

# 深圳新型智慧城市 设计理念与实践

Shenzhen New-type Smart City  
Design Concept and Practice

2017.05

中电科新型智慧城市研究院有限公司

THE SMART CITY RESEARCH INSTITUTE  
OF CHINA ELECTRONICS TECHNOLOGY GROUP CORPORATION



# 一、建设背景

Background

# 二、理念和规划

Design Concept

# 三、建设实践

Practice

## 城市成立 City Promoted

March 1979

## 经济特区成立

Special Economic Zone formed

1 May 1980

## 面积 Area

1,991.64 square kilometers

## 2015年人口 Population of 2015

- 总共 Total

18+ Million

- permanent residents

11.38 million

## GDP of 2016

- Total

CNY 1.93 trillion

USD 290.62 billion

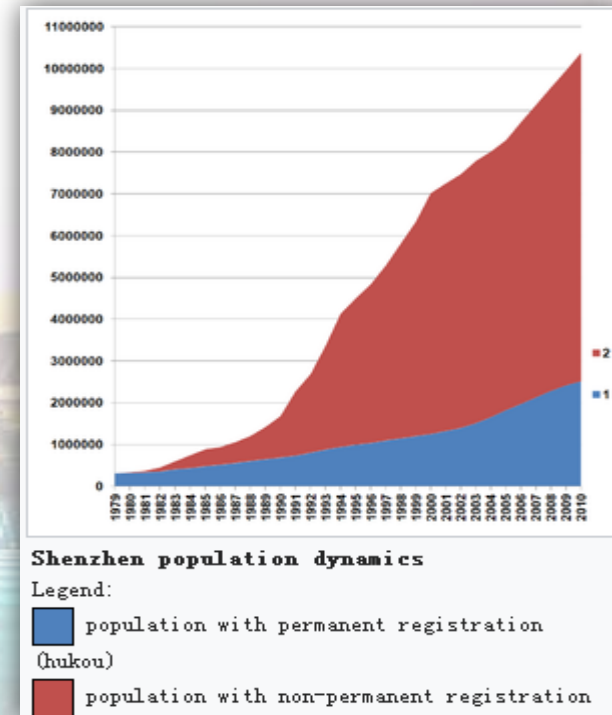
- Growth

9%

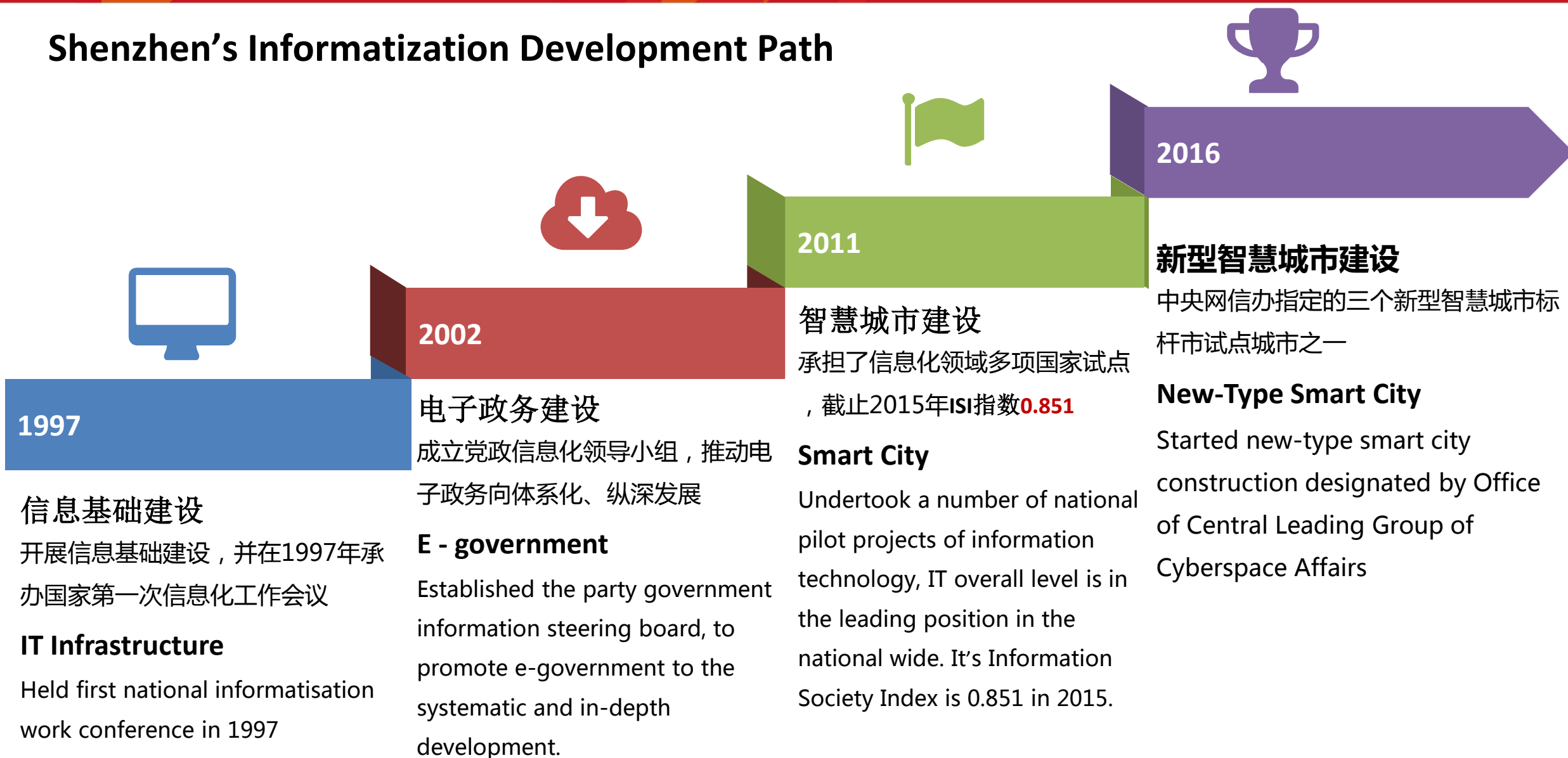
## 现代化、国际化、创新型城市 Modern, International and Innovative City



Division	Subdivisions	
	Subdistricts	Residential communities
Luohu	10	115
Futian	10	115
Nanshan	8	105
Bao'an	10	123
Longgang	11	111
Yantian	4	23
Longhua	6	100
Pingshan	2	30
Guangming	6	28
Dapeng	3	25
Qianhai		



## Shenzhen's Informatization Development Path





100%的行政审批项目可在网上申请及查询结果

100% of the administrative approvals can be applied online and check the progress



路边“宜停车” Parking App  
based on magnetic field sensor



自助服务终端  
Self-Service Terminals



全球首个NB-IoT  
智慧水务商用项目

The world's first NB-IoT Smart Water Commercial Project

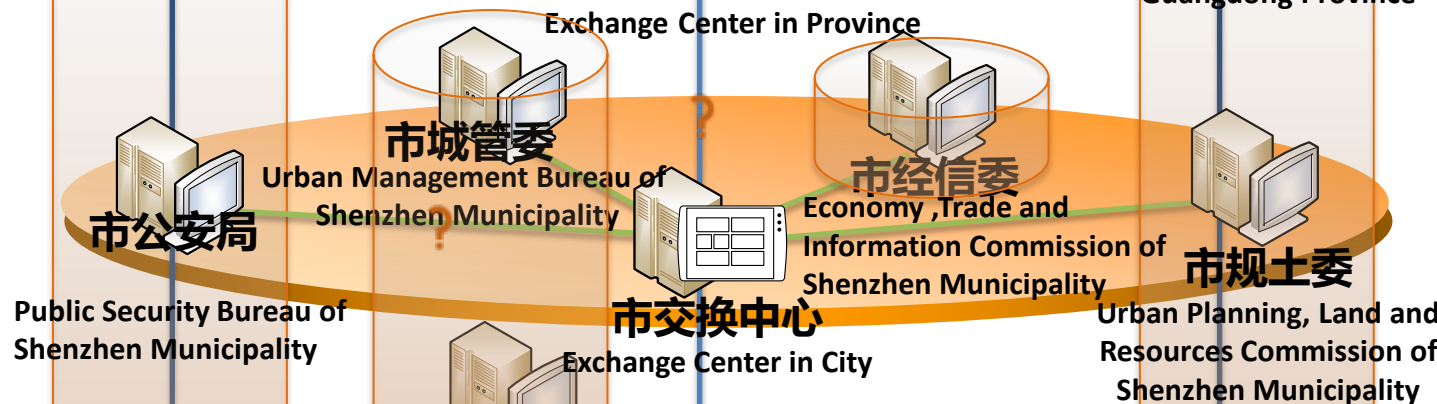


## 烟囱林立、信息孤岛 Various Chimneys, Information Silos

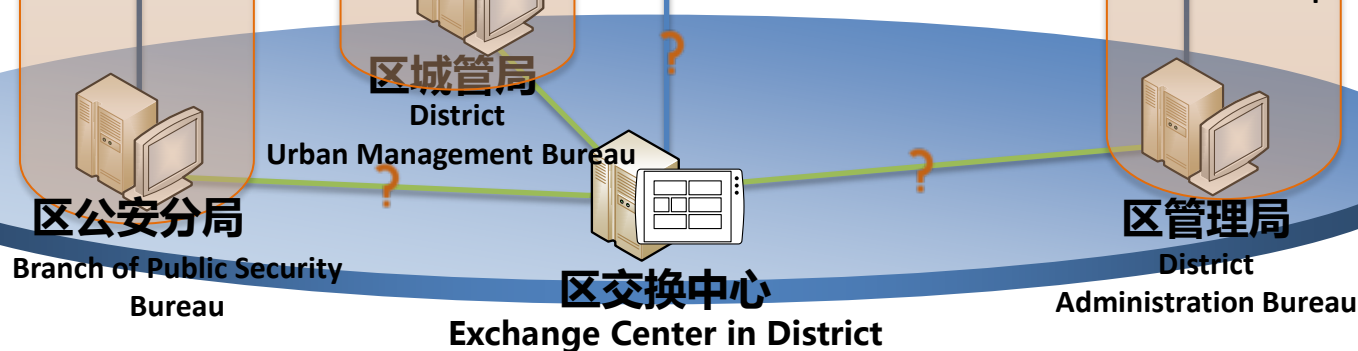
**Province Level**

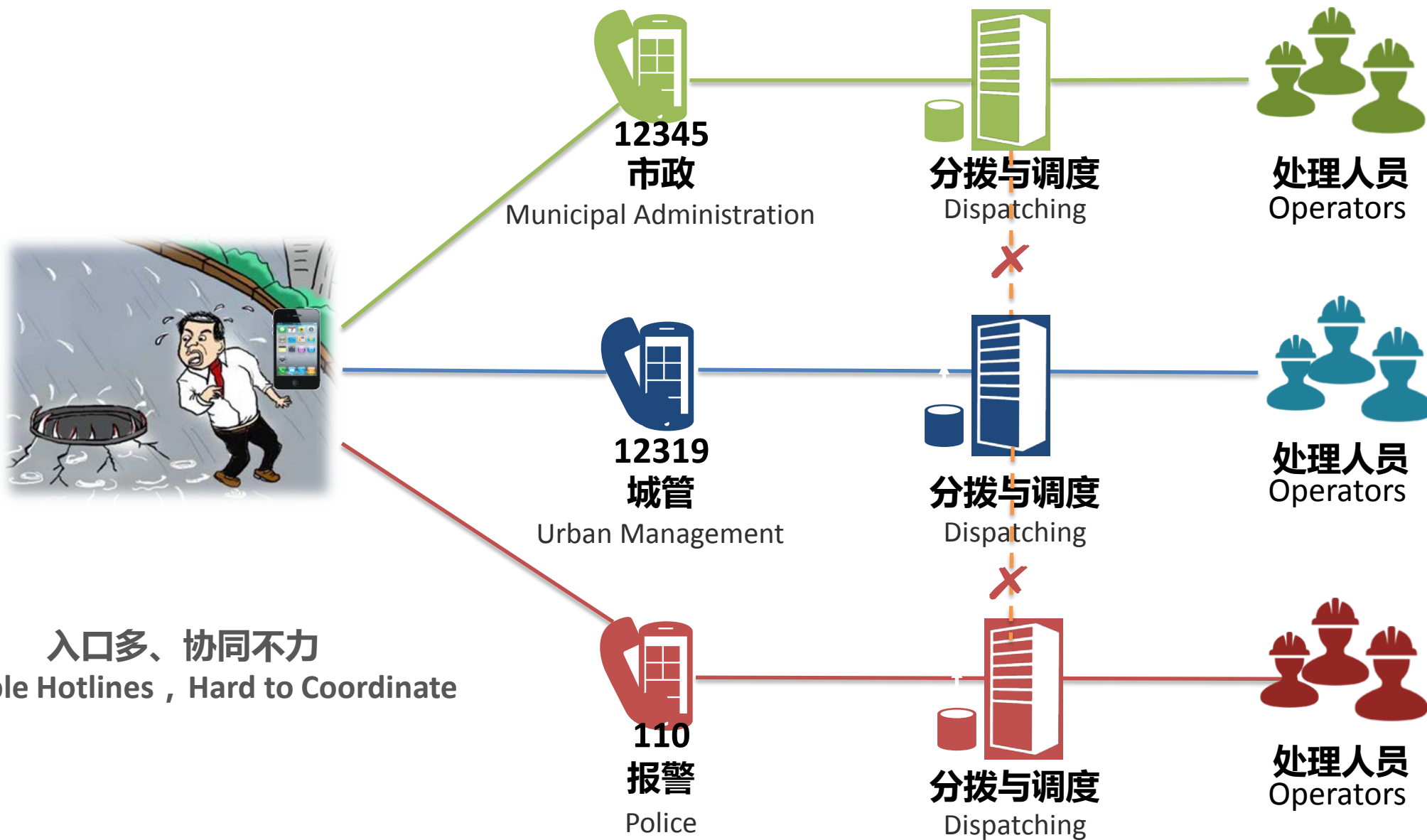


**City Level**



**District Level**





入口多、协同不力  
Multiple Hotlines , Hard to Coordinate



**城市安全监测预警能力弱**

City security monitoring and early warning capability is weak.



**服务水平和要求存在较大差距**

There is a big gap between service levels and requirements.



**城市精细化管理水平有待提高**

A fine social governance mode is demanded.



**城市化遗留问题突出**

The remaining problems of urbanization are outstanding.



2015年12月17日，  
在中央网信办的领导下，在第二届世界互联网大会上，  
深圳与中国电科签署了战略合作框架协议，  
启动**新型智慧城市标杆市建设**。

On December 17, 2015, at the second **World Internet Conference**, Shenzhen and CETC signed a strategic cooperation framework agreement, initiating the construction of New-type Smart City.

到2020年，

- 构建**宽带、泛在、融合、安全**的**智慧城市基础设施**，
- 形成**高效便捷、无处不在**的**信息服务**，
- 建设**全程全时**的**公共服务体系**，
- 打造**低碳绿色**环境友好的**宜居城市**，
- 建立**现代化的****社会治理体系**，
- 建设**创新活跃**的**智慧产业体系**。

By 2020,

- Construct the **broadband, ubiquitous, integration and security** Smart City Infrastructure.
- Provide the **efficient, convenient and ubiquitous** Information Service.
- Build up the **full-time** Public Service System.
- Create a **low-carbon, green and environment friendly** livable City.
- Establish the **modern** Social Governance System.
- Build the **innovative and active** Smart Industrial System.



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- **以人为本**

以人为本，坚持民生优先，促使政府转移为以群众满意度为本的服务者。

- **协调发展**

区域协调发展、城乡协调发展、物质文明和精神文明协调发展、经济建设和国防建设融合发展、军民融合发展。

- **持续创新**

构建一个充满活力、开放、包容的城市创新环境，城市中的各个主体（包括政府、企业、社会团体、市民等）积极参与创新，在技术、商业模式、体制机制、建设模式等方面不断探索创新。

- **资源共享**

加强城市管理数字化平台建设和功能整合；打通信息壁垒，构建信息资源共享体系。

- **安全可控**

构建一体化的网络空间安全体系，打造安全可控的网络环境、保护信息与信息交互安全、构建健康有序的网络秩序。

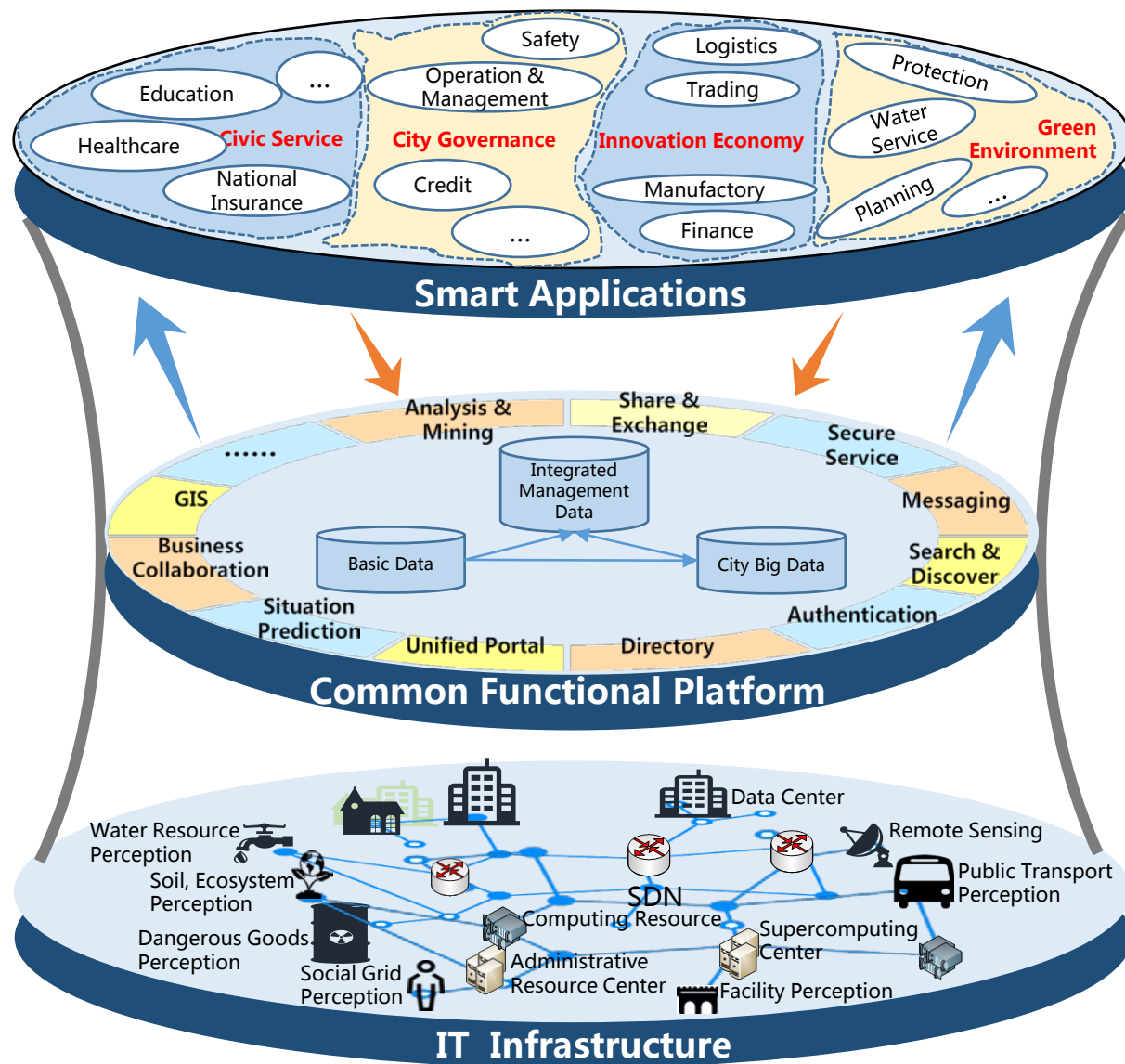
- **People Oriented**

- **Coordinated Development**

- **Continuous Innovation**

- **Resource Sharing**

- **Secured Cyberspace**



以开源模式构建各具特色的智慧领域应用

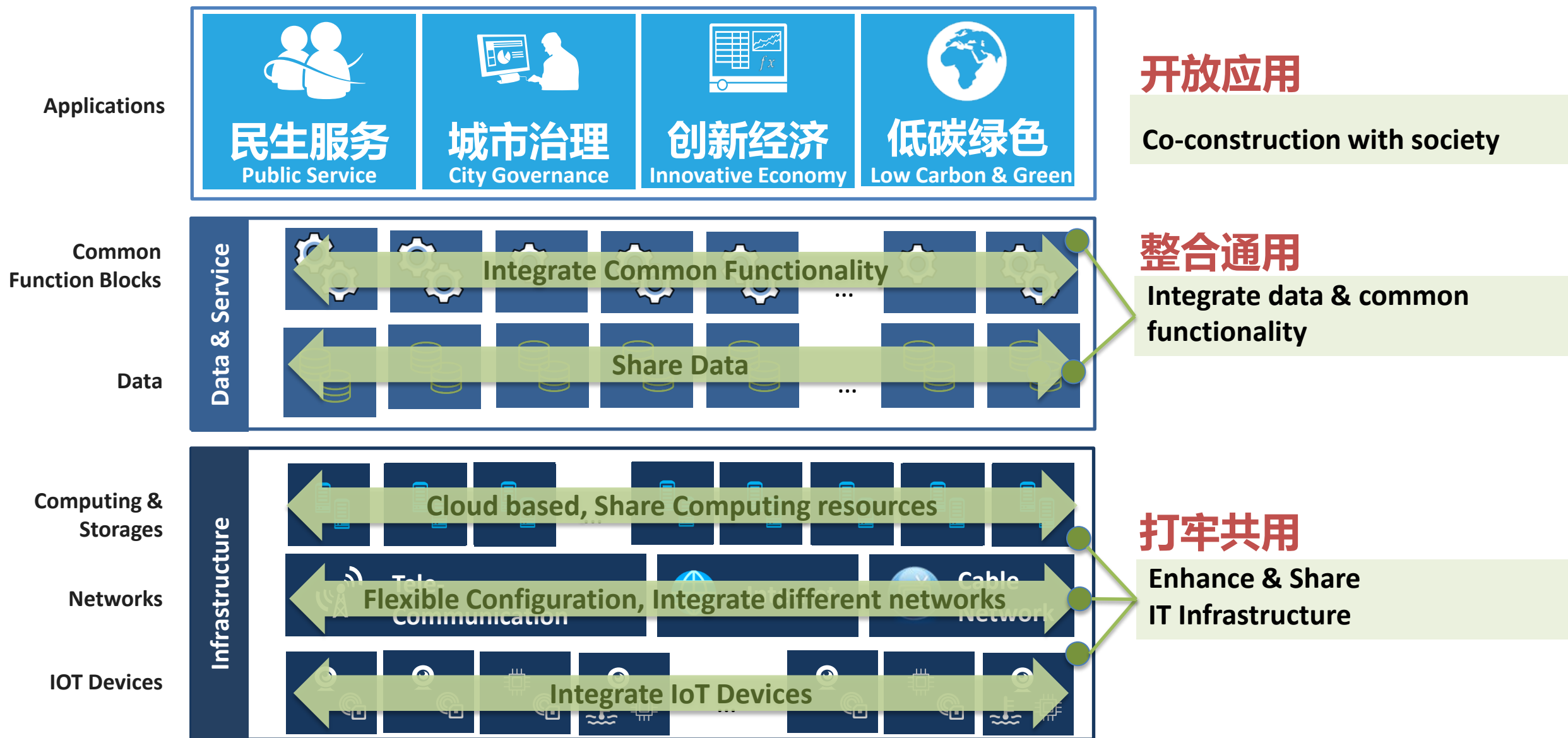
To build diverse smart applications involving all parties in an open environment.

功能整合、资源管理与服务

To integrate the data, common functional services and development tools.

共建安全互联、泛在感知的信息基础设施

To build together the secured, connected, and ubiquitous IT infrastructure.





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Design Concept and Overall Plan

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## 建设模式 Construction Mode



- 由中电科集团投资按照**PPP模式**承建并负责运营

Shenzhen City Operation Management Center is **invested, constructed and operated** in the **PPP** model by China Electronics Technology Group

- 一期建设到**2016年12月**完成

The first phase of construction has been completed by **December 2016**.

## 运营模式    Operation Mode

城市运营中心通过汇聚委办局数据、社会数据、中电科自有数据等多种数据源进行挖掘分析，为政府、企业、公众提供**免费的公益服务**和**收费的增值服务**。

- Converge government data, crowd sourcing data, and other private sectors' data
- Explore insights and trends based on comprehensive analysis
- Provide **free public service** and **the paid value-added services** to government or society



12月27日，全国**首个**新型智慧城市运营管理平台——**深圳市城市运营管理中心**完成建设，**投入试运行**。

On December 27th, the country's **first** new-type smart city operation and management platform - **Shenzhen City Operations Management Center** completed the construction and started the **pilot run**.

### 第一批试点服务以支撑决策和促进业务协同为主，提供**3大服务**，**7项功能**：

Providing 3 types of services in the first group of service list to support city situation awareness, decision making and operation collaboration.



城市运行展现与监测预警系统  
City Situation Monitoring  
& Early Warning System



交通拥堵治理指标界面  
Traffic Control



深圳市运营体征监测平台  
Shenzhen Operating Index  
Monitoring Platform

定价方法、购买模式等等  
Service pricing and purchase patterns, and so on.



主管机构不明确，业务协调和推进存在困难  
The Competent Authority is not clear, coordination among different departments is difficult.

数据授权使用和管理相关的政策缺失  
Data authorization and management related policies are missing.

To provide better living conditions, business environment and public services.

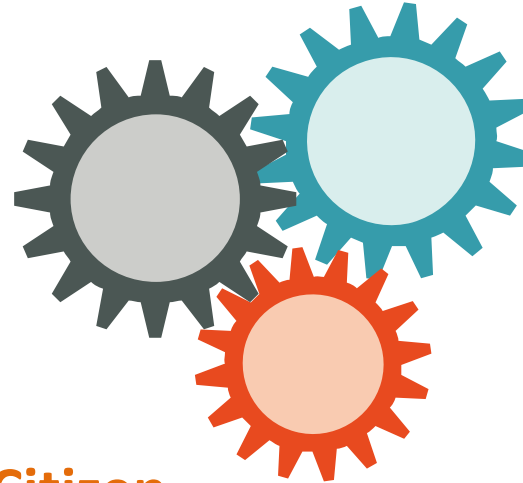
## Government

### ***Demands***

- To provide better public services
- Lack of construction fund
- Lack of manpower
- Lack of innovative idea
- Technology Evolves quickly
- Project becomes more and more complicated, involving multiple players and systems

### ***Concerns***

- Lack of standards to evaluate the services provided by the private sectors
- Hard to monitor or supervise the program during its construction and operation



## Citizen

### ***Demands***

- Provision of service
- Better and convenient services
- React fast

### ***Concerns***

- arbitrary charges
- No way for complaining
- Personal information leaking

## Private Sectors

### ***Demands***

- Huge markets
- Social capital need investment ways

### ***Concerns***

- Profitability is unclear
- Leadership of local government or policy could change while a project is in progress
- Execution of the contract on government side cannot be ensured
- Lack of laws or effective ways to protect private sectors' investment
- IT Services, especially software services, are quite flexible. There are many uncertainties.

## Government

- standardize the process of operating different types of PPP projects
- ensure open and transparent in the public bidding process and encourage sufficient competition
- establish supervision mechanism to monitor the whole process, e.g. to establish 3<sup>rd</sup>-party supervision mechanism
- allow and encourage social sectors to involve in public service provisions by
  - allow private sectors to involve in public service providing in certain domain
  - subsidizing the programs that providing public services by social sectors
  - establish laws and policies to protect private sectors' investment

*e.g. rights and obligations, dispute handling, modification and termination of contract, and etc.*

## Private Sectors

- define the services and pricing mechanisms as specific as possible, and the service should be evaluable as well
- profit or quasi-profit projects first
- a clear responsible government department
- minimal guarantee fee + service purchase fee



CETC 中国电科

责任 创新 卓越 共享

*Responsibility  
Innovation*

*Excellence  
Shared*



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集成至支付宝“医疗服务”

集成至微信“城市服务”

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市民服务

医生服务

90家医院

## “互联网+医疗”--大数据实时处理

数据采集

数据存储

数据管理

数据计算

数据分析

HIS  
数据采集



医院1

HIS  
数据采集



医院2

HIS  
数据采集



医院3

.....

HIS  
数据采集



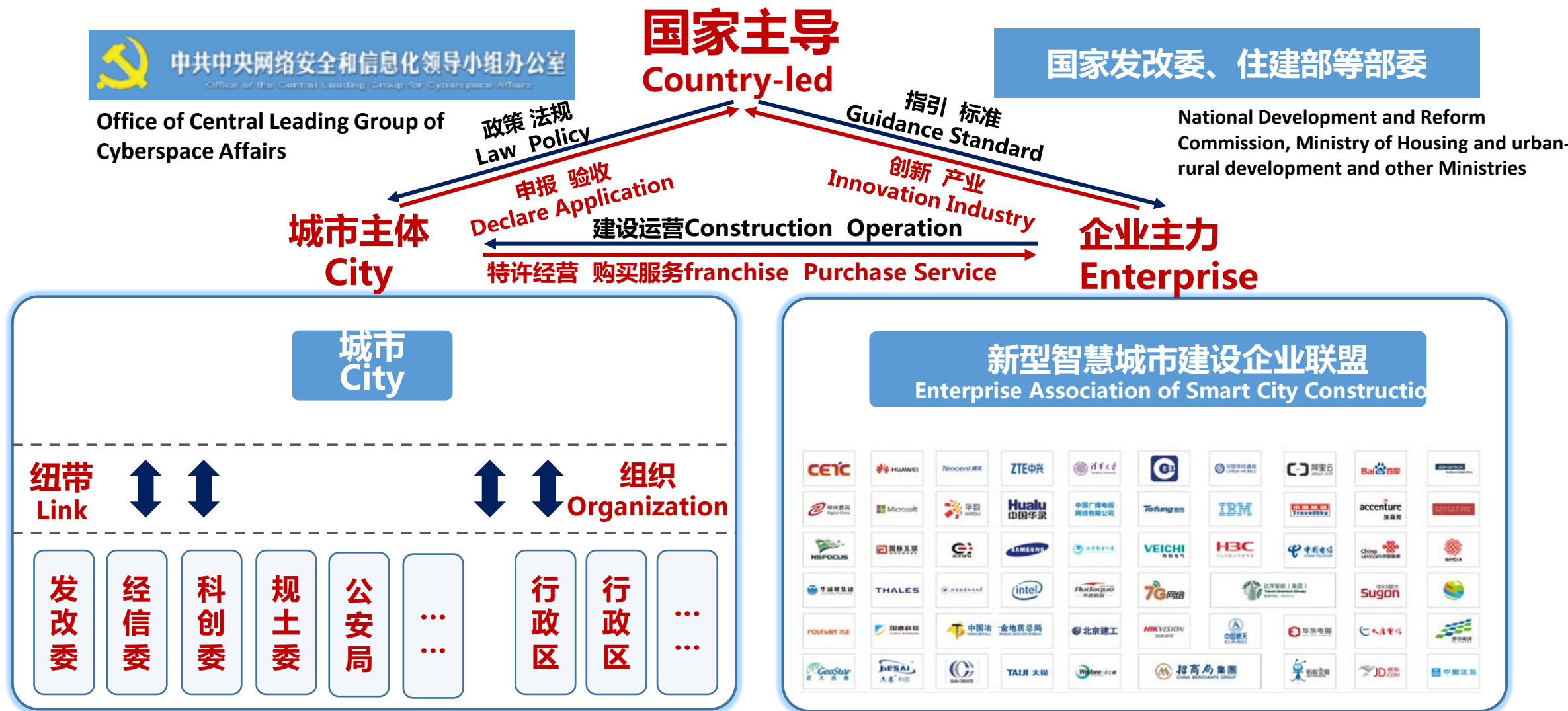
医院N

“互联网+医疗”模式由企业推动，政府监管。企业整合医院资源，通过互联网为患者提供诊前、诊中、诊后服务。卫计委对企业进行监督指导。

指导  
监管



数据  
上报



National Development and Reform Commission、Economic and Information Technology Commission、Planning and Land Resources Commission、other Commission、and administrative regions.