

绿色交通在重庆的实践

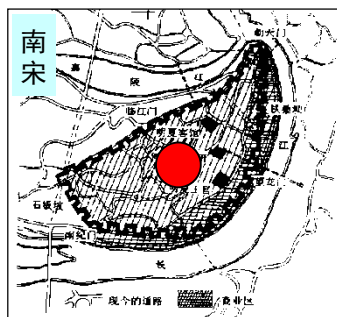
The Practice of Green Transport in Chongqing

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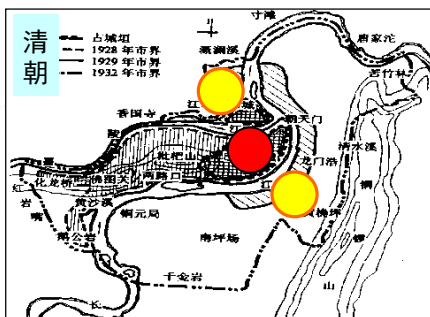
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- 重庆地形特征及交通特征
 - 近几年在绿色交通方面的推进及成效
 - 困惑及思考
 - Chongqing landform features and transport features
 - In recent years the advancement and effectiveness of green transport
 - The confusion and thinking
-

多中心组团的典范

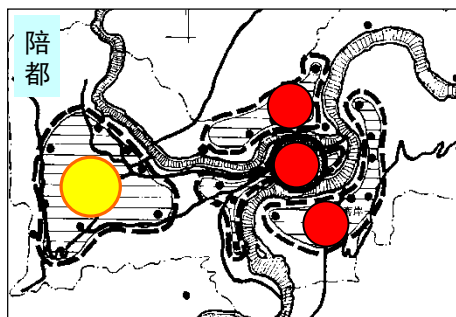
- 半岛聚集—陪都西拓—三线建设跨越两江：利用几次大规模外力嵌入来克服城市空间拓展的门槛，不断发展新的专业性组团以承载国家要求。



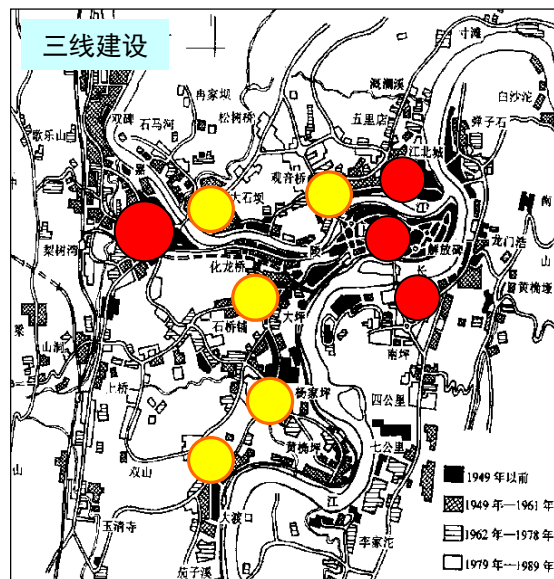
地方行署



国家商埠



国家政治文化中心



国家工业基地

第一次裂变: 跨江发展

第二次裂变: 文化科教组团的出现

第三次裂变: 工业组团的沿江拓展

A model of multi center city.

Peninsula - capital accumulation West Extension - three line construction across the two rivers: the use of force to overcome several large-scale embedded city spatial expansion threshold, the continuous development of new professional group to carry the national requirements.

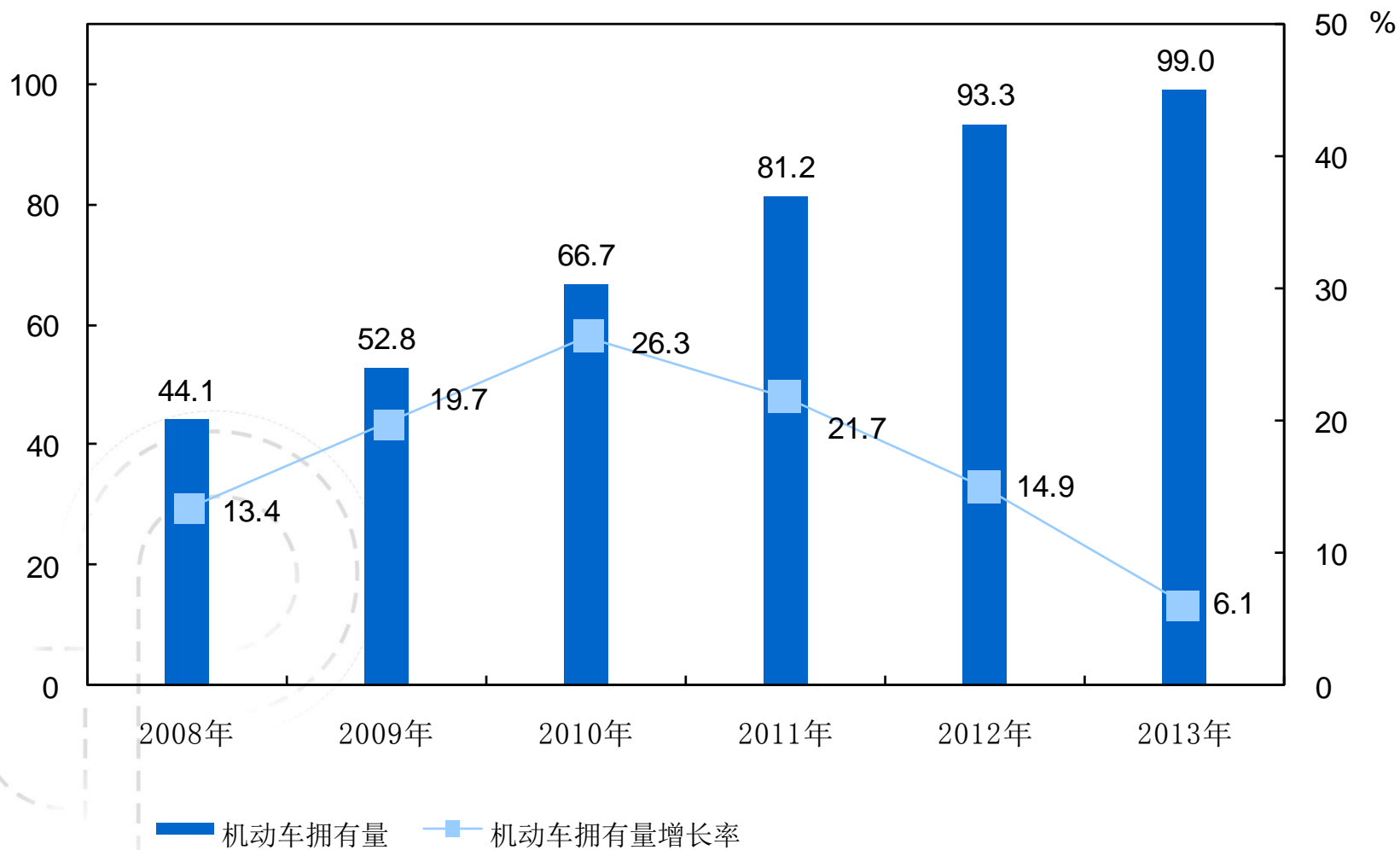
机动车发展

2013年底，全市机动车拥有量404.8万辆，同比增加17.9万辆，增长4.6%。其中，汽车191.0万辆，同比增加33.8万辆，增长21.5%。

The development of motor vehicles

By the end of 2013, the quantity of motor vehicle 4048000 vehicles, an increase of 179000 cars, 4.6% growth. Among them, 1910000 vehicles, an increase of 338000 cars, 21.5% growth.

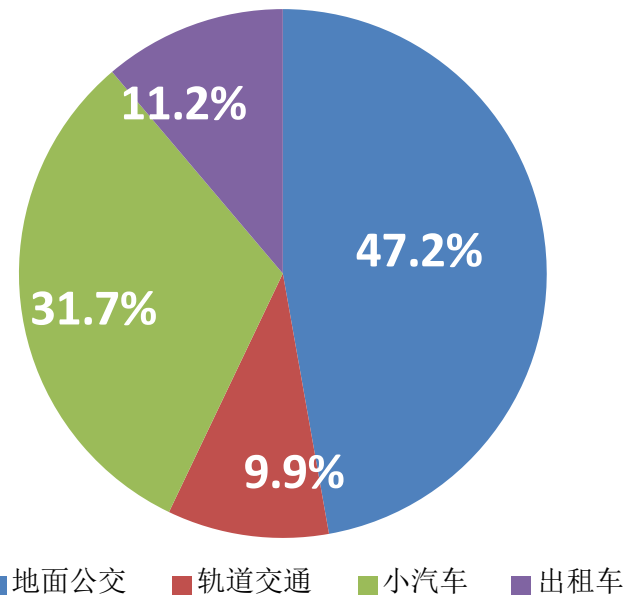
万辆



主城区机动车拥有量变化示意图



- 出行方式
- trip mode



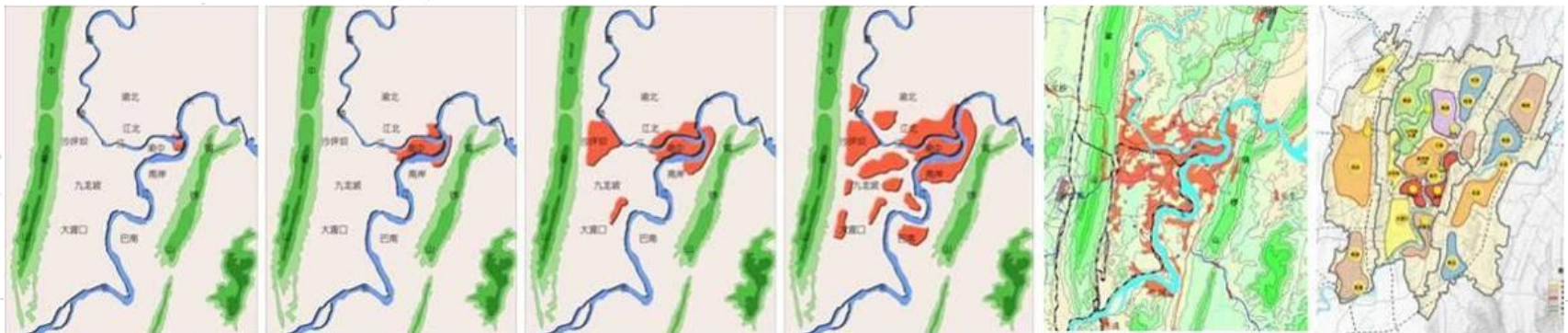
主城区居民机动化出行方式

Motorized travel modes of inhabitants in urban areas （单位： %）

| 出行方式 trip mode | 地面公交 Public transport | 轨道 metro | 出租车 taxi | 小汽车 car |
|-------------------|-----------------------------|-------------|-------------|------------|
| | 47.2 | 9.9 | 11.2 | 31.7 |

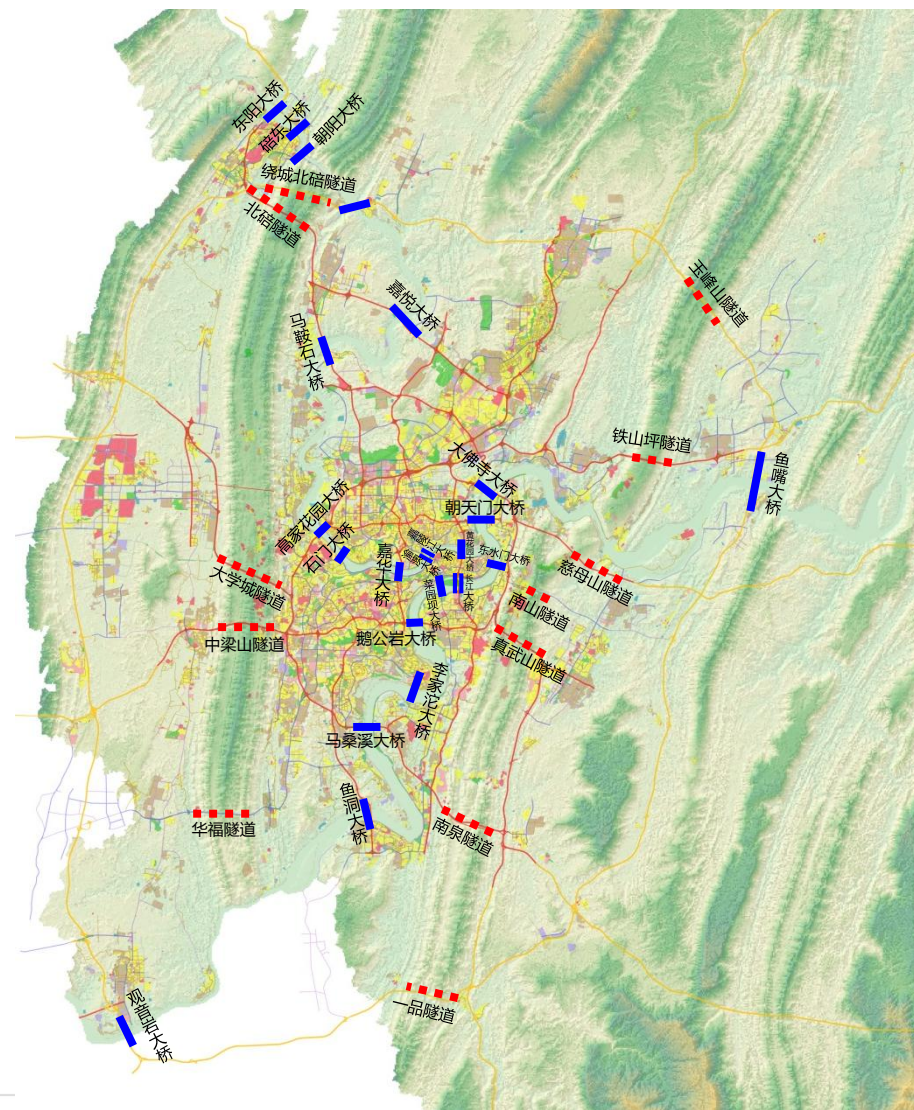
1、城市：典型的组团城市

- ❑ 受“两江、两山”地理特征的影响，都市区组团式发展特征明显，并逐步形成了“多中心、组团式”的空间布局。
- ❑ “两江、两山”是组团的天然分界线，由于“跨两江”、“穿两山”的桥隧工程投资巨大，也形成了**道路网发展的天然瓶颈通道**。
- Influenced by the "two rivers, two mountains" geographical features, the metropolitan area of cluster development characteristic is obvious, and gradually formed a "space layout, multi center group".
- The "two rivers, two mountain" is the natural dividing line group, because of the "cross rivers", "wear two mountains" bridge and tunnel engineering of huge investment, but also the formation of channel natural bottleneck road network development.



2、城市道路网布局形态

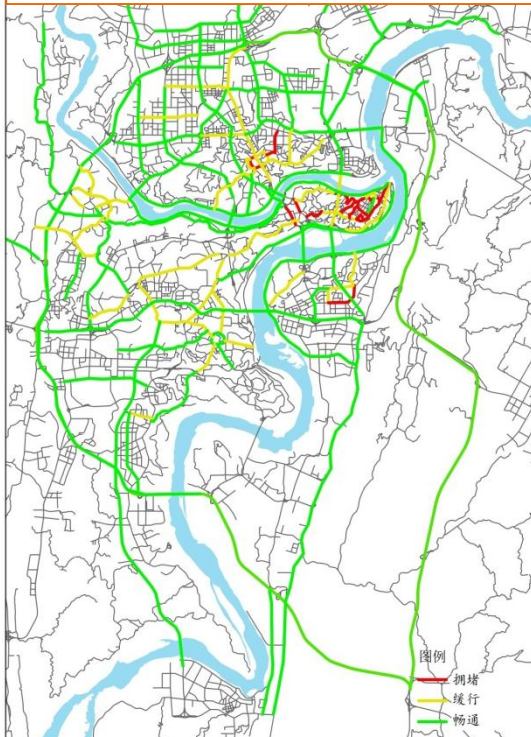
- ❑ “切割”是道路网最显著的特征，受“四山”的切割，形成东、中、西三个槽谷；受“两江”的切割，中部槽谷又形成北、中、南三大片区。
- ❑ 槽谷、片区内部的道路网络自成体系，而槽谷、片区之间通过有限的桥隧联系。
- ❑ "Cutting" is the most significant feature of the road network, cutting by the "four mountains", the formation of East, West Valley, in three; by the "two rivers" cutting, Central Valley and the formation of North, South, in three kilometer.
- ❑ Valley area, the internal road network self system, and limited by the contact area between the bridge and tunnel valley.



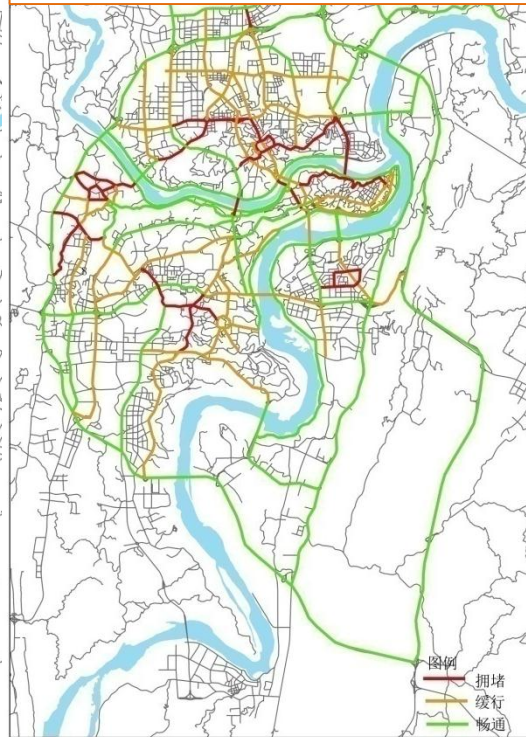
高峰时段车速不断下降。 The peak period of declining speed

- 内环以内干道平均车速从2011年的29.36 km/h下降到2013年24.5 km/h。局
- Within the inner ring road average speed from 29.36 km/h in 2011 down to 24.5 km/h in 2013

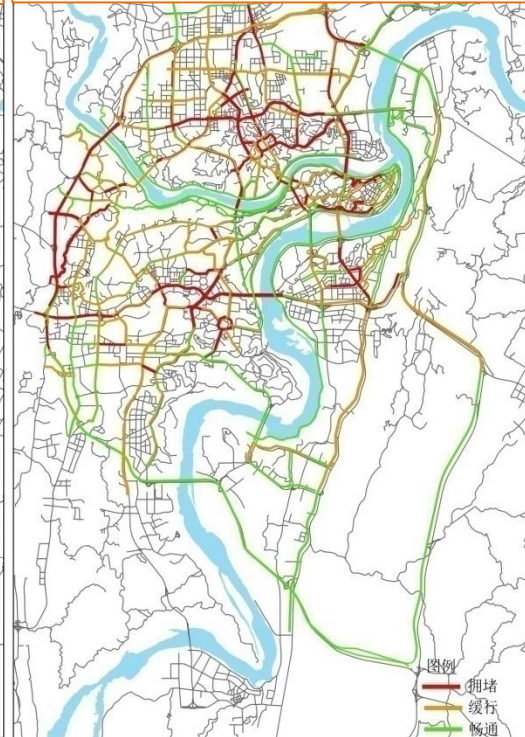
2011年高峰时段拥堵分布图



2012年高峰时段拥堵分布图



2013年高峰时段拥堵分布图



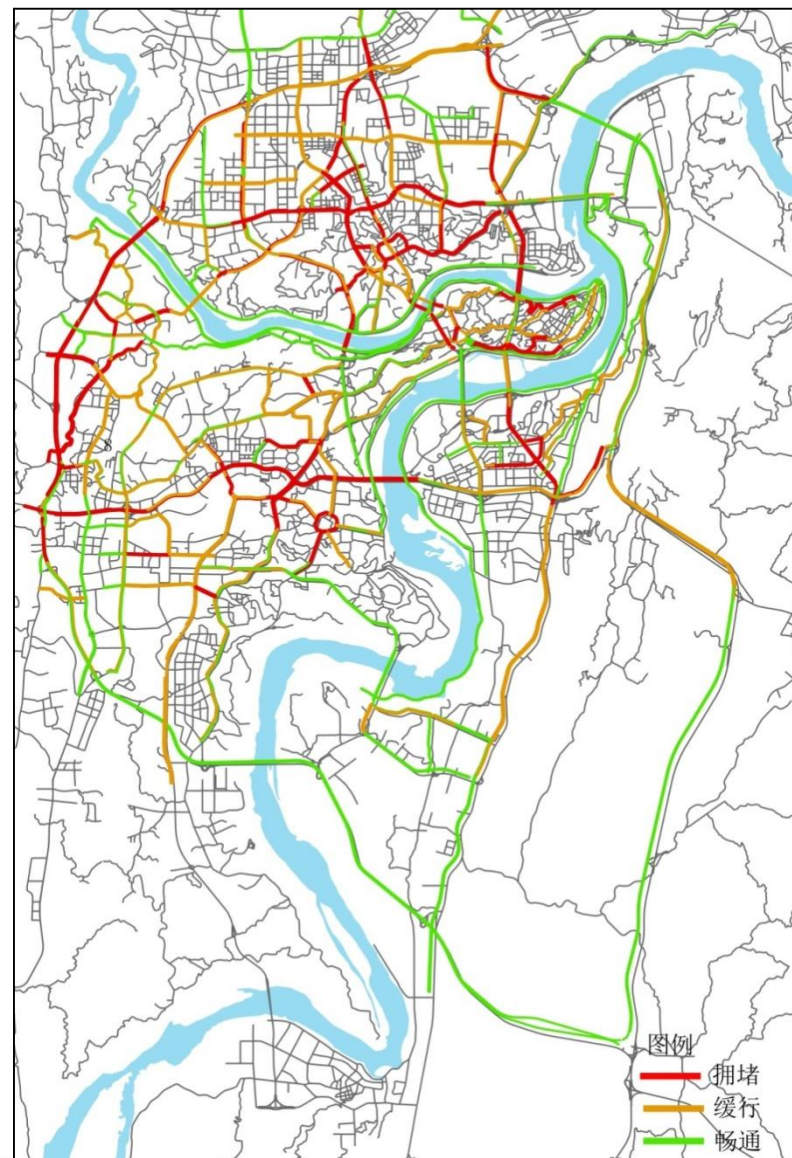
内环以内干道平均车速 (km/h)

| 年份 | 干道平均车速 |
|------|--------|
| 2011 | 29.36 |
| 2012 | 24.9 |
| 2013 | 24.5 |

高峰时段拥堵范围扩大。

the scope of peak period congestion expand

- ❑ 穿山隧道、跨江桥梁、商圈环道以及核心区快速干路高峰期间拥堵严重。
- ❑ 五大商圈由局部拥堵向区域拥堵扩散，商圈呈现常态性拥堵。
- ❑ Mountain tunnel, bridge across the river, ring road and roads looks fast core area of peak period congestion seriously.
- ❑ The five values by local congestion to regional congestion diffusion, values show normal congestion.

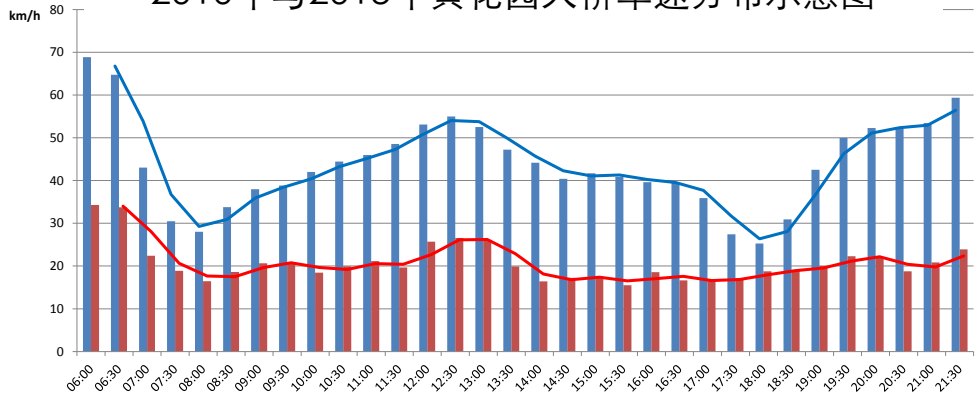


拥堵持续时间增长。

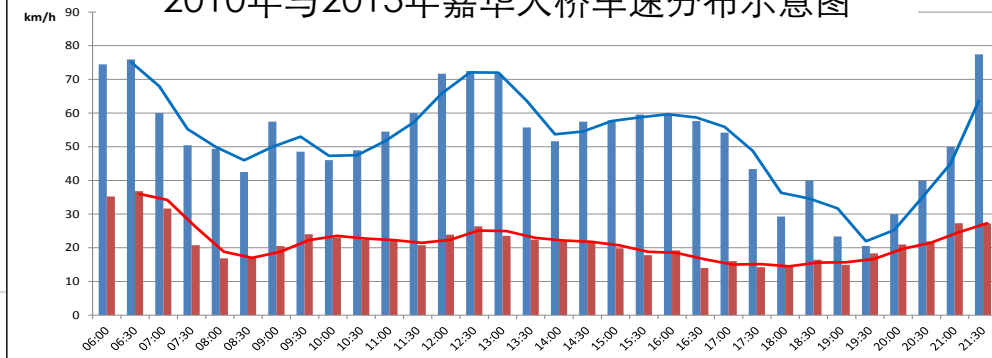
- 嘉华大桥、黄花园大桥等主要大桥，中梁山隧道、大学城隧道，以及主要通道（如快速路四横线、新南路）和主要节点（如四公里立交、新牌坊转盘）由早晚高峰拥堵发展为全天长时间的拥堵。

Jiahua bridge, Huang garden bridge main bridge, tunnel, tunnel in Liangshan University City, and the main channel (such as road four line, the New South Road) and the main node (such as four km highway, the new arch turntable) by the morning and evening peak congestion for the development of the whole long time congestion.

2010年与2013年黄花园大桥车速分布示意图



2010年与2013年嘉华大桥车速分布示意图



交通发展态势

- 城市建设用地需求稳步增长，交通出行距离增长带来的机动化出行比例增加
- 机动车保有量快速增长，对城市交通的冲击大
- 如何构建具有组团式城市结构的交通体系
- 如何提高公共交通的使用率

The development trend of transport

- ▣ City construction land demand and steady growth, the proportion of motorized trips
- ▣ distance from growth to increase
- The rapid growth in the amount of motor vehicle, the transport impact of large city
- ▣ How to construct group type city transport system structure
- ▣ How to improve the use of public transport

- 优化用地布局
- 整合和优化地面公交线网，构建一体化的公共交通网络
- 注重完善步行和自行车交通体系
- Optimization of land use
- The integration and optimization of the ground public transit network, public transport network construction integration
- Focus on improving the walking and bicycle transport system

优化用地布局：

强化片区网格自由式的路网结构，适应组团式的空间格局；综合考虑交通组织和职能分工，重新考量组团边界的划分；合理控制用地开发强度，有效引导老城疏解与新区拓展；合理引导产业和交通设施布局，实现组团内部职住平衡；建立与人口密度分布相适宜的公共交通发展模式；组团建设规模以适宜的交通距离为宜。

Optimization of land use layout:

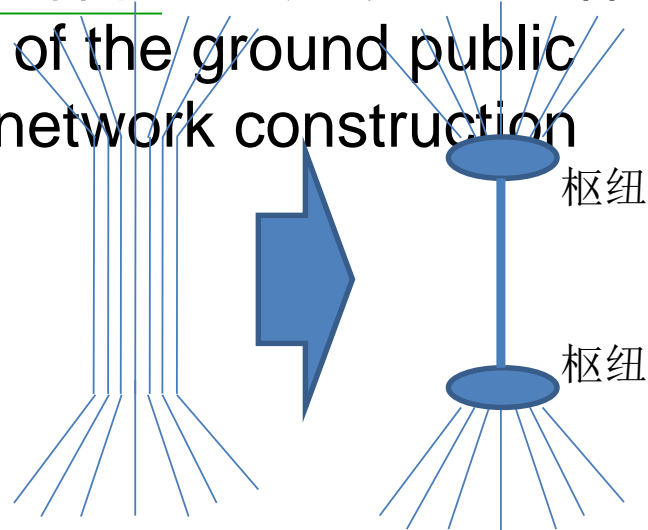
Strengthening network structure kilometer grid free style, to adapt to the space pattern; comprehensive consideration of the traffic organization and the division of functions, reconsider division group boundaries; the reasonable control of land development intensity, effectively guide the old solution and new district development; reasonable guide industry and traffic facilities layout, implementation of group internal job housing balance; the establishment of public traffic development pattern and population density distribution suitable; group construction scale with suitable transportation distance is appropriate.

整合和优化地面公交线网，构建一体化的公共交通网络

The integration and optimization of the ground public transit network, public transport network construction integration

通过**枢纽转换**整合跨区常规公交线路，增加垂直接驳公交支线。实现公交干线、公交支线与轨道交通之间的无缝换乘。

Through the integration of cross regional hub conversion of conventional bus lines, increase the vertical feeder bus branch. To realize the seamless transfer between trunk, feeder bus transit and rail transit.



线网布局匹配



枢纽衔接通畅



运营管理协调



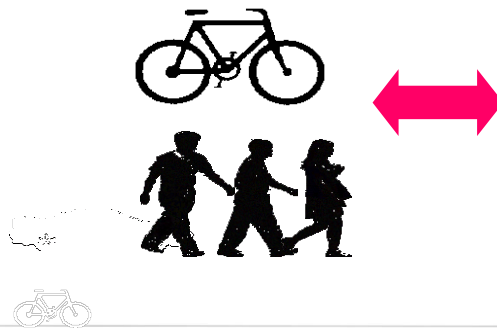
一体化公共交通

-
- ✚明确公交服务的公益性，政府加大对公交的财政补助力度。
 - ✚ 实施区域票制，适度降低组团内部公交票价。在轨道交通、公交干线与公交支线间实施优惠换乘。
 - ✚Clear public transit services, the government increased public financial assistance efforts.
 - ✚The implementation of regional vote system, appropriate reduction of group internal bus fares. The implementation of preferential transfer in rail transit, transit trunk and branch line between bus.

注重完善步行和自行车交通体系Focus on improving the walking and bicycle traffic system



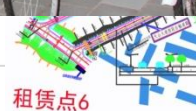
- 发挥组团式城市“职住平衡”的优势,鼓励绿色慢行交通出行；
- 改善步行交通出行环境，保障步行空间；
- Play group type city "of job housing balance" advantage, to encourage green slow traffic;
- To improve walking traffic environment, guarantee the walking space;



-
- ✎ 在两江四岸滨江地区以及西永、茶园、龙盛等城市新拓展区因地制宜的发展自行车交通和垂直步道。
 - ✎ 倡导B+R出行模式，提升轨道交通最后一公里的出行服务。
 - ✎ Develop the bicycle and walk conditons
 - ✎ Advocate B+R trip mode, improve the last kilometer travel service of rail transport.

北部新区实践： 自行车道规划建设 公共自行车推广

The northern area of practice:
The bikeway planning and
construction
Public bicycle promotion



图卢兹与重庆的交通规划合作（从2008年至今）：

- 渝中区交通问题的解决方案
- 两江新区自行车交通系统规划
- 两江新区有轨电车交通系统规划
- 两江新区有轨电车示范线规划设计

Cooperation between Toulouse and Chongqing in transport plan(since 2008):

- Solution of transport problems in Yuzhong area
- Bicycle transport system plan in Liangjiang New District
- Tram transport system plan in Liangjiang New District
- A tram line plan and design in Liangjiang New District

目前仍然需要解决的问题在如何使公共交通提供更好的服务，以及在用地布局实现职住平衡，提高组团内部交通出行更多使用自行车和步行，减少机动车出行比例。

At present, still need to resolve problems and provide better services on how to make the public transport, as well as in the implementation of job housing balance land layout, improve the group internal traffic travel more use of bicycles and walking, reduce the proportion of motor vehicle trip.

当前规划的重点问题：

1、过江通道、穿山隧道是否越多越好？桥梁隧道是交通拥堵的瓶颈？该如何解决？

2、职住平衡的引导及自我选择？

1, does the bridges and tunnels the more the better?

Bridges and tunnels are the bottleneck of transport jams?

How to solve?

2, job housing balance guidance and self choice?

3、公共交通发展与小汽车增长的博弈？

4、绿色交通的推广？

5、车辆限购或限行？

6、中心区停车问题的不同声音。

3, public transport development and the increase of cars?

4, the promotion of green transport?

5, vehicle purchase or limit line?

6 different sounds of how to resolve the parking problems of central area.

谢谢!
THANKS!

