

The Road to Digital Transformation

Building the Future

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Huawei at a Glance



180,000
Employees

80,000
R&D employees



170+
Countries



14
R&D
institutes/labs/c
enters



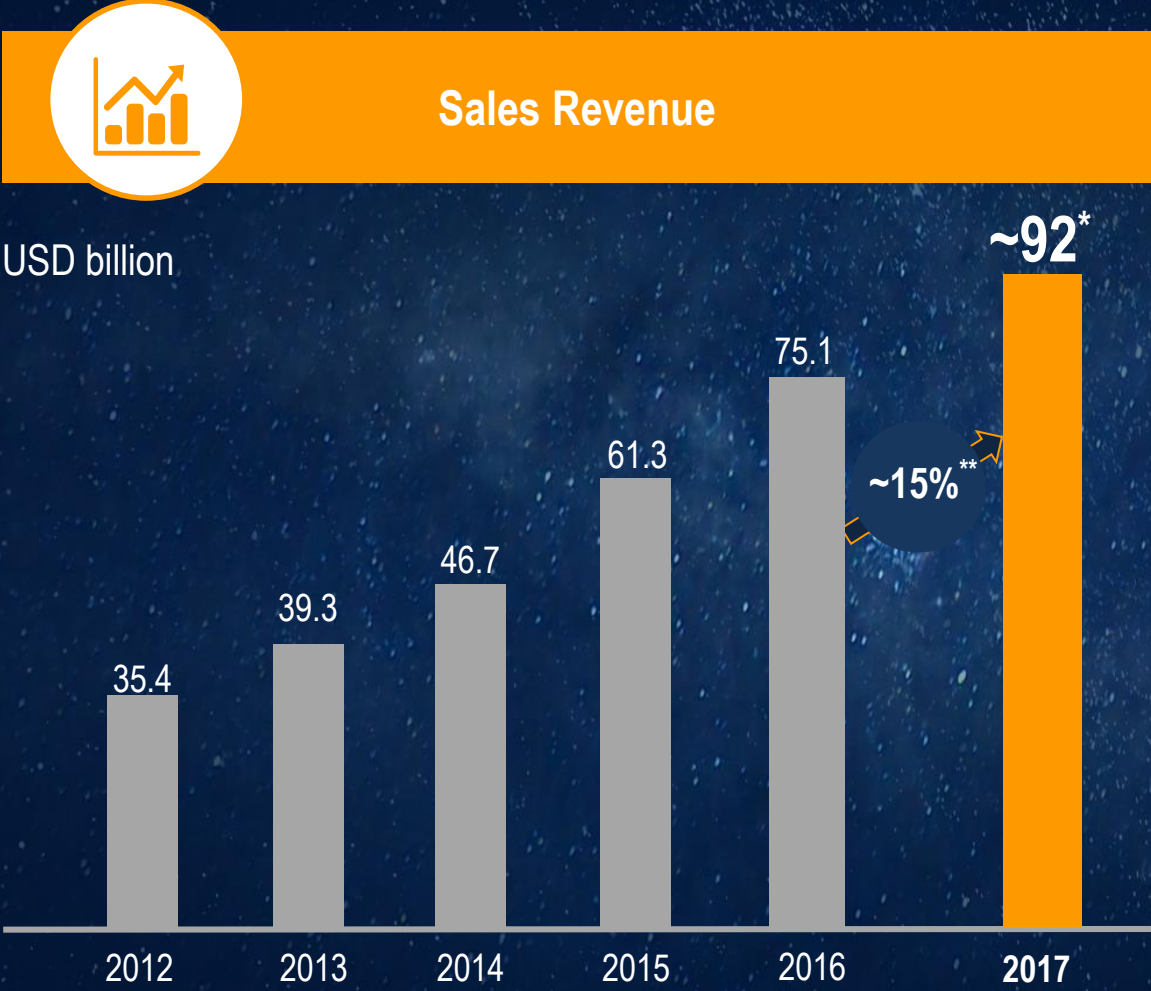
No. 70 in
Interbrand's Top 100
Best Global Brands



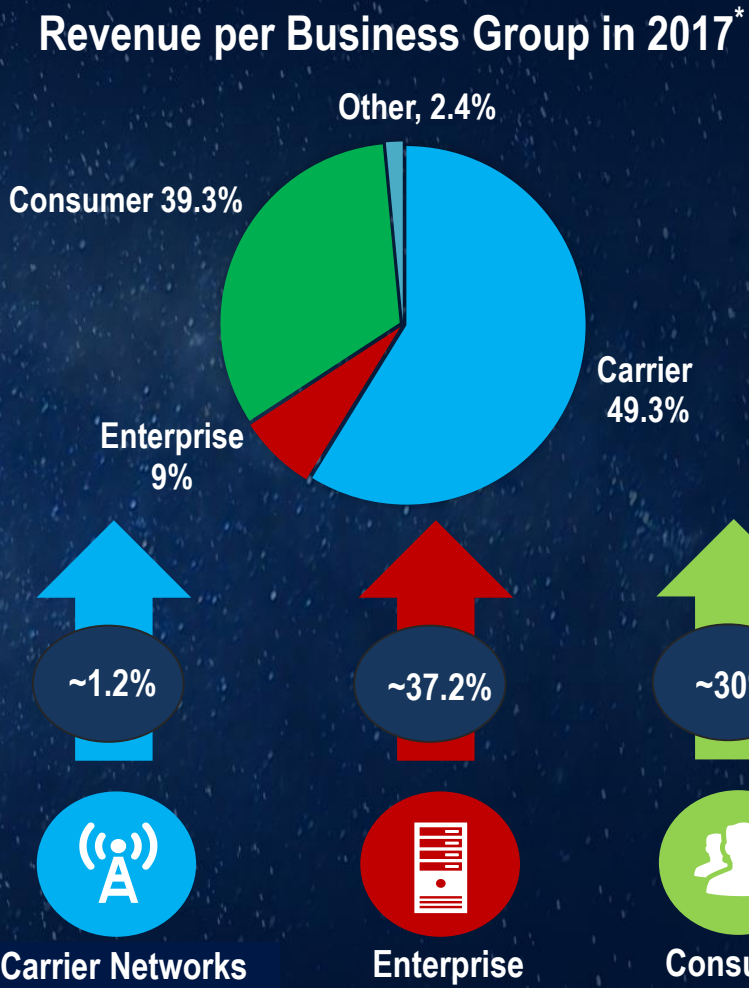
No. 23 in the
Fortune Global 500



Sustainable Business Growth

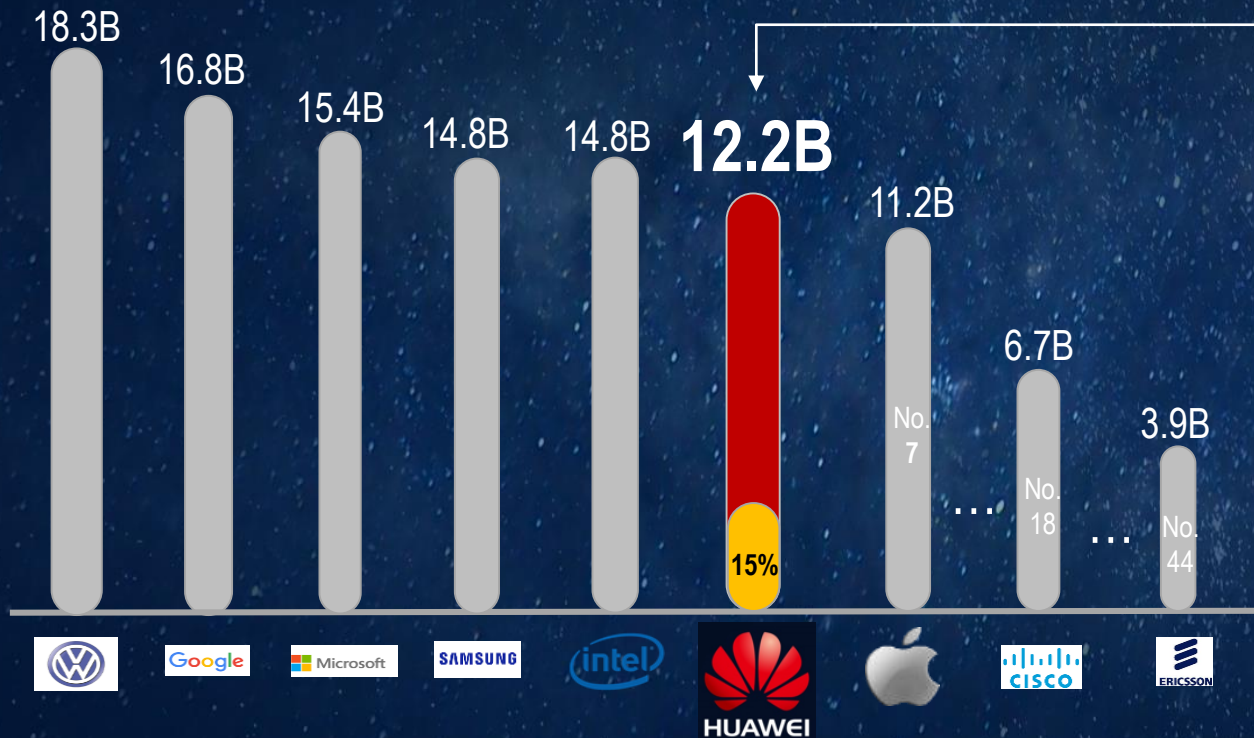


Note: financial data audited by KPMG
*: 2017 data not audited yet, **: % by RMB



Continuous Investment in R&D

TOP 6 @ The 2017 Industrial R&D Investment (\$)



Source: European Commission

Continuous Investment in R&D

- 12~15% of annual revenue as R&D investment
- US\$48 billion+ invested in R&D from 2007 to 2016

~15% of R&D Investment for pre-research in New Directions:

- 5G
- Cloud, AI, IoT...
- Chipset
- Next Generation DC
- All-optical Networks...
- New Materials, etc...
- ...

Vision and Mission



**All Things
Sensing**



**All Things
Connected**



**All Things
Intelligent**

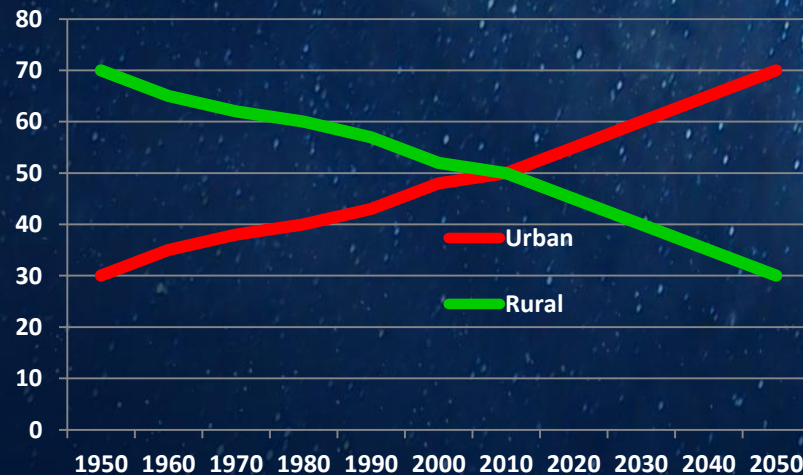
Bring digital to every person, home and organization for a fully connected, intelligent world

Why Do We Need Smart Technologies?

Rapid population growth, urbanization acceleration

- Global population growth will increase from 7B in 2015 to **9B in 2050**
- In 2025 the urban population will account for **57%** (Frost & Sullivan)

Increase in Urbanization



Source: United Nations

Major issues...



Information silos, **difficult information sharing**



Low resource usage, energy consumption



Slow service response



Security challenges



High maintenance costs

SMART CITIES need to solve real urban issues



54% of the global population - to become 66% by 2050



75% of an average country's GDP



75% of global primary energy consumption



50% to 60% of global greenhouse gas emissions



In the U.S., city commuters spend **7 billion hours** in traffic jams that cost the whole economy an estimated **\$160 billion**



In the U.K. the rate of violent crime is approx. **12 acts per 1000** people in urban areas and below **7 per 1000** people in rural areas



23% of the world's population lives in cities within **100 km** distance of the coast, thus are exposed to saltwater intrusion and risk of flooding

Agencies & Enterprises Integrating Data Applications & Business Processes



Utility



Police



Healthcare



Traffic



Education



Enterprises



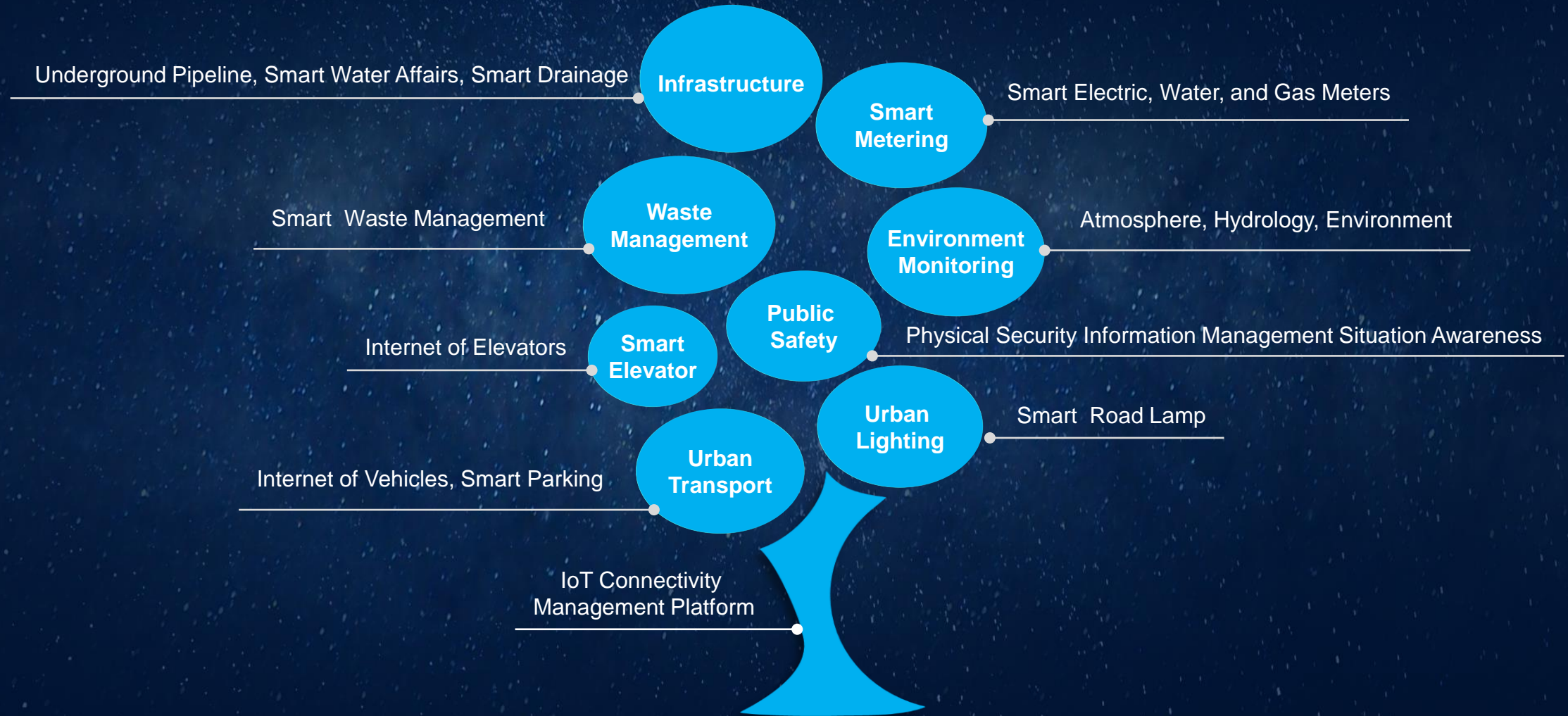
Transport

4 Smart City Layers

Smart City
Management



IoT - the Foundation of Smart World



Global IoT deployments

Worldwide Local Government IoT Adoption and Investment Plans

Plan to launch an IoT solution
in the next 12-24 months
29%

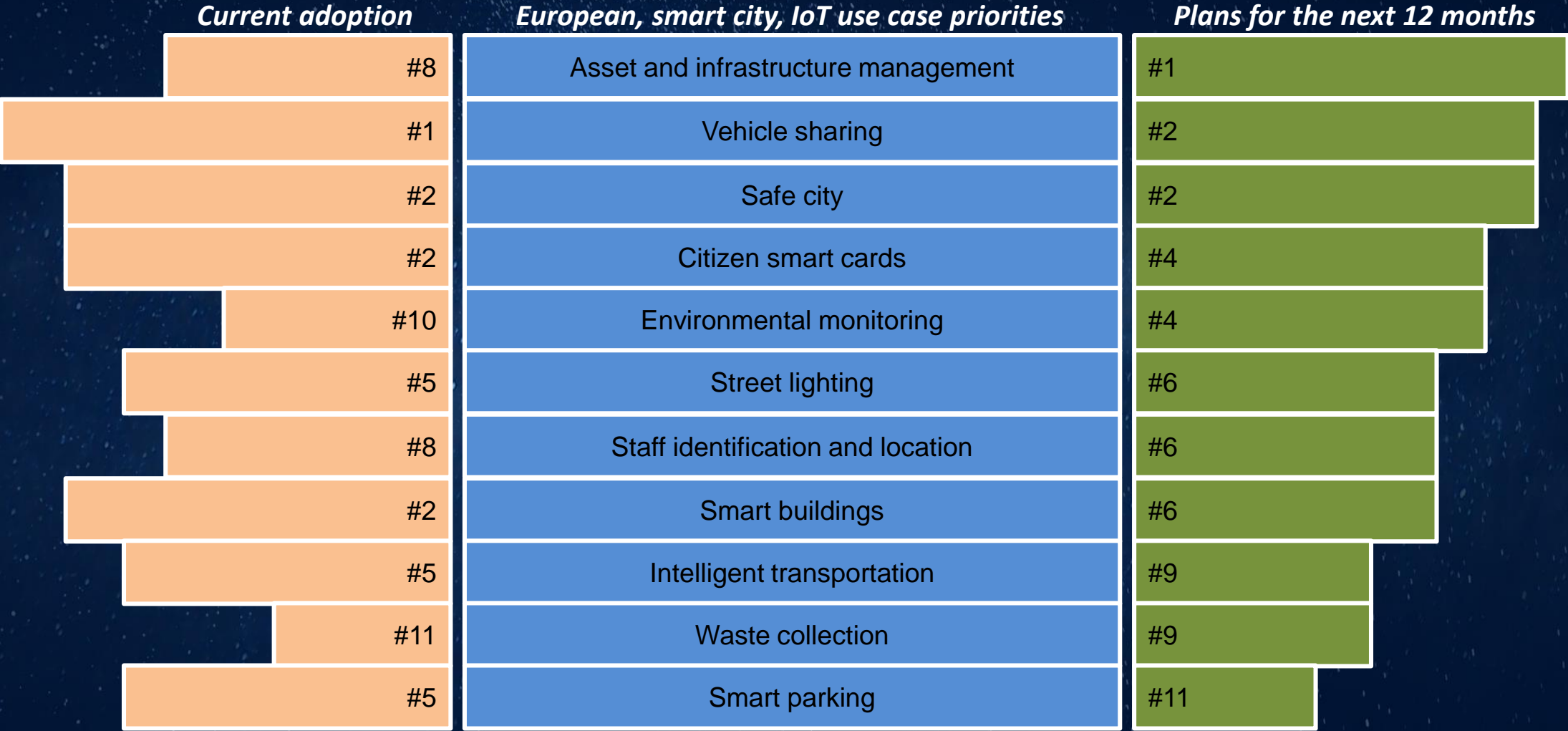
Plan to launch an IoT solution
in the next 12 months
39%



Already deployed IoT solution,
no additional plans
11%

Already deployed, plans to extend
in the next 24 months
21%

Public Safety and Asset Management are top priorities



Smart and Digital Boost Economy of over \$3 trillions

Market Value by Segment, Global, 2025

Smart Healthcare

Market Value: \$ 348.5 B
CAGR: 8.8% (2012-2025)

Smart Transportation

Market Value: \$ 351.13 B
CAGR: 19.6% (2012-2025)

Smart Infrastructure

Market Value: \$ 381.53 B
CAGR: 12.0% (2012-2025)

Smart Building

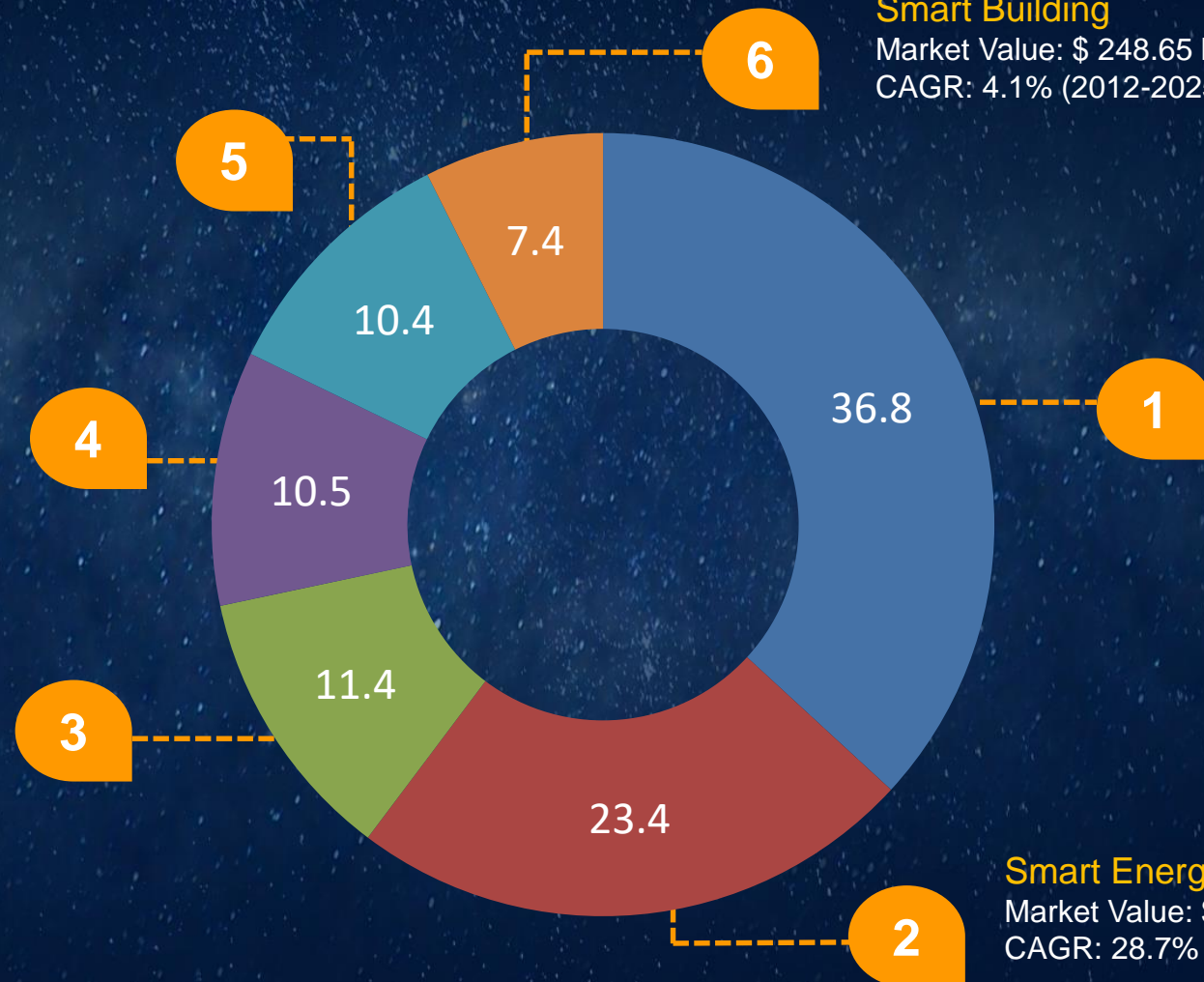
Market Value: \$ 248.65 B
CAGR: 4.1% (2012-2025)

Smart Governance and Smart Security

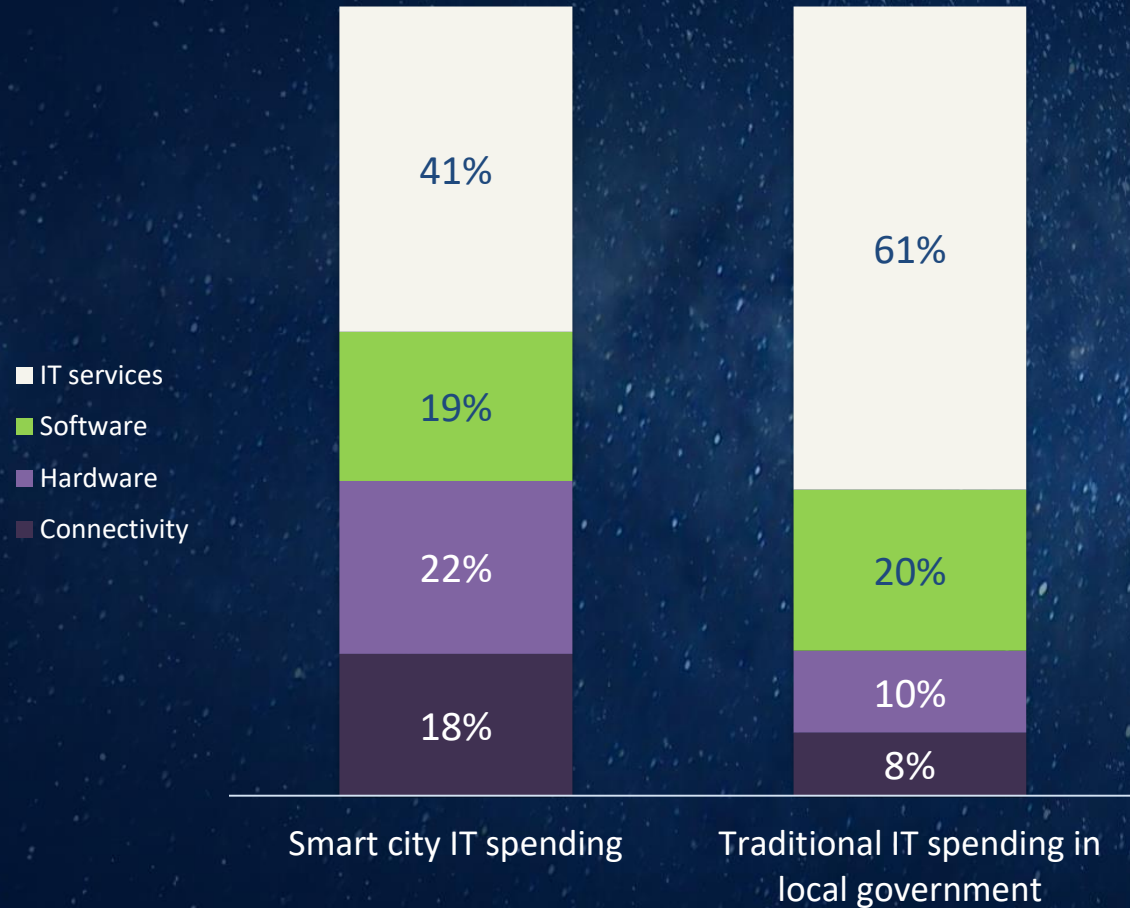
Market Value: \$ 1,230.26 B
CAGR: 11.6% (2012-2025)

Smart Energy

Market Value: \$ 781.66 B
CAGR: 28.7% (2012-2025)



Smart Cities should be deploying infrastructure



- Establish a **digital transformation unit** that will define key policies
- Design a **strategy** that **aligns** with long-term goals
- Actively engage with the **ecosystem**
- Develop integration platforms **incrementally**
- Make **data** available across departments and with the ecosystem through **standard APIs**

Results are promising...

Networked LED Street lighting



50% operation and
energy Costs Savings

Connected Trash Bins



40-80%
Labor cost reductions

35%
Operation Efficiency

Smart Parking



Traffic speed **+20%**

-85% Manpower

-90% Illegal Parking

Smart Buildings



Energy Savings
payback
in less than
6 months

Smart Water



-40% clean water loss
due to leaks, pipe
bursts



Quality of Life is the Next Connectivity Era



QoS → QoE → QoL



Join us in building a better connected world

