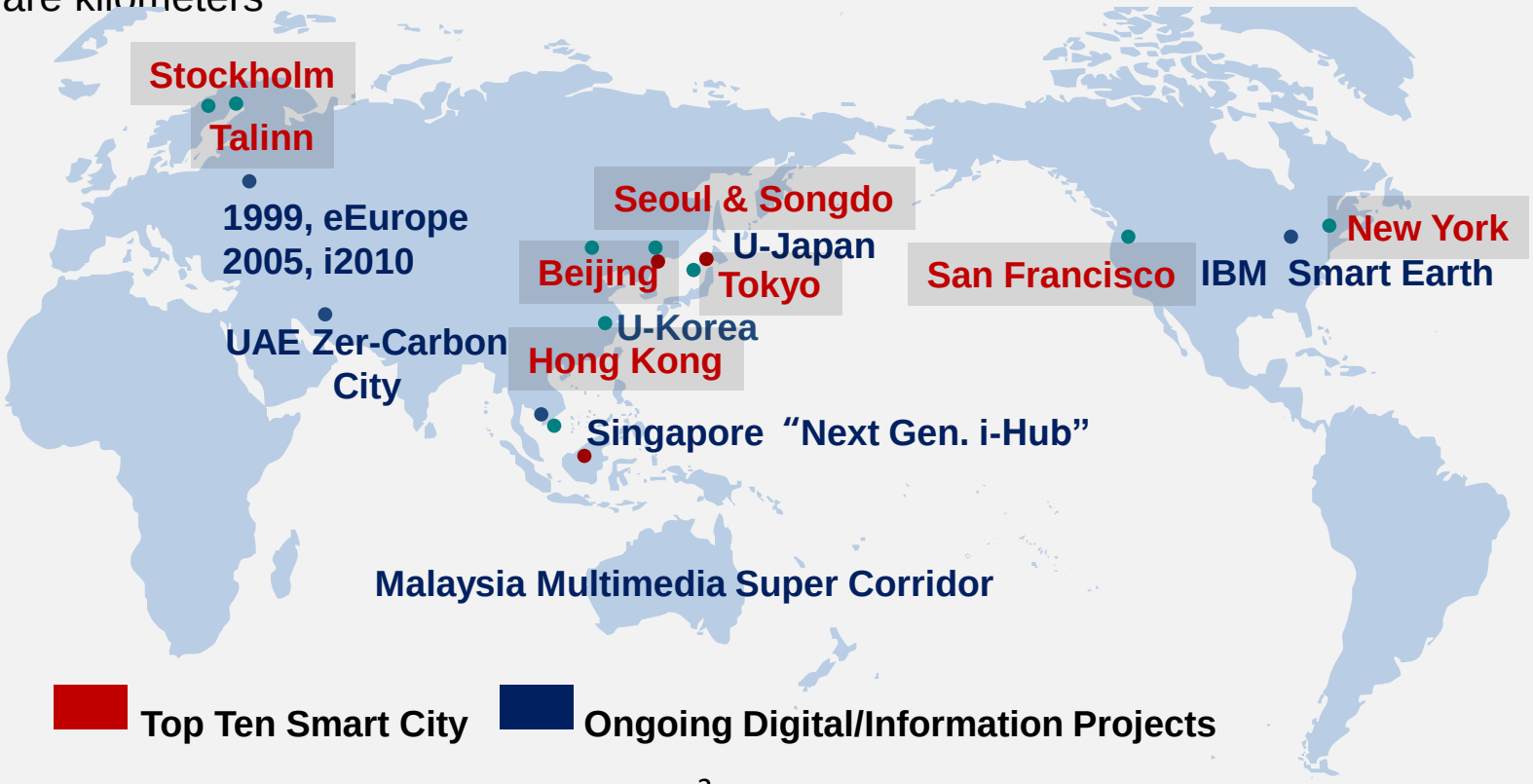
Smart City, Connect the Future

China Mobile

杜兰

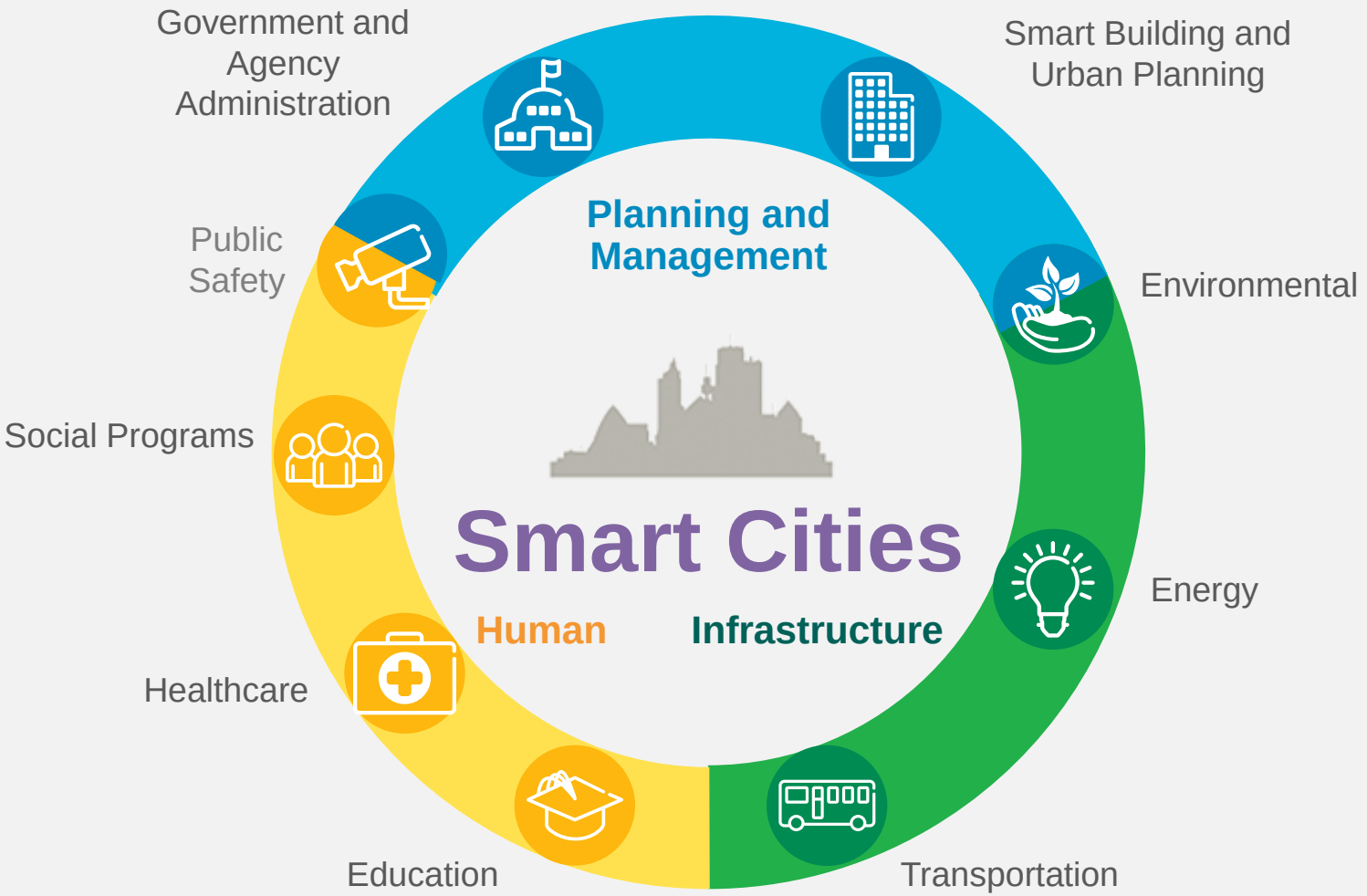
Global Overview:
Smart Cities are Growing at Tremendous Speed

- Back in 2002, Philadelphia became the first one came up with the concept of “Smart City”, and brought up the “Wireless Philadelphia” Project in July, 2004. It was the first city to start developing a smart city
- By 2012, there are more than 1000 planning smart cities globally. ABI predicts that there will be more than 3500 smart cities by the end of 2015, covering more than one million square kilometers



Business Scope :
Covering Daily Lives, Governance, Infrastructure

- **Facilitate green and harmonious business, create pleasant lives and form an efficient government**



Strategic Plan :
Connects Citizen and their Government

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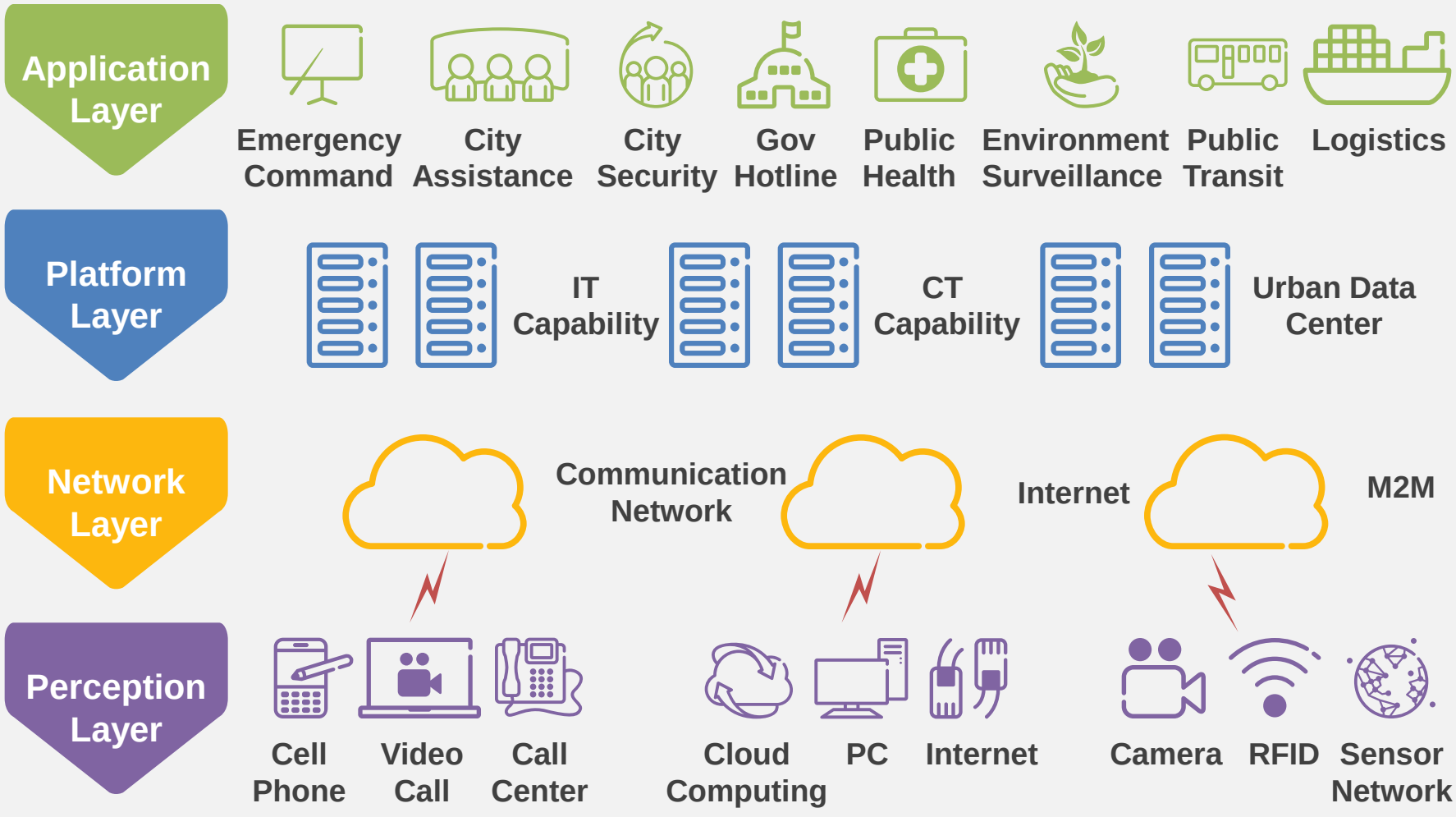
- Accumulate UGC, enhance user experience , and construct a “Wireless Information Service” ecosystem



Building a Sensing System, Supports Smart City

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4 Application Layer (Actions)

- Smart Public Transit
- Emergency Command
- E-health

❑ Social services and management practices
❑ Re-invent living and working style
❑ Intelligentize current applications

3 Platform Layer (Computing)

- Information Hub
- Application Hub

❑ Centralized operation and service platform
❑ Universal Authentication, portals and analytics
❑ Ability sharing and authentication control

2 Network Layer (Neural Network)

- Internet of Things
- Internet
- Communication Network

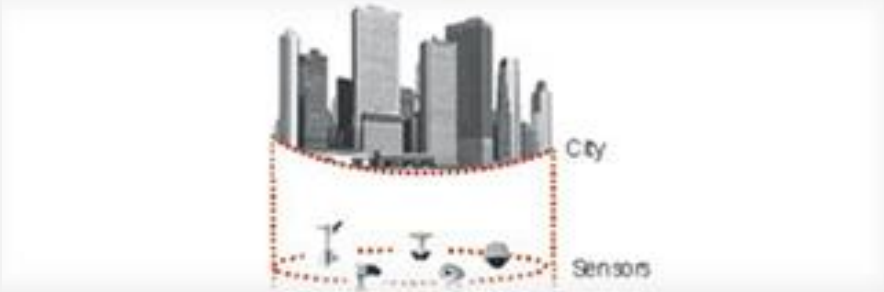
❑ Nerve center：IDC
❑ Neural Network：Communication Network + Internet + Internet of Things
❑ Neuron：M2M Terminal/Gateway

1 Perception Layer (Nerve)

- Listening
- Hearing
- Touch
- Smell

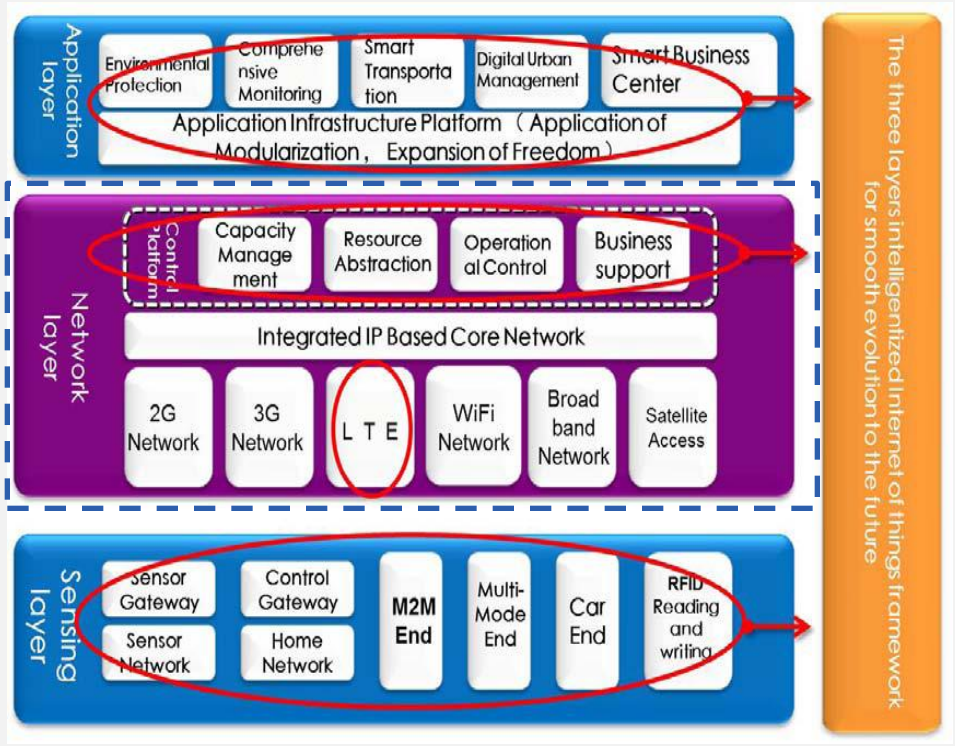
❑ Use the Internet of Things to sense the society
❑ Multi-channel and dynamic data collecting
❑ Collect data from daily lives and multiple industries

Sensing the City: Capture Information Timely



- Sense, fetch and process all the information in the city collected by IP Cam, RFID, Sensor Network, etc.
- Introduce big data technology to bring intelligence to information. Collect, store, integrate and excavate the value of data. Big data is the key to turn a digital city into a smart city

Building Nerve：Sensitive Perception & High Speed Network

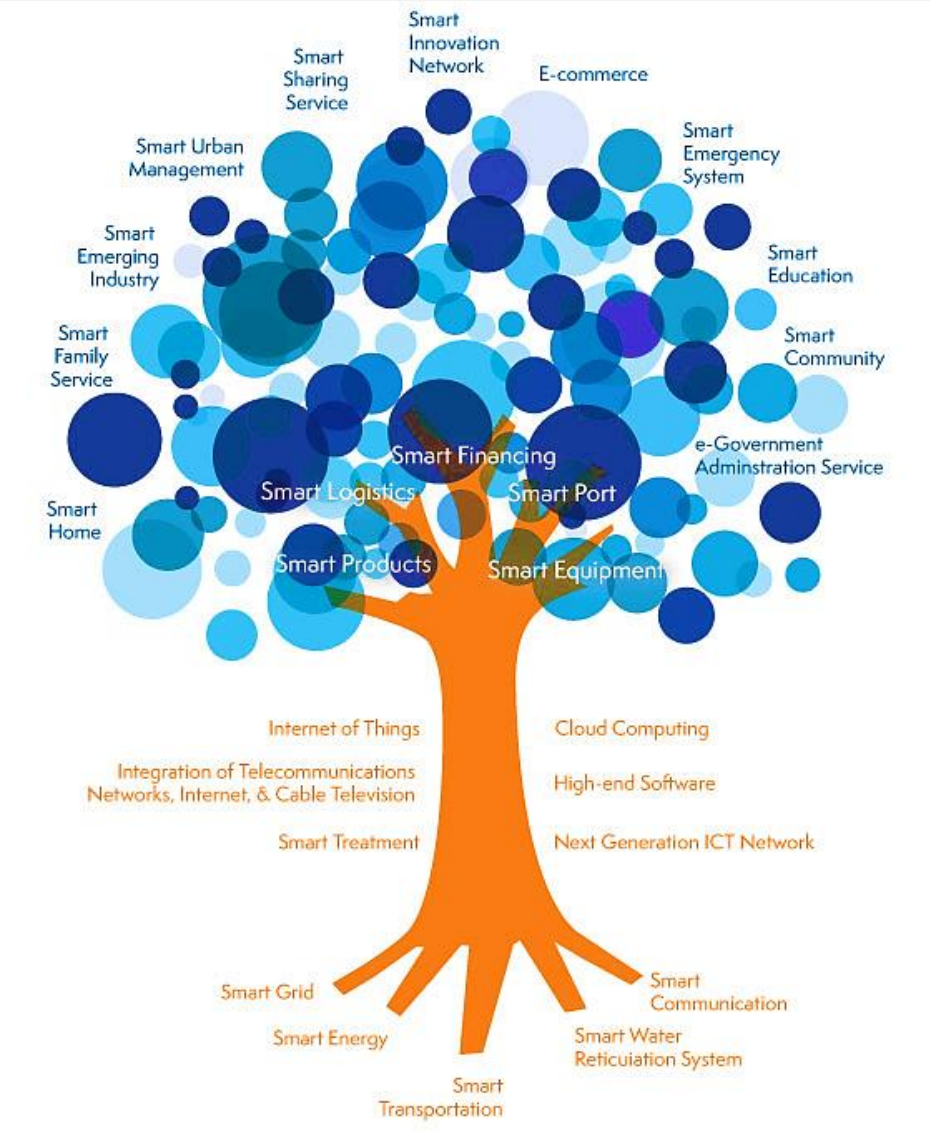


Efficient Network

Smart & Convenient

- Communication Network, Internet and M2M network constitute the neural network of smart cities
- WLAN (802.11) is the primary network access, HSPA/ LTE will dominate
- New technology like HSPA/LTE can help transferring data to the urban computing center to process

Building the Brain：Application Integration and Information Aggregation Platform



- **Industrial Development：**

Stimulate industrial development and overall urban development by opening abilities

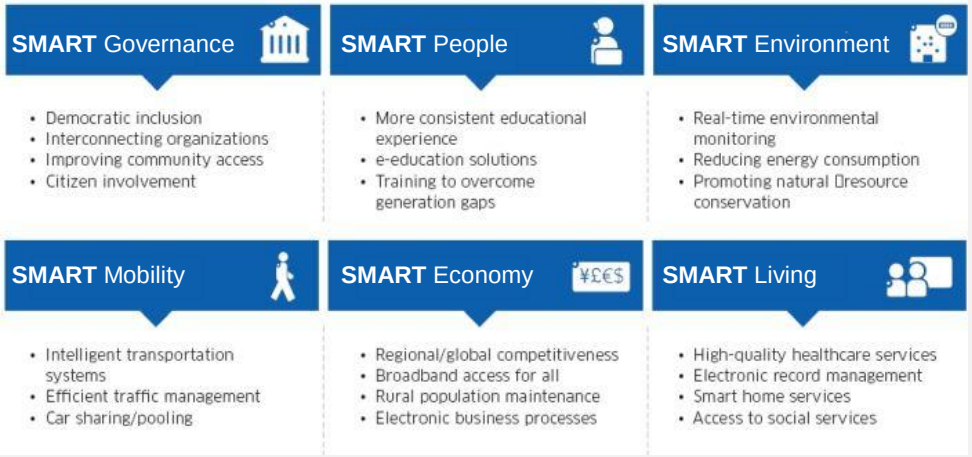
- **Application Integration：**

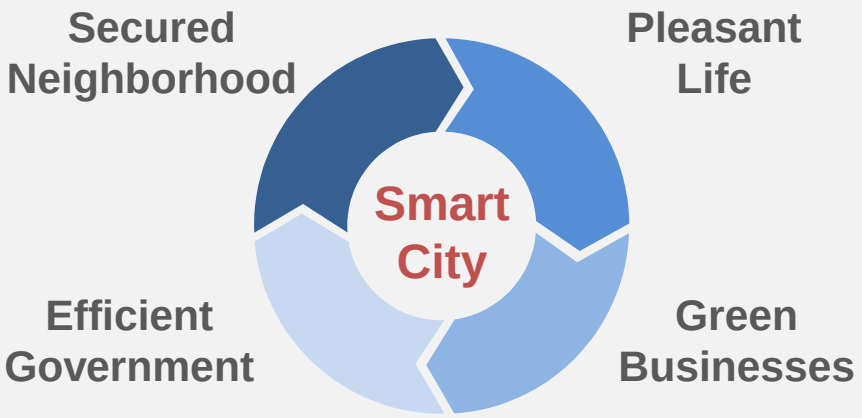
Gather Applications, encourage application coordination and integrate applications

- **Information Aggregation：**

Unify network access and data handling, boost information sharing

Abundant Services：Safe, Convenient and Thoughtful Applications





- **One-Stop Local Information Service Platform**

Provide local government info, public services info, local service inquiry. Online utility payment, online reservation, etc.

- **Service Platform for Urban Management and Industrial Application**

Implement the M2M technology to gather info from industries, and provide management assistance

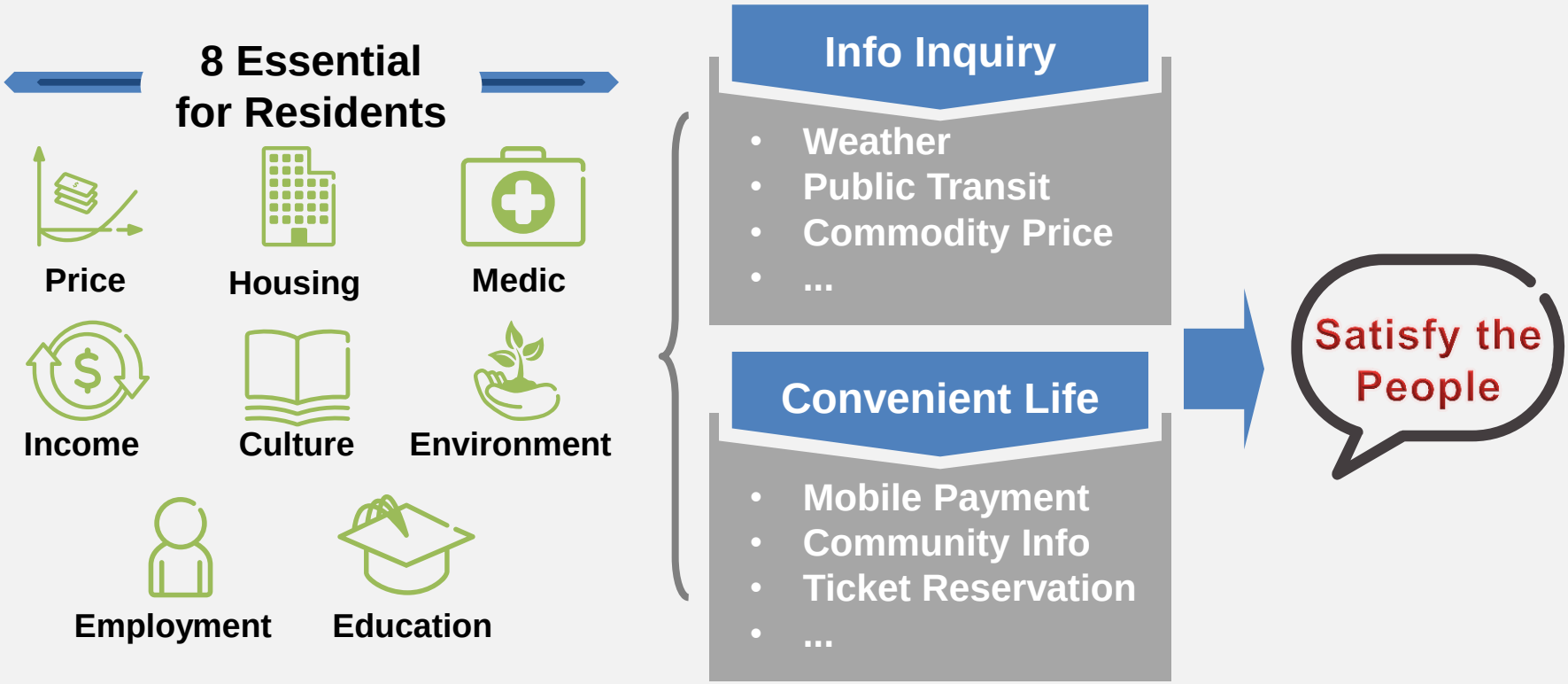
China Mobile's Smart City Project is Under Rapid Development

- More than **160** cities have signed to build smart city
- Smart City Portal is online in **22** regions
- Nearly **10,000** Applications
- **Approaching 6 Miilion Users**

Build City-Wide Info-Service Platform and Service System for Personal, Business and Government Users

Livelihood (Personal Users): Optimize Service to Help Enjoy Wireless Life

- Smart City provides various livelihood related services and applications to its people. Residents can check out government info, public service info, local info, etc. on their cell phone or other mobile devices whenever, wherever they want:
  - **Info Inquiry Makes daily life Easier:** Weather Report, Commodity Price, etc.
  - **Convenient Life Serves People Better:** Mobile Payment, Ticket Reservation



Case：Utility Payment in Shandong

Utility Bill Ordering

Processing Platform

Push Notification

No More Queues

Billing Delivery

Payment

- **Utility Inquiry and Payment：Provide** function including billing delivery, mobile payment and push notification. Users will be prompted to check and able to pay for utility via cell phone

By the end of 2012, more than **1.4 million** Shandong residents have used Smart City services, more than **1 million transactions** completed

City Management and Service(Gov. Users): Digital Administration Info, Benefits the Society

- Based on communication network, internet and M2M, smart city can help **modernize city management** , improve the management efficiency, service quality and emergency response.
- Smart City is now applied in Crisis Management, Environment Monitoring, Traffic Control and Infrastructure Management.

Disaster/ Emergency/ Evacuation Management	Construction Site Environment Monitoring and Control	Real Time Traffic Info / Low-Carbon Public Transit / Smart Traffic Control	Remote Streetlight and Sewer Cover Management
			

Case: Noise Monitoring (Fujian)

Construction Site Noise Monitoring

Residential Community Noise Monitoring

- Noise Monitoring: Auto collect and store noise data via M2M network consisted of **sensors, wireless network and applications**. Mainly implemented in construction site and residential community
  - **Construction Site:** The system is now part of the standard monitoring tools of Xiamen Government. It has been used in more than **46** sites and reduced complaint rate by **77%**
  - **Residential Community:** Implemented in **24** communities, serving **200 thousand** residents

Case：Smart Bus System (Xiamen)

- “Mobile Bus Inquiry” is a mobile app that has not only basic functions such as bus schedule inquiry, but also advanced functions, e.g.: bus positioning, notification upon bus arrival, etc. owing to the M2M technology
- In Sep. 2012, PV exceeded **8 Million**, reduced **61.3%** waiting time, **23.6%** of congestion rate, and **41.8%** delay rate, total on time rate is raised to **95.2%**

Prospective：Everywhere, Everything, Almighty

Smart Health Service

Morning: **Register** online before visiting hospital

Smart Travelling

Noon: **Check-in** on the way to airport

Smart Dinning

Afternoon: **Checkout** options and discount and **reserve** for dinner

Smart City

Smart Public Transit

Early Morning: **Book** a taxi or **look up** bus time table before leaving

Smart entertainment

Evening: Watching movie with family, using **tickets booked via cell phone**

Download more Smart City related apps on Mobile Market!!

Thank You!