



Caribbean-Style Smart City

— Huawei Smart City Solution

LEADING NEW ICT

1

Cities are Transforming

2

Smart City Initiative for Caribbean

3

Huawei, Best Partner for Smart City

New Challenges to Cities



City governance

Terrorist attacks, natural disasters, passive emergency command, and difficult cross-agency collaboration



People's livelihood

Regional education unbalance and poor healthcare conditions



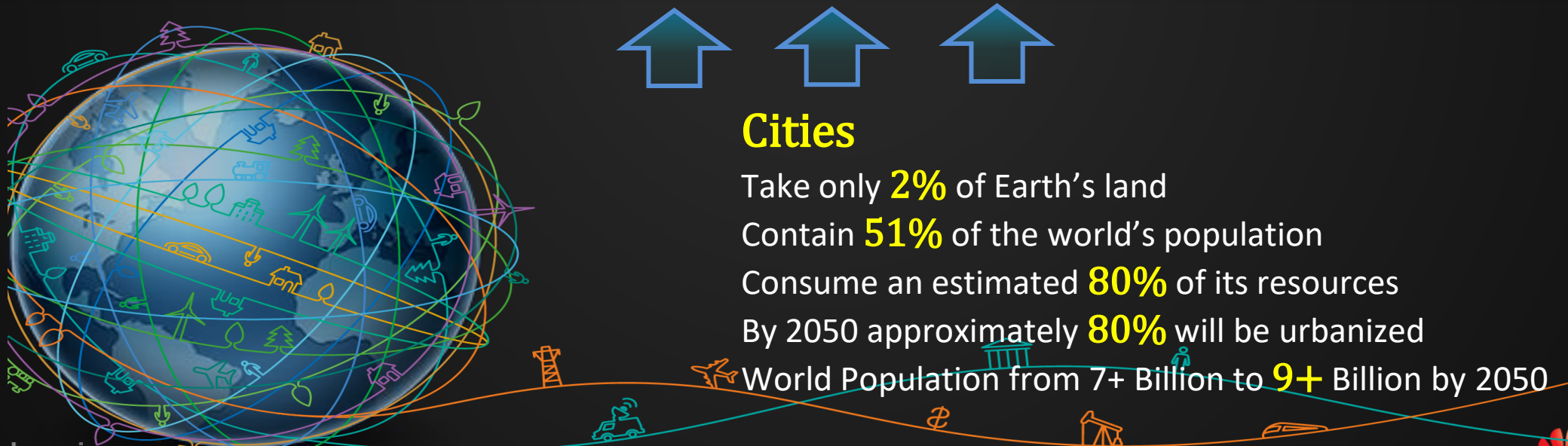
Industry development

Insufficient decision-making support and difficulties in enterprise innovation, upgrading, and transformation



Environmental ecology

Insufficient pollution monitoring and poor green energy development



Cities

Take only **2%** of Earth's land
 Contain **51%** of the world's population
 Consume an estimated **80%** of its resources
 By 2050 approximately **80%** will be urbanized
 World Population from 7+ Billion to **9+** Billion by 2050

Smart City, The Best Initiative to Resolve New Challenges

Efficient Municipal Governance



- Social security
- Emergency response
- Utilities management
- Urban planning
- ...

High-quality Public Services



- Public transportation
- Education
- Healthcare
- Government services
- ...

Sustainable Economic Development



- Environmental ecology
- Industrial parks
- Tourism
- Intelligent manufacturing
- ...



New ICT is the Key to become a Smarter City

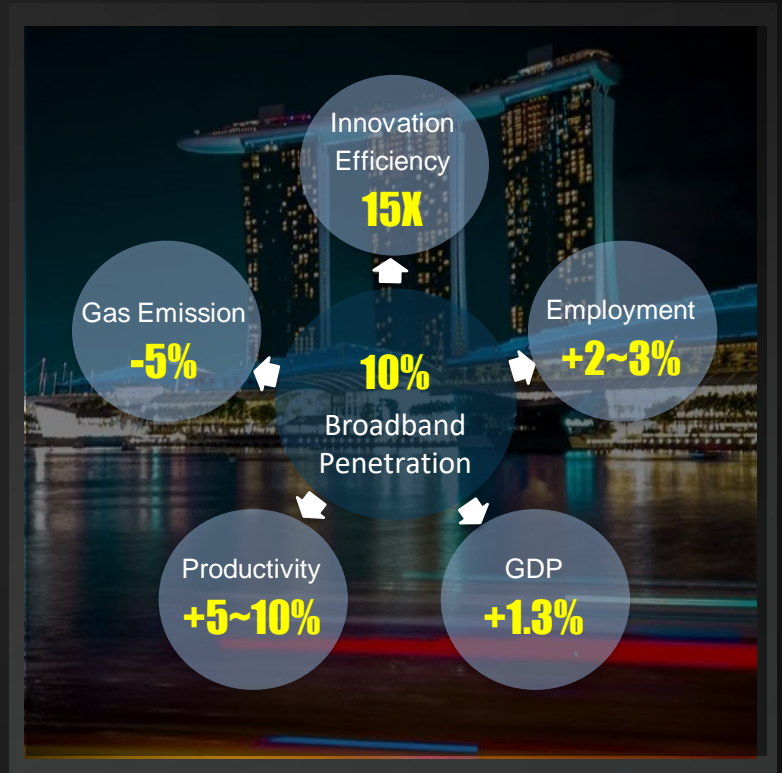
New ICT is Becoming **Core Part of Production System**

New ICT is Building a **Better Connected World**

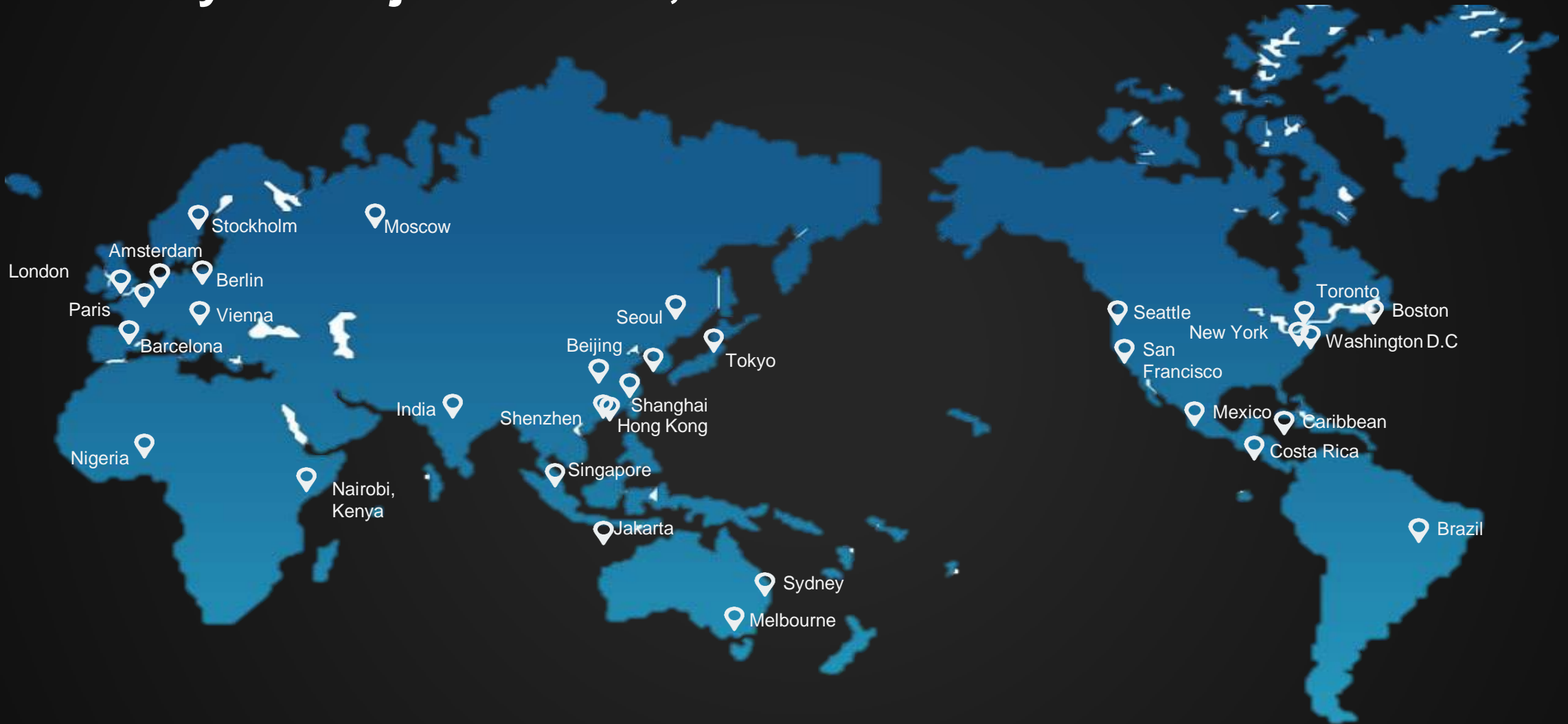
New ICT is **Bringing Innovation** for Smart City

<p>Germany Industry 4.0</p> 	<p>USA Industrial Internet</p> 
<p>China MADE IN CHINA 2025</p> 	<p>Japan Artificial Intelligence</p> 

<p>BIG DATA</p> 	<p>CLOUD COMPUTING</p> 
<p>5G</p> 	<p>IOT</p> 
<p>SDN</p> 	



Smart City is not just a trend, it's a Race



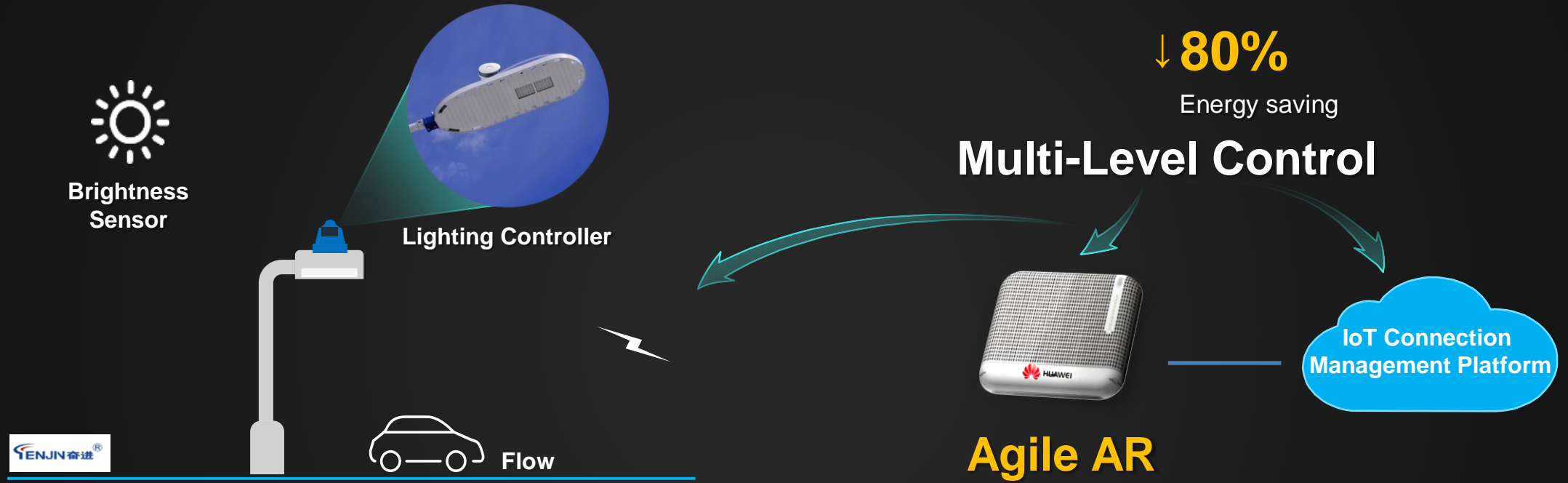
The world is NOT waiting. **Investment** and **talents** will be attracted to the front runner.

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Economic Value of a Smarter City



- Set time: 18:00 ON - 06:00 OFF
- Brightness: ■ ON - ■ OFF

- First week: 18:15 ON - 06:15 OFF
- Next week: 18:20 ON - 06:20 OFF
- Traffic
- Hazy days

Potential Economic value as a Result of Street lamp
 Electricity Savings -> Additional Revenue -> Better Retail Business Create more jobs ->
 Safe City with Less Crime -> Increase in Property Tax -> Increase in GDP & Investment

Other Value because of a Smarter City

Smart Living in the Dubai (Desert Area)

- Streetlight maintenance costs **42%** and energy costs **35%**
- Sewage water treatment operational costs **70%**
- Smart waste bins operating costs **65%**



Power IoT, Lighting Up the Life of Nigerian People

- Reduced power line loss by **31%**
- Bill collection time period: from 90 days to **1 day**
- Reduced labor costs by **90%**

Different Regions, Characteristic Smart City. Where is Caribbean's way to Smart City?

Caribbean has the best locations, culture and resources.....



Scenery



Shopping



Festival



Food

Tourism Industry Has Great Impact To Regional Economy

TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO GDP		2016 % share
1	Caribbean	14.9
2	Oceania	12.2
3	South East Asia	11.8
4	European Union	10.2
5	North Africa	9.7
6	Middle East	9.1
7	South Asia	8.9
8	Latin America	8.8
9	Other Europe	8.4
10	North East Asia	8.4
11	North America	8.4
12	Sub Saharan Africa	7.1
13	Central Asia	5.2

TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO EMPLOYMENT		2016 % share
1	Caribbean	13.4
2	Oceania	13.2
3	European Union	11.6
4	North America	11.0
5	South East Asia	9.7
6	North Africa	9.0
7	North East Asia	8.7
8	South Asia	8.3
9	Latin America	7.8
10	Middle East	7.6
11	Other Europe	6.6
12	Sub Saharan Africa	6.0
13	Central Asia	5.1

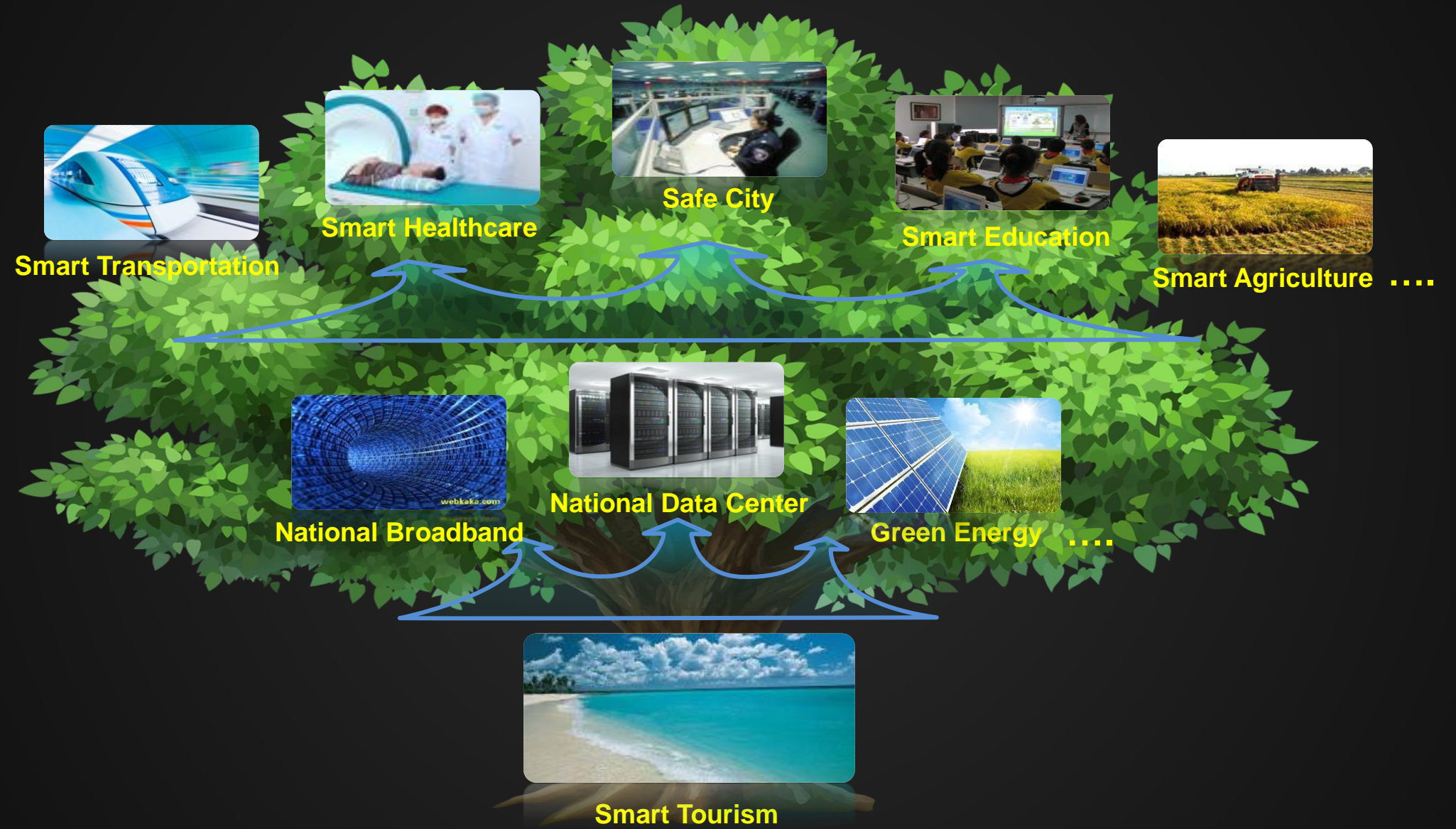
Relative Contribution Rank No.1 :
Tourism industry is extremely important for most Caribbean countries.

TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO GDP		2016 (US\$bn)
1	North America	1771.3
2	European Union	1682.9
3	North East Asia	1522.6
4	Latin America	328.2
5	South East Asia	301.1
6	Other Europe	278.5
7	South Asia	252.9
8	Middle East	227.1
9	Oceania	182.7
10	Sub Saharan Africa	108.0
11	North Africa	57.7
12	Caribbean	56.4
13	Central Asia	10.8

TRAVEL & TOURISM'S TOTAL CONTRIBUTION TO EMPLOYMENT		2016 '000 jobs
1	North East Asia	77048.4
2	South Asia	47998.2
3	South East Asia	30154.9
4	European Union	26585.0
5	North America	24239.9
6	Latin America	16108.3
7	Sub Saharan Africa	15770.6
8	Other Europe	9445.1
9	Middle East	5730.7
10	North Africa	4933.4
11	Oceania	2470.1
12	Caribbean	2319.4
13	Central Asia	1546.7

Absolute Contribution Left Behind :
Tourism in Caribbean still have great room to grow.

Smart Tourism : Driving Forces For Caribbean-Style Smart City



Dunhuang: Making Tourism Smarter and better.....



Project Background

- The dramatic tourist increase in the peak tourist season poses huge challenges on cultural heritage protection and tourist safety. In the off season, there are few tourists, resulting in tourism resource wastes.
- The large population fluctuation also poses severe challenges on city management and public services, including transportation, education, healthcare, and catering industries.

Huawei Solution

- Smart Dunhuang: Built a city e-Government cloud, helping construct a one-stop administrative platform.
- Safe Dunhuang: Constructed an integrated and open cloud platform, supporting multiple surveillance vendors.
- Wireless Dunhuang: Constructed nearly 10,000 wireless APs, implementing wireless smart tourism.
- Information Dunhuang: Developed high-reliability GPON solution, providing large-capacity pipes.

Customer Benefits

- Enhances service quality in the peak season and increases the tourists in the off season.
- Enabled rapid decision making and response based on the city management platform.
- In 2015, the number of tourists in Dunhuang reached 6.6 million, with annual growth rate of 32%. Dunhuang won the China's leading Smart City award of IDC.

Safe City: To Serve and To Protect



Project Background

- Rising terrorist attacks: Frequent destructions by Somali Youth Party, serious casualties in the Westgate shopping mall explosion
- Frequent thefts & robberies: 1/3 residents were robbed or stolen. Vehicle thefts frequently occurred.
- Serious economy declining: reduced foreign investment and sharply decreased tourism revenue

Huawei Solution

- Constructed data centers and multiple systems such as video surveillance, eLTE communications, CAD, and VCN.
- Covered 1,800 cameras and 7,600 eLTE terminals in the capital, and served 9000+ police officers from 195 police departments.
- Provided multiple functions such as panoramic surveillance, converged command, intelligent analysis, and broadband trunking.

Customer Benefits

- Significantly improves the public safety situation and reduces the overall crime rate by 40%.
- Ensures zero casualty in case of major events.
- Increases tourists by 14% and significantly improves the economic benefits.

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Cities are Transforming

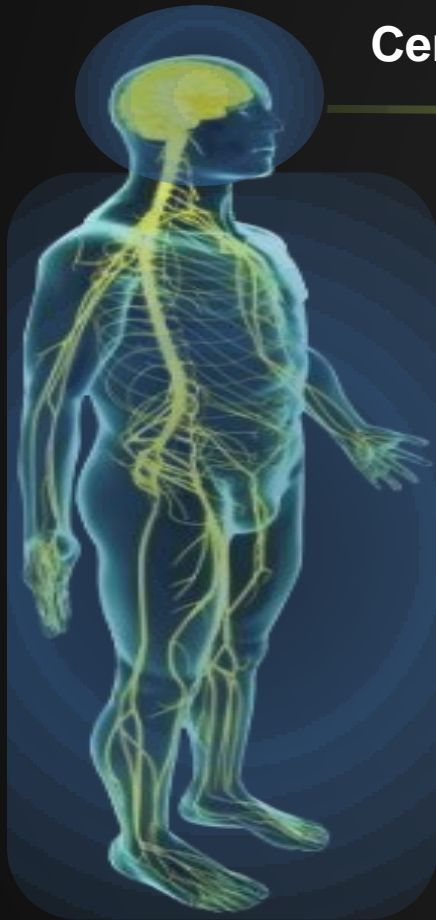
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Builder of Smart City's Nerve System



Central Nervous System – Brain

Peripheral Nervous System

City operating center



Cloud data center



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City IoT

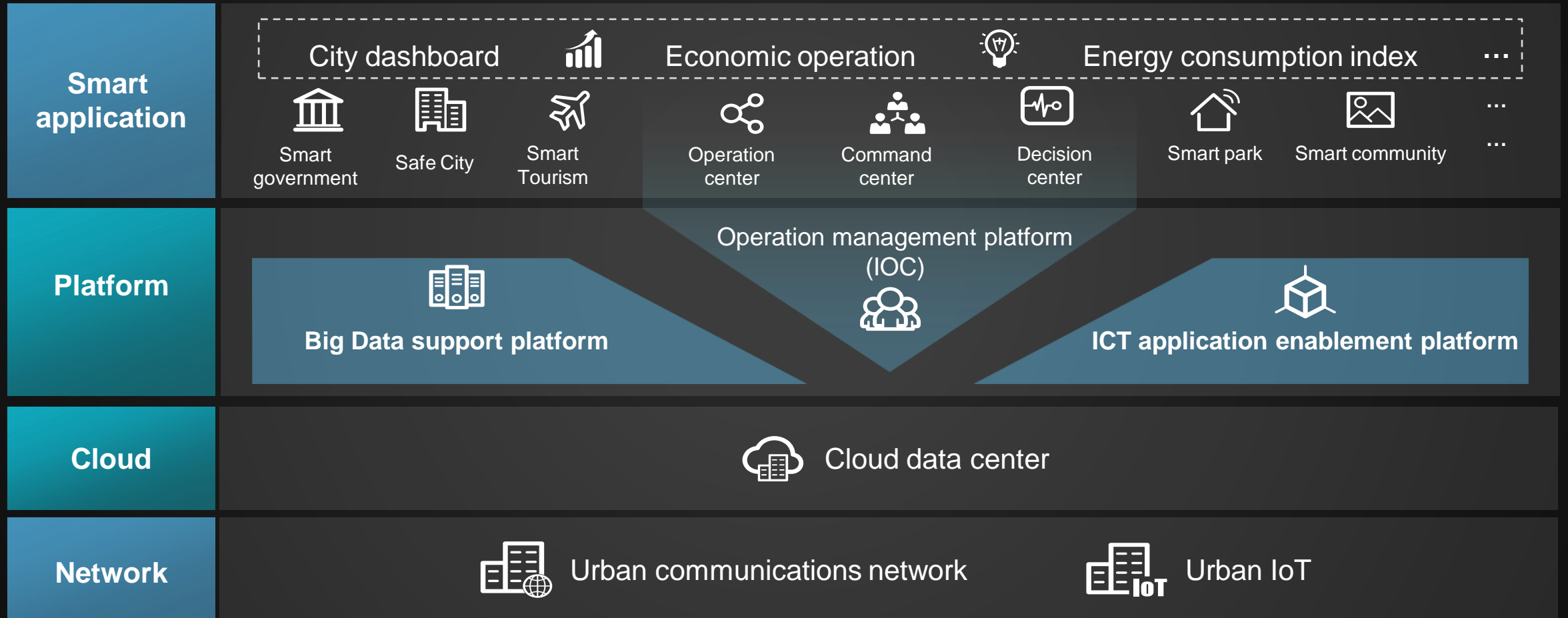


City communications network



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Huawei Smart City Solution Framework



The Best Smart City Ecosystem

Huawei Cooperate with Partners to Build a Sustainable Ecosystem



8,000+ Channel Partners

350+ Solution Partners

2,100+ Certified Service Partners

Global Footprint of Huawei Smart Cities



Huawei smart city solution has served **400M** People in **100+** cities, **30+** countries in the world

Huawei Diversified ICT Practice Worldwide



Nigeria e-Government



Malaysia NBN



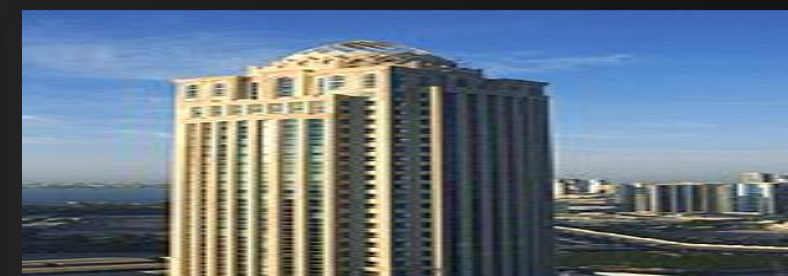
Russia e-Government



Smart Maldives



Ghana e-Government



Qatar NBN



Singapore NBN



Britain NBN



Uzbekistan e-Education

The background is black with a subtle grid pattern. On the right side, there are several thin, curved lines in orange, yellow, red, and cyan that sweep across the page. The text 'THANK YOU' is centered on the right side in a large, white, bold, sans-serif font.

THANK YOU

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