



GIS-based Integrated Land Administration

LI Zhijun

Information Center of Ministry of Natural Resources

I Introduction

II One Map Core Database

III Common Platform for National Spatial Information

Land and resources are the basis of survival and development

- protection of cultivated land ——food security
- exploitation of mineral resources——economic security
- prevention of geological disaster——life security
- geological environment monitoring——ecological security
- registration of real estate——public interest

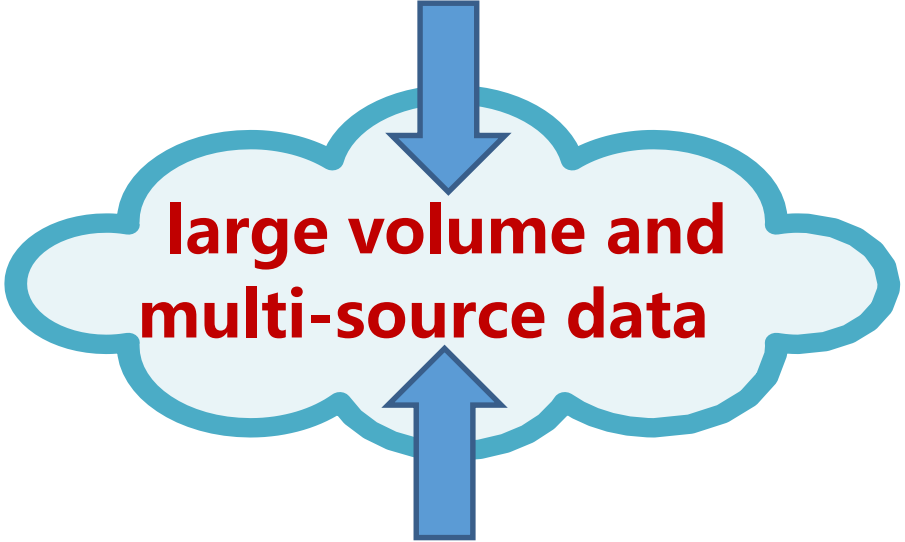
Data-intensive Industries



Satellite remote sensing
& aerial remote sensing



Fixed or mobile camera



Network information system



Field observational stations

administrative information
management system



行政办公



行政审批

comprehensive data
supervision platform



监测监管



执法检查



应急处置

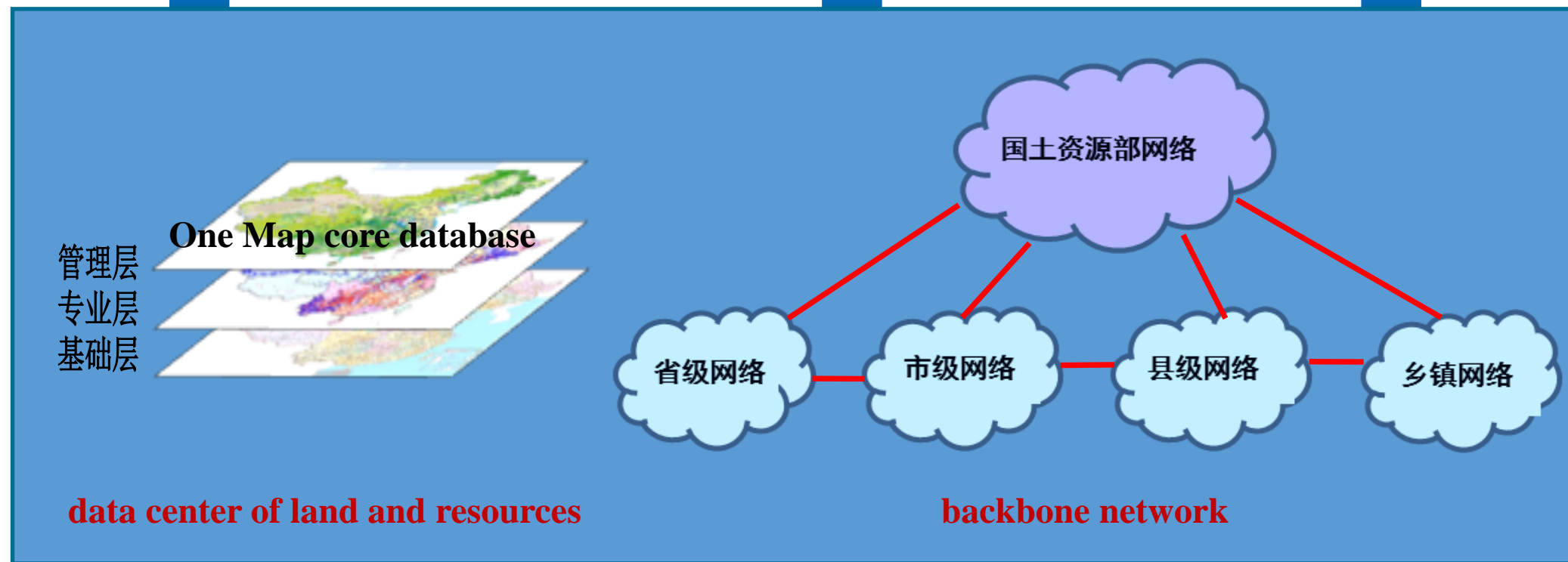
data service platform



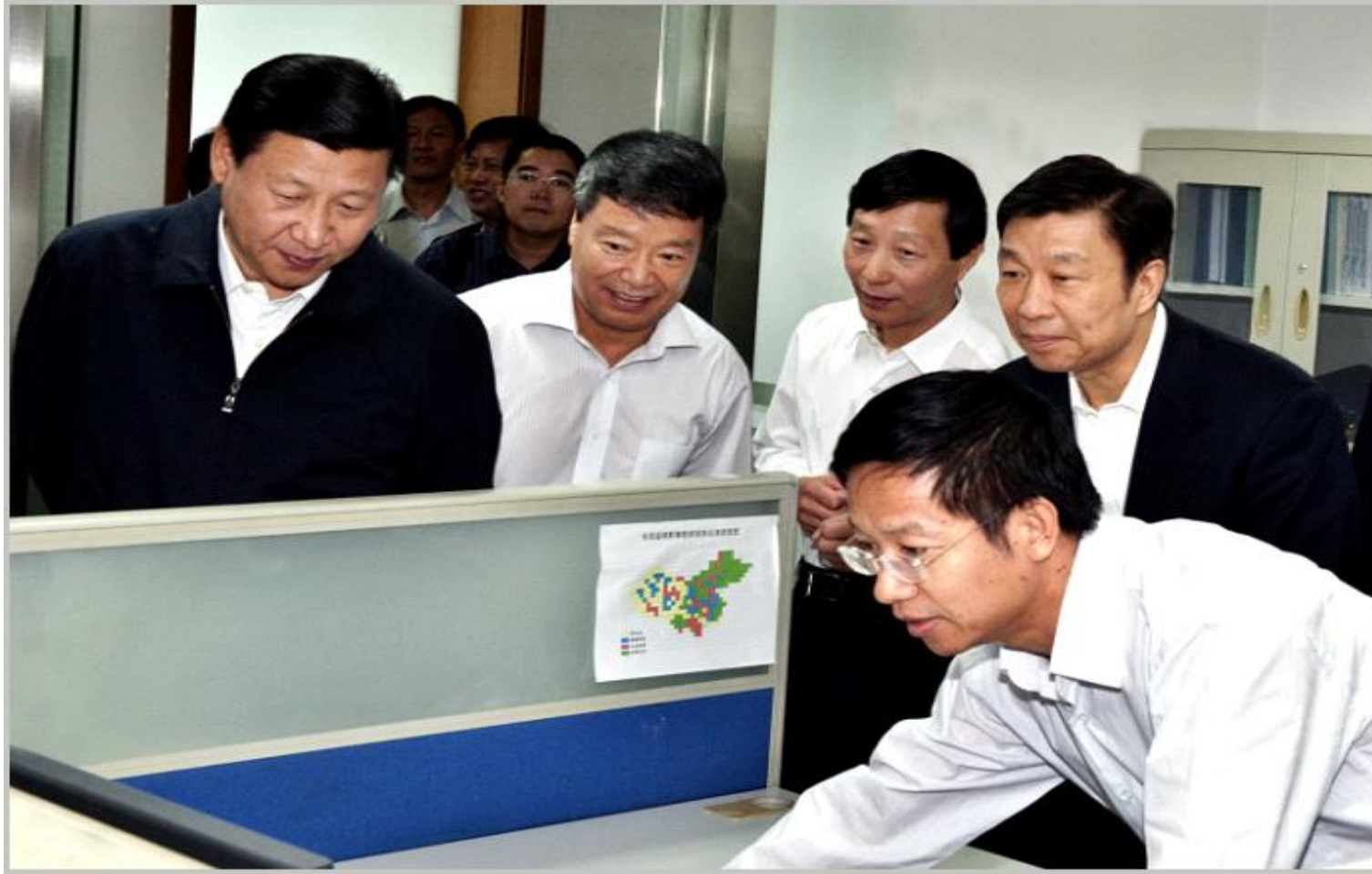
市场交易



社会服务



Central government leaders concern about the informatization of the land and resources



In September 2010, President XI Jinping and Vice President LI Yuanchao watched One Map core database and Comprehensive Data Supervision Platform.

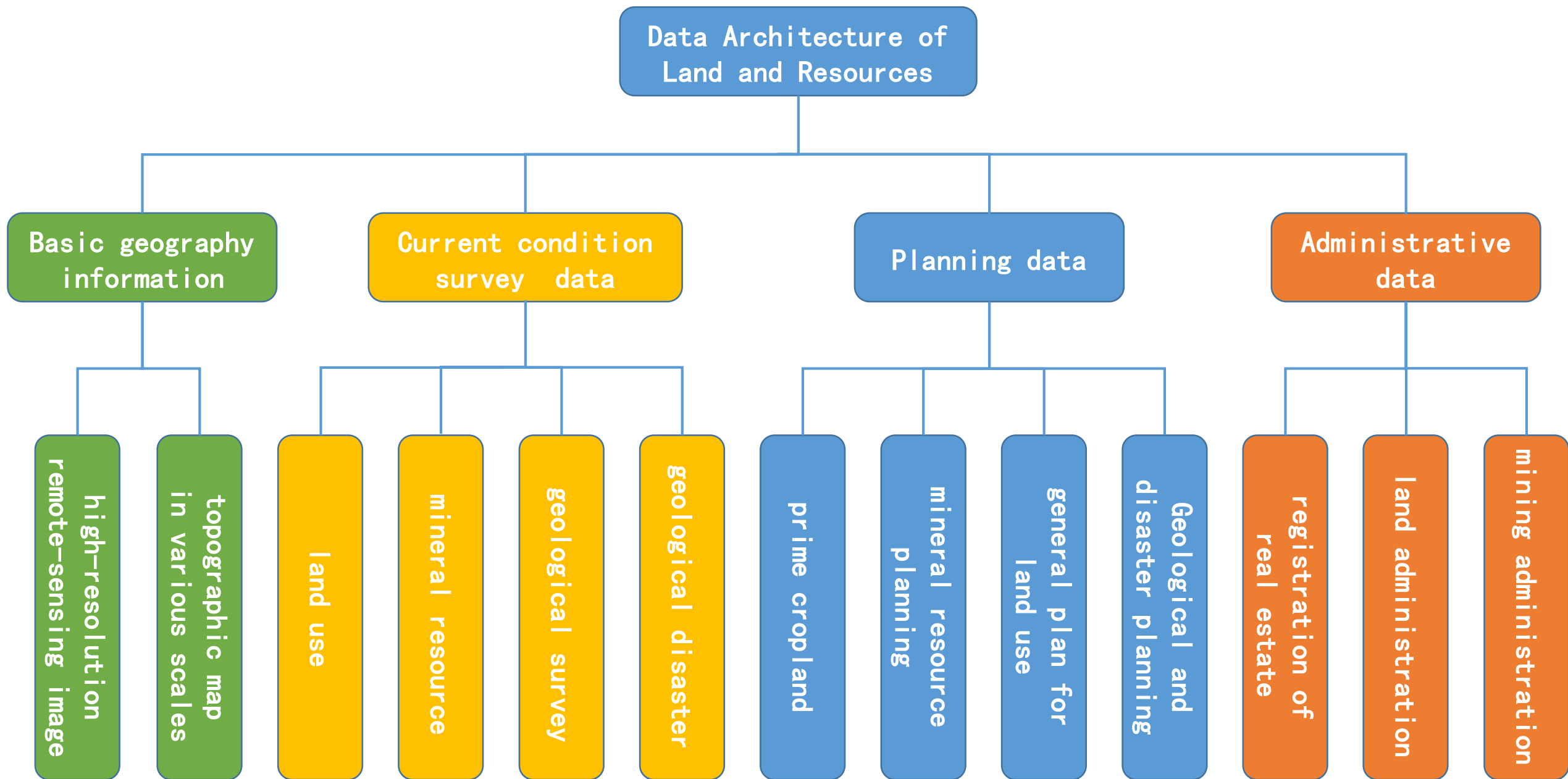


In December 2009, Premier Li Keqiang watched One Map core database and Comprehensive Data Supervision Platform.

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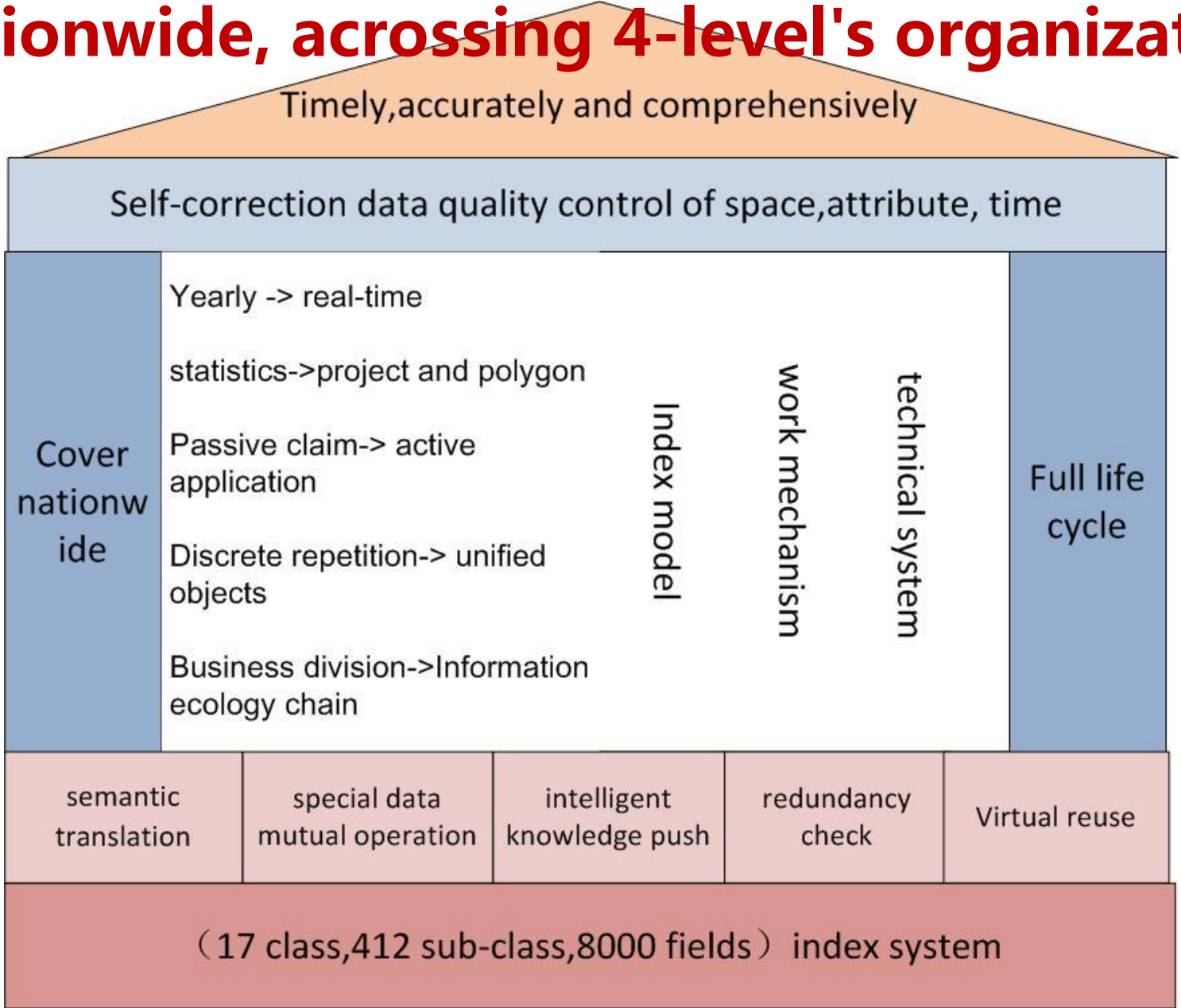
III Common Platform for National Spatial Information



Digital survey technology is widely used in land and geological survey

- The digital geological survey system realizes the whole-process integrated description, organization and management of field data collection, description, database construction, processing, and achievement expression, and it has been widely applied in geological survey, mineral resource evaluation, geological environment and groundwater evaluation. Basic geological database has been built up into 9 categories and more than 60 subcategories, covering basic geological survey, mineral resources exploration and other specialties.
- Internet and land survey technology has been preliminarily applied in land change and land supervision, which makes the information collection and processing more convenient.

Set up real-time online data collection mechanism, covering nationwide, acrossing 4-level's organization.



About **2 million pieces** of dynamic information are collected in real time every year, and now the total is up to **22 million pieces.**

Permanent Basic Farmland Database

- The permanent basic farmland database collects electronic information such as the location, area, type of land, quality, responsibility for protection and protection signs of basic farmland. There are **45.41 million** spots in the database.



Real Estate Registration Database

- Real estate registration includes land, housing, woodland, grassland, sea rights and other content. Currently, the real estate registration database is under construction.
- Up to now, daily incremental data in **2,700 counties** in China have been entered into database in real time. **27 million pieces** of real estate registration information have been accessed, and there are **200 thousand pieces** information accessed everyday.



Real Estate Registration Database

不动产登记数据库管理系统

图形数据 属性数据 资源配置 用户配置

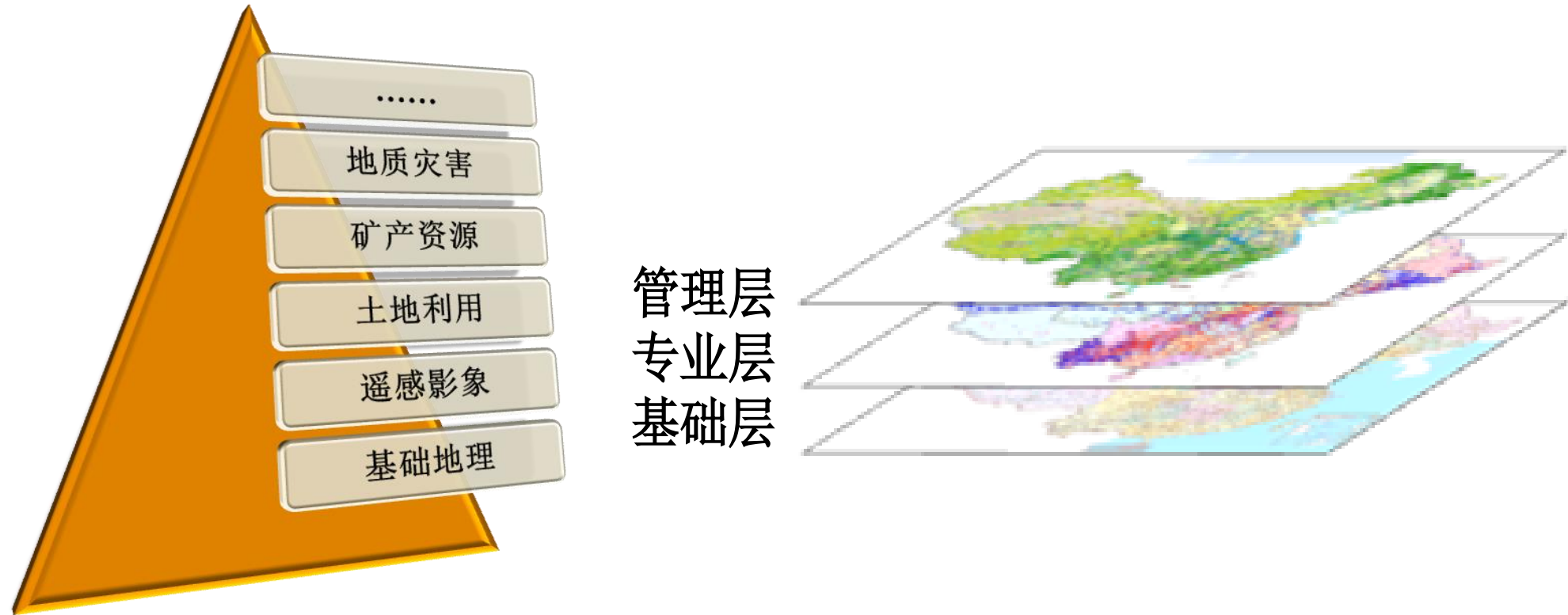
首页

2016年2月26日 星期五

资源目录

- 黑龙江省
- 上海市
- 江苏省
- 浙江省
- 安徽省
- 福建省
- 江西省
- 山东省
- 河南省
- 湖北省
- 湖南省
- 广东省
- 广西壮族自治区
- 海南省
- 重庆市
- 四川省
 - 成都市
 - 自贡市
 - 攀枝花市
 - 泸州市
 - 德阳市
 - 绵阳市
 - 广元市
 - 遂宁市
 - 内江市
 - 乐山市
 - 南充市
 - 眉山市
 - 宜宾市
 - 广安市
 - 达州市
 - 雅安市
 - 巴中市
 - 资阳市
 - 阿坝藏族羌族自治州

'One Map' core database of China's Land and Resources



Built up One map Core Database, integrated fundamental, business and administrative layers which includes more than **6992 data layers**, totally more than **5.38 billion features** in quantity, it strongly supports the administrative, comprehensive supervision and decision-making of land and resources.

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III Common Platform for National Spatial Information

Platform construction background

According to the draft State institutional reform plan, China will establish: a new ministry of natural resources, merging functions of eight ministries and administrations. the ministry is formed to oversee the development and protection of natural resources as well as set up and implement a overall spatial planning system.



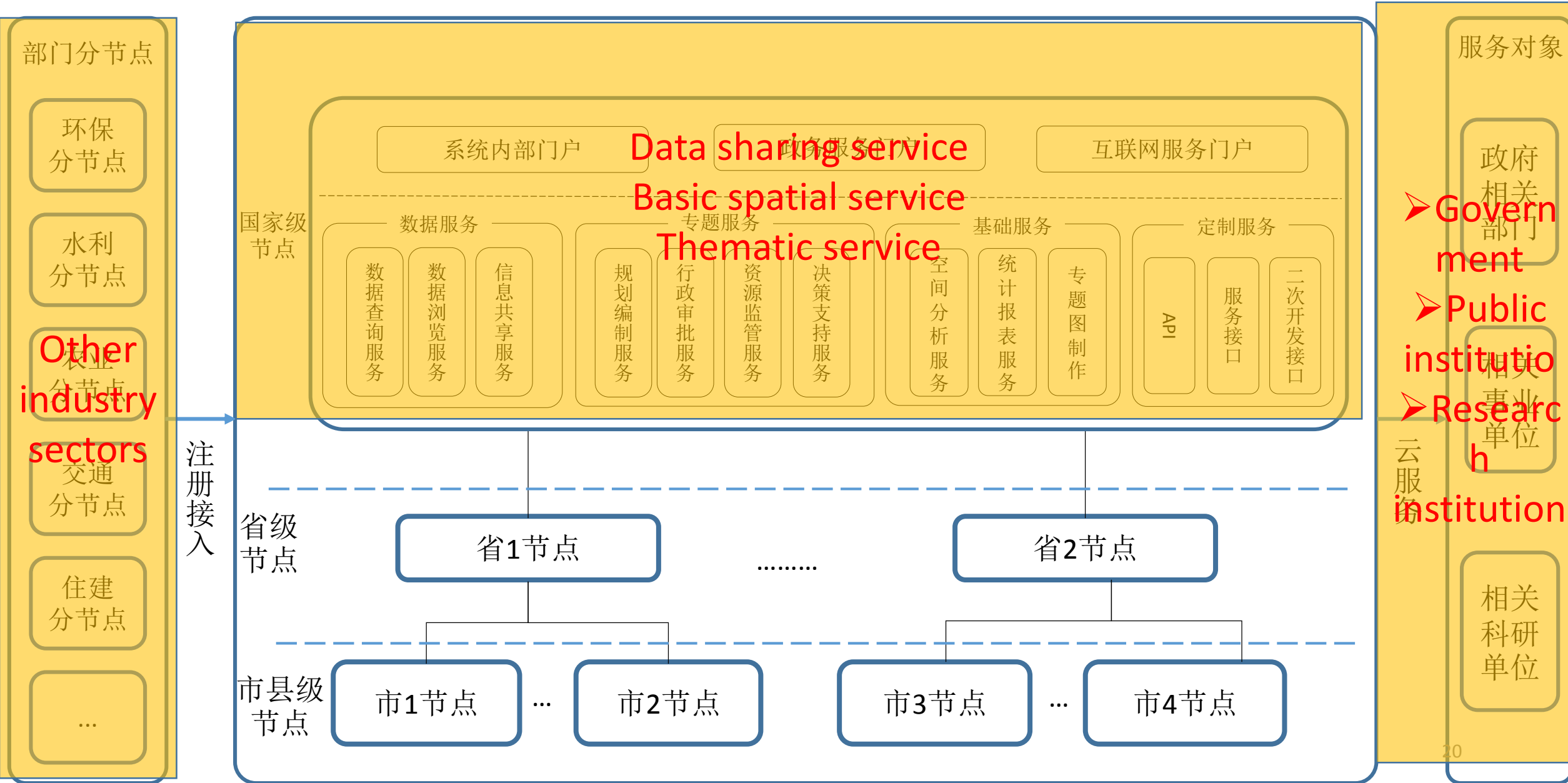
Proposed list of ministries, commissions of China's cabinet after reform CHINA DAILY

According to the draft State institutional reform plan, the State Council will consist of 26 ministries and commissions in addition to the General Office of the State Council.

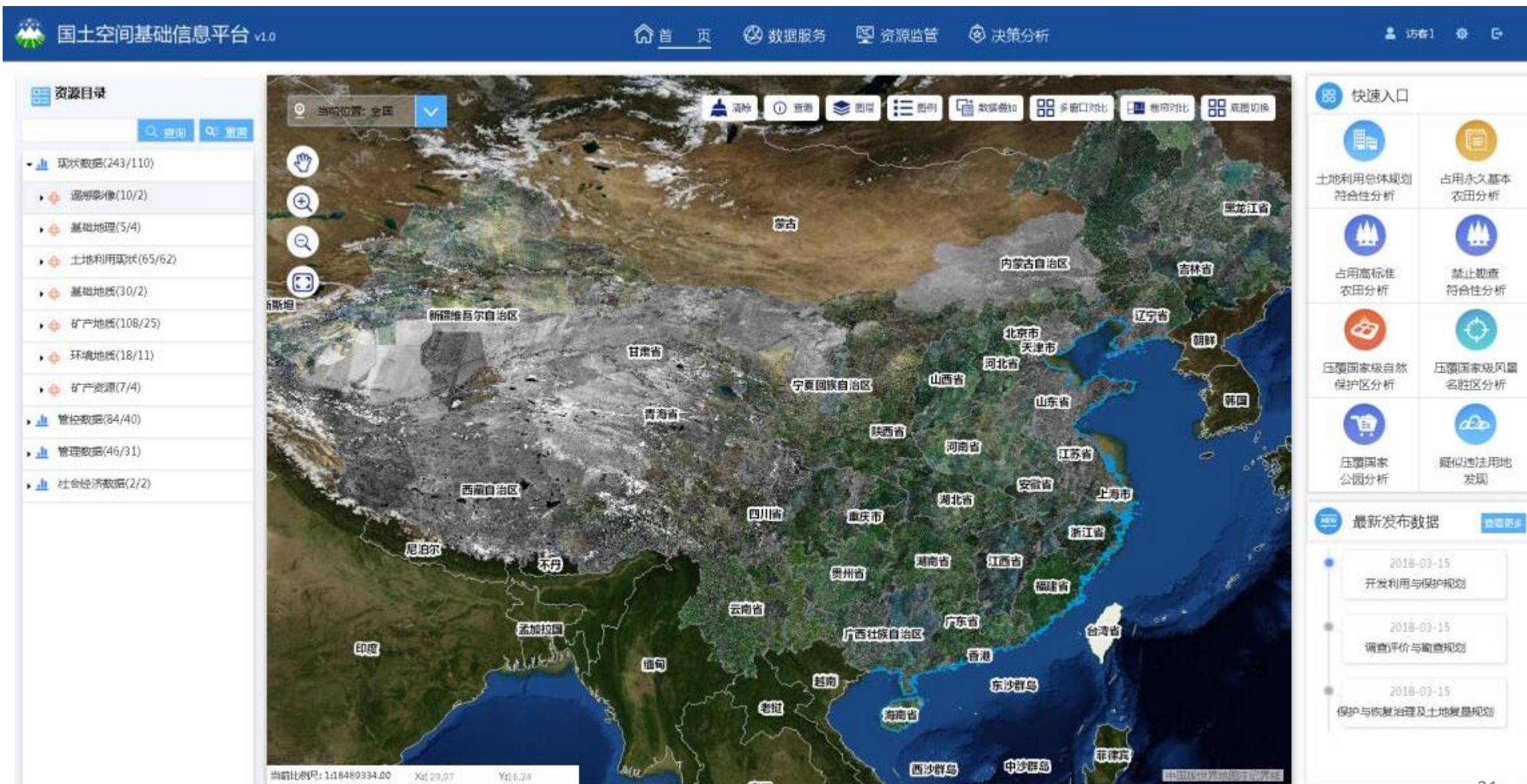
根据议案，除国务院办公厅外，国务院设置组成部门为26个。

- 14 Ministry of Natural Resources
自然资源部
- 15 Ministry of Ecological Environment
生态环境部
- 16 Ministry of Housing and Urban-Rural Development
住房和城乡建设部

General framework of platform



National Platform Version 1.0



Data resource system

Current condition survey data	Planning data	Administrative data	socioeconomic data
remote-sensing image	ecological protection redline	Approval of construction land	statistical data
land use	prime cropland	Land supply project	cellular signaling data
Basic geographic	integrated land use planning	land consolidation	POI
geographical conditions census	town and country planning	land consolidation	public transport data
Basic geology	mineral resource planning	Mining development and utilization	logistics data
forestry & grassland survey	water resources planning	mineral reserve	social data
water & ocean survey	transportation planning	license of forest harvest	life data

Whole process management of administrative approval

收件
受理



结果
公开



网上
办理

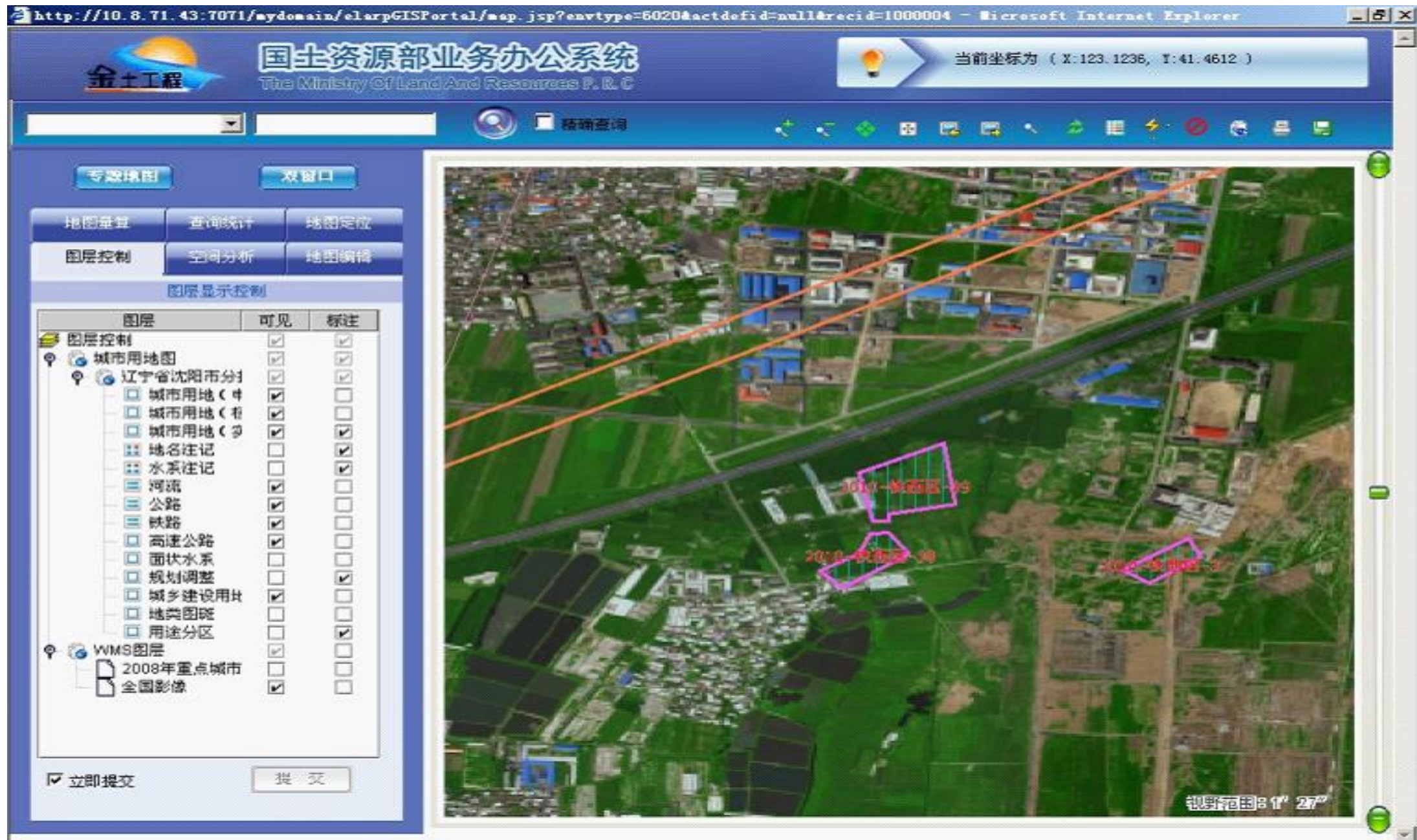


集体
会审

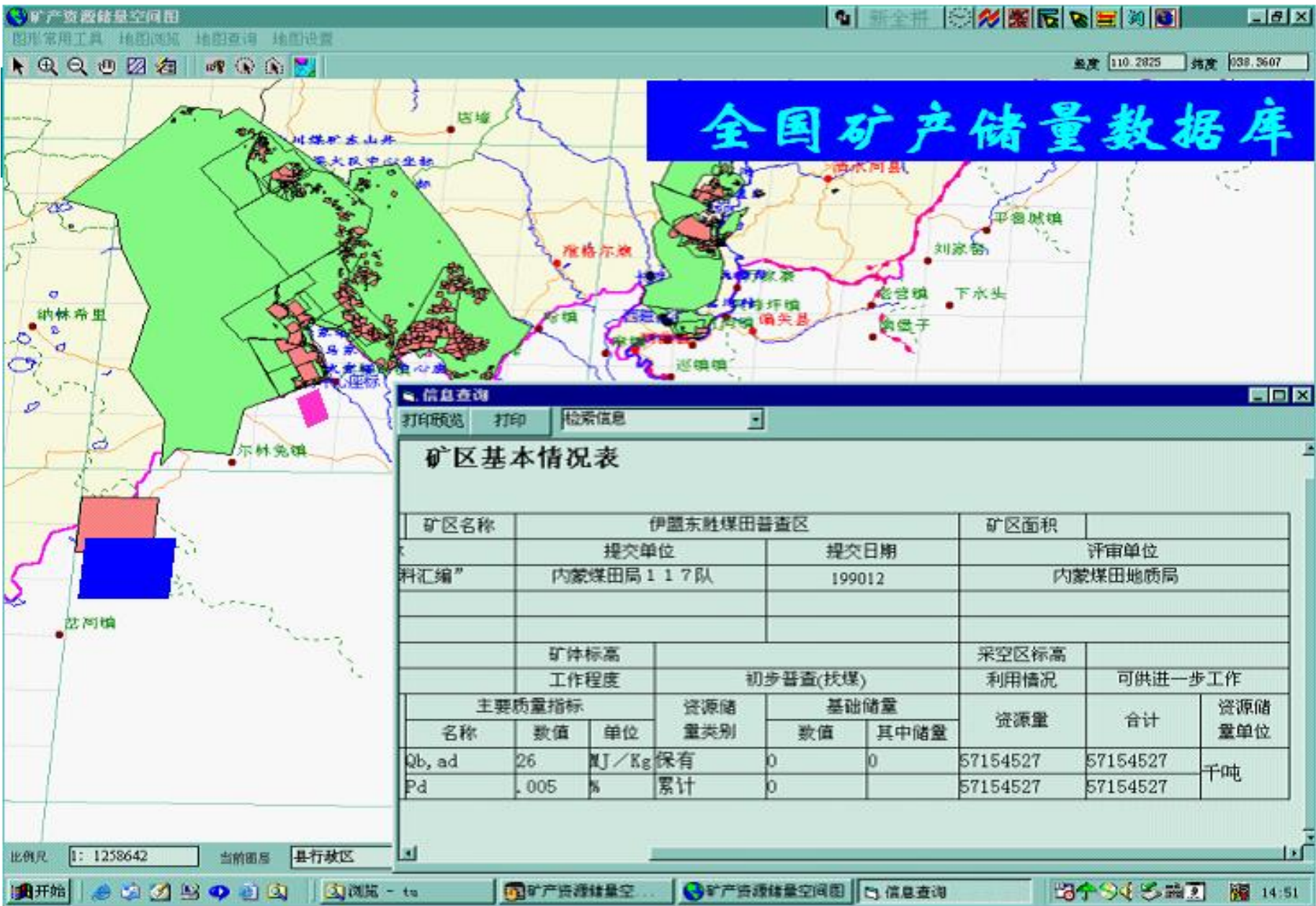


The time limit for administrative examination and approval has been shortened by more than 50%.

Approval of construction land



Approval of mining rights



Illegal Activity Discovery



Fig. 1. Remote sensing image at T1



Fig. 2. Remote sensing image at T2



Fig. 3. Extract the spots of newly-increased construction land



Fig.4. Data of the general land use planning within this area.

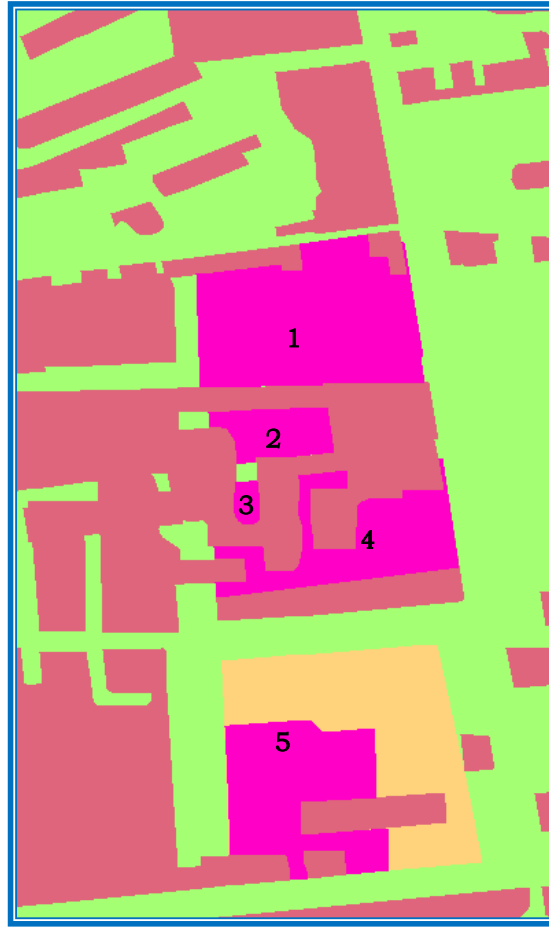


Fig.5. The spots of newly-increased construction land overlay data of the general land use planning.

Spot No. 1, spot No.2 & spot No.5 are not within the constructive expansion permitted zone



Fig. 6. The spots of newly-increased construction land overlay the spatial information of the approved construction land.

Spot No.1 & spot No.5 are not within the approved construction land. 34



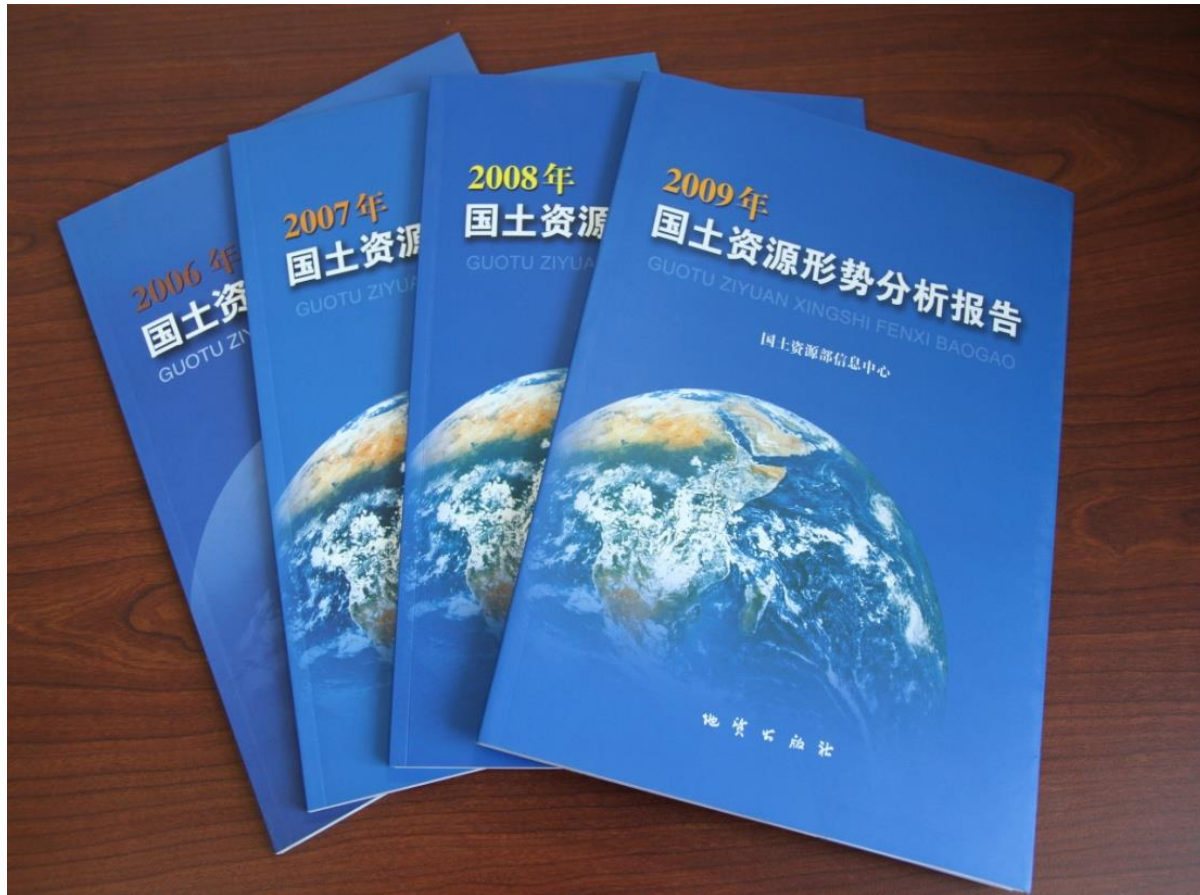
Fig.7. Spots of suspected illegal land

Spot No.1 & spot No.5 are not within the approved construction land.

基本情况	● Project land use information 单位：亩				
用地情况	● Illegal information				
违法情况	● Information of investigation and punishment				
查处及落实情况					
行政处罚内容	自觉（督促）履行落实情况	申请强制执行内容	强制执行落实情况	落实到位率	
罚款金额（元）	17098.39	17098.39			100.00%
没收违法所得金额（元）					0.00%
没收违法建筑面积（平方米）	5573.40	5573.40			100.00%
拆除违法建筑面积（平方米）					0.00%
其他					
建议处分	处分落实情况	移送司法机关	追究刑事责任落实情况		
省部级（人）					
地厅级（人）					
县处级（人）					
科级及以下（人）	1	1			
其他（人）					
*结案情况	<input checked="" type="radio"/> 已结案 <input type="radio"/> 未结案				
备注					

Decision-making analysis

By collecting all kinds of information, data mining and comprehensive analysis, Common Platform for National Spatial Information effectively supports land and resources situation analysis and assessment.

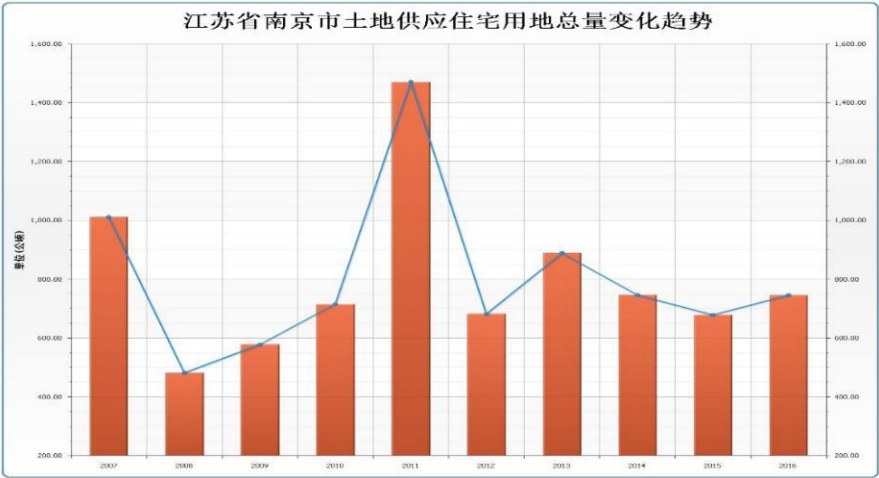


Supply and structure of residential land

Through the monitoring of land supply, the structure and total change trend of residential land supply in each city can be analyzed

江苏省南京市土地供应住宅用地总量变化趋势

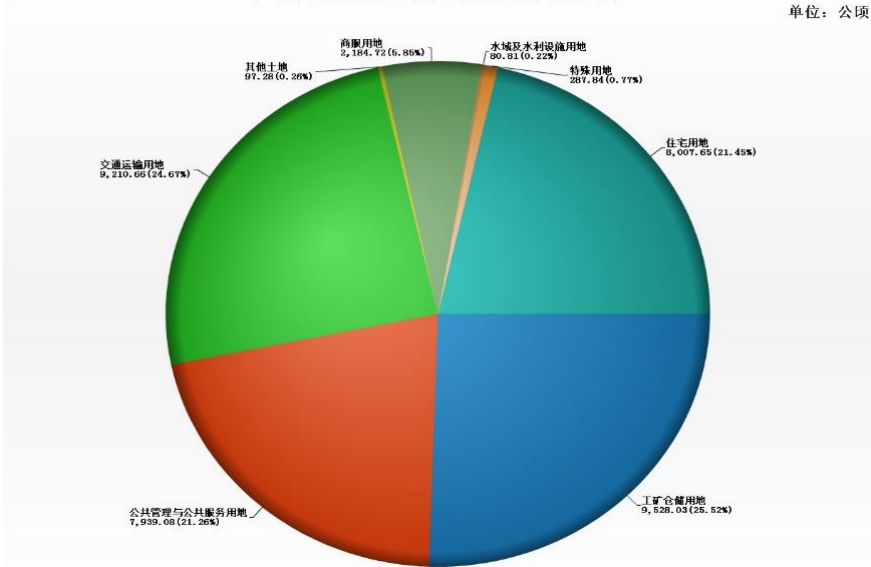
年度	住宅用地供应总量
2007	1010.37988
2008	481.20176
2009	577.223561
2010	714.725965
2011	1470.100935
2012	681.00422
2013	887.442592
2014	745.75613
2015	677.880028
2016	745.299178



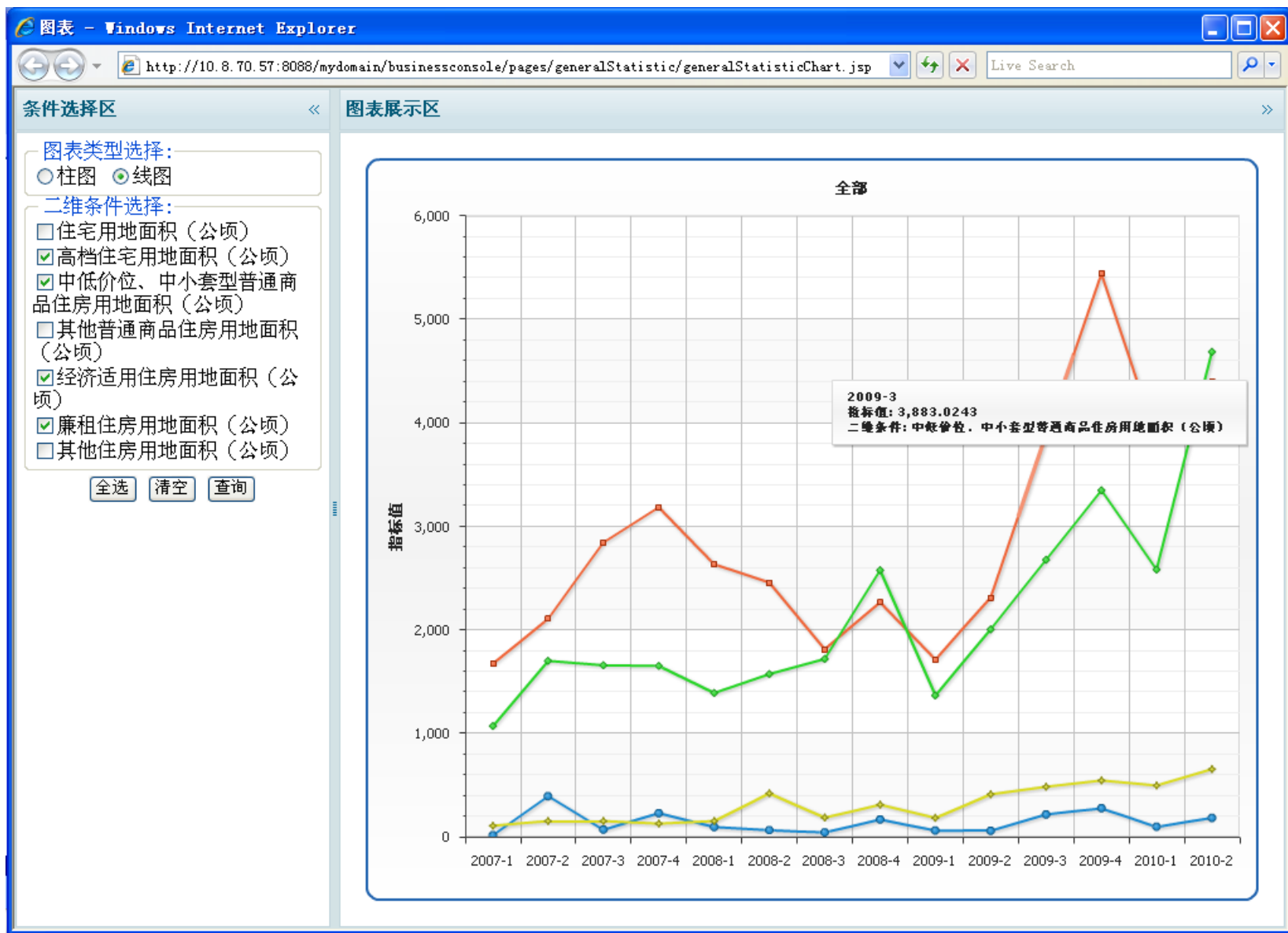
江苏省南京市供地用途结构分析

江苏省南京市供地用途结构分析

用途	面积	比例	用途	面积	比例
总面积	37336.05	100%			
商服用地	2184.72	5.85%	工矿仓储用地	9528.03	25.52%
住宅用地	8007.65	21.45%	公共管理与公共服务用地	7939.08	21.26%
高档住房	155.03	1.94%	特殊用地	287.84	0.77%
中低价位	985.24	12.30%	交通运输用地	9210.66	24.67%
保障房	3326.87	41.55%	水域及水利设施用地	80.81	0.22%
其他普通商品房	3523.87	44.01%	其他土地	97.28	0.26%



Real estate regulation



- total amount,
- distribution,
- temporal
- and allocation of national land supply

汇报完毕，谢谢！