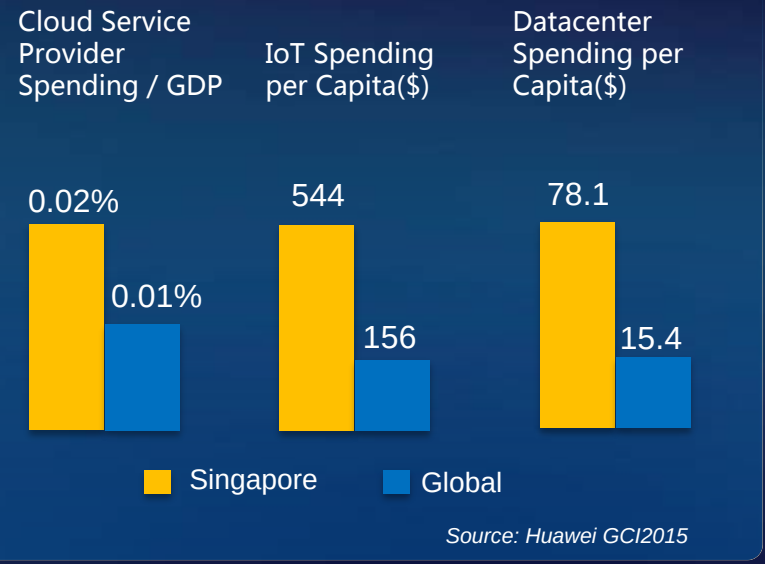
Next step: a global manufacturing center based on low carbon economy

Launched the "Made in China 2025" strategy

- Incentive policies and investments focusing on cloud services, Big Data analytics and IoT
- Encourage independent innovation of SMEs

Singapore: Promoting applications to drive supply and building a smart nation

- eGov: 400 government e-services (98%)
- Healthcare: 36 telehealth centers
- Education: 100% schools covered, 50 applications
- SMEs: **5,000+** SMEs use iSPRINT
- Finance: Nationwide NFC payment, 30,000+ payment points



Source: Huawei GCI2015

Government plays Important Role to promote National Broadband development

Government

Funding

- Malaysia: Government subsidy in PPP model
- Cameroon: Commercial loan

Regulations

- China: Department of Housing published mandatory regulations on FTTH access for new buildings
- US: "Dig Once", one trenching within a certain time

Collaboration

- Kenya: shared infrastructure, government tax subsidies
- Sweden: allowing electricity, gas and other utility companies to build fiber networks for rent

Rational Spectrum Planning is Important to MBB Development

Rational Planning

1. More Spectrum

For LTE spectrum

Carrier E(TOP1): 39.5MHz

Top Carrier in Singapore: 200MHz

2. Spectrum Concentration

For Capacity upgrade

Carrier E: spectrum fragmentation

LGU + : refarming, 4CC

3. Spectrum Efficiency

For high & low spectrum combination

Carrier A: Lack of high-frequency

Softbank: full coverage

Unleashing the potential of MBB Site Resources & Acquisition

New Base station can be anywhere!

Lamp Pole Along the Highway

Lamp pole Along the Street

The Power Pole near Residence

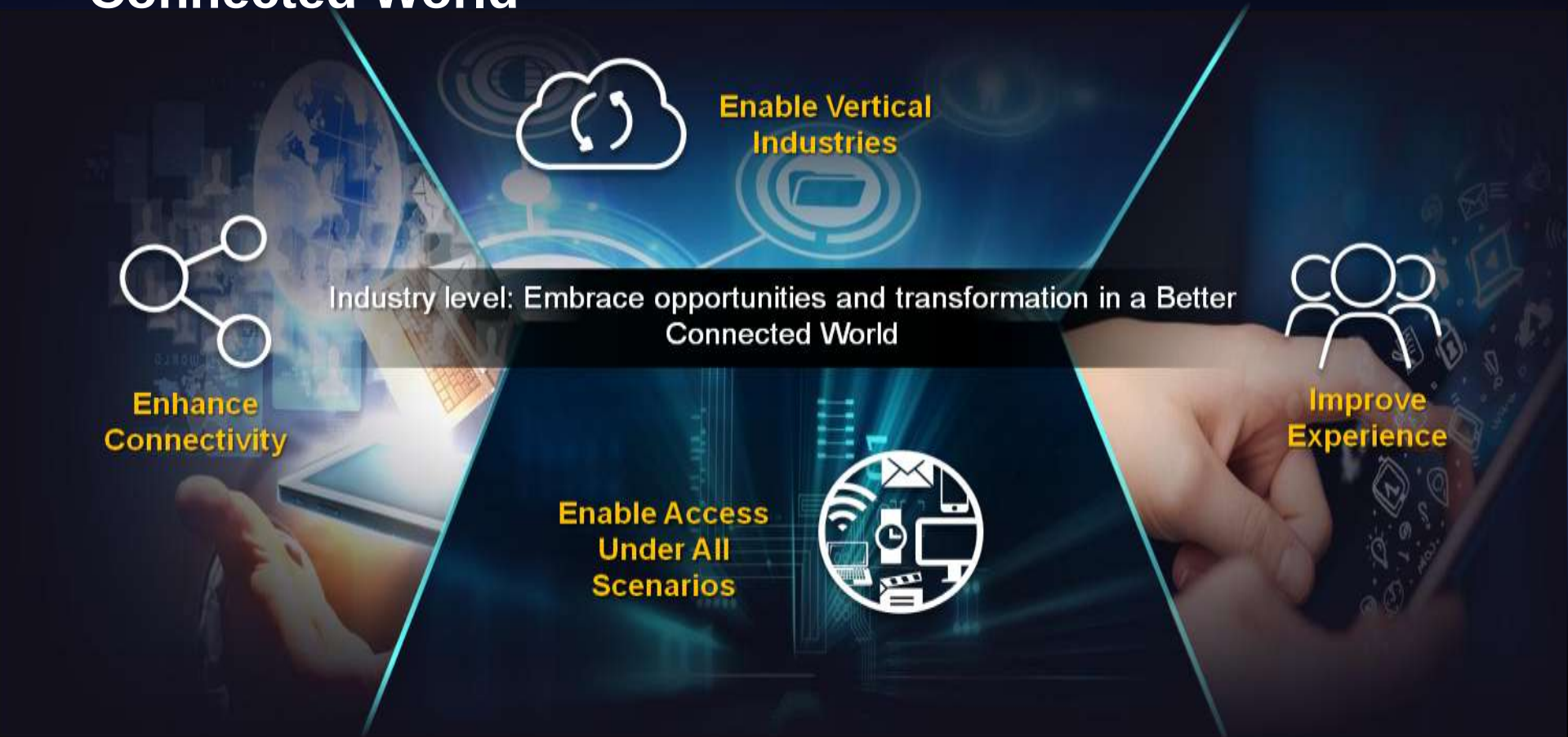
Shopping Mall and Store

Philippines:

Plenty of Site Resource remain Unused!

Site Types	Site Resource	Quantity	Owner
Outdoor	Bus Station	1,000 ?	Government / Local Council
	Billboard	10,000 ?	
	Lamp pole	60,000	
	Power pole	10,000	
Indoor	shopping Mall Hospital Airport Stadium	930+	Big Consortium/ Corporate

Huawei accelerating ICT transformation to build a Better Connected World



Innovation for A Better Tomorrow

$30Bn

R&D Investment Accum.

10

JICs & Labs

15,000

Talents Development

…through Openness and Collaboration


JOIN US IN
BUILDING A BETTER CONNECTED WORLD