

# Move Towards The Sustainable Metropolitan Transportation Development In China

## A Case Study Report of Guangzhou

March, 2016



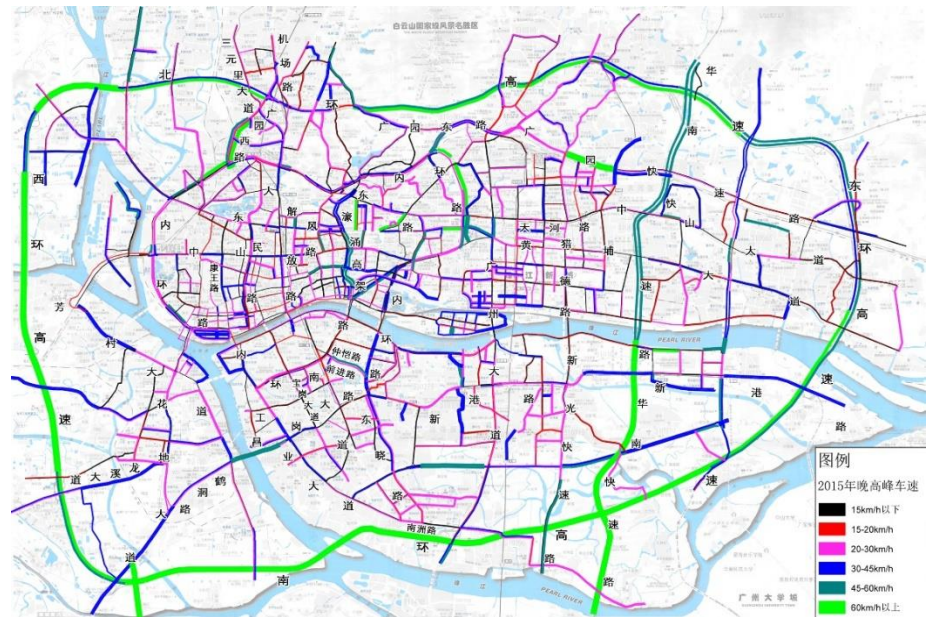
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# 1 Background

## Basic Data

- GZ (Canton): China National Central City, established in 214 B.C, capital of GD Province.
- Population: 16.67million
- Urban Area: 7434.4 km<sup>2</sup>
- In 2015, 2.504 million motor vehicles, 75.7% cars (1.887 million).
- Evening peak period: car speed in CBD drops by 55% from 22.5km/h to 21.2 km/h.



## 2 Current Issues

- Population (Influx graduates & migrant workers)
- Traffic demand exceeds supply (high GDP growth rate--improved life quality--car purchase demand + inbound & outbound transportation demand)
- Insufficient transportation resources (eg. parking spaces about 650,000, 26% of total number of cars)
- Room for Public Transport Development
- Transportation Management & Service Upgrade

- Transportation Resources Rearrangement
- Paying equal attention to construction, management & service
- People-centered Public Transportation
- ITS & Smart Transportation

# 4 Pertinent Action Plan

## 4.1 Further strengthen coordination mechanism between government organizations collaboratively for better transportation development

### (i) Urbanization & Suburbanization

Urbanization & Suburbanization are in line with China's development trend and policy. Yet in many aspects, overall city planning & land use planning cannot be closely linked with the comprehensive transportation planning to avoid reliant-on-automobile and low-density city sprawl morphology.

### (ii) Government organizations' role in standardization of ITS platform function

Geographical names, electronic maps, data format etc. to push forward the construction of info system and data sharing, data mining to address the segmentation problems of management information between organization and branches.

# 4 Pertinent Action Plan

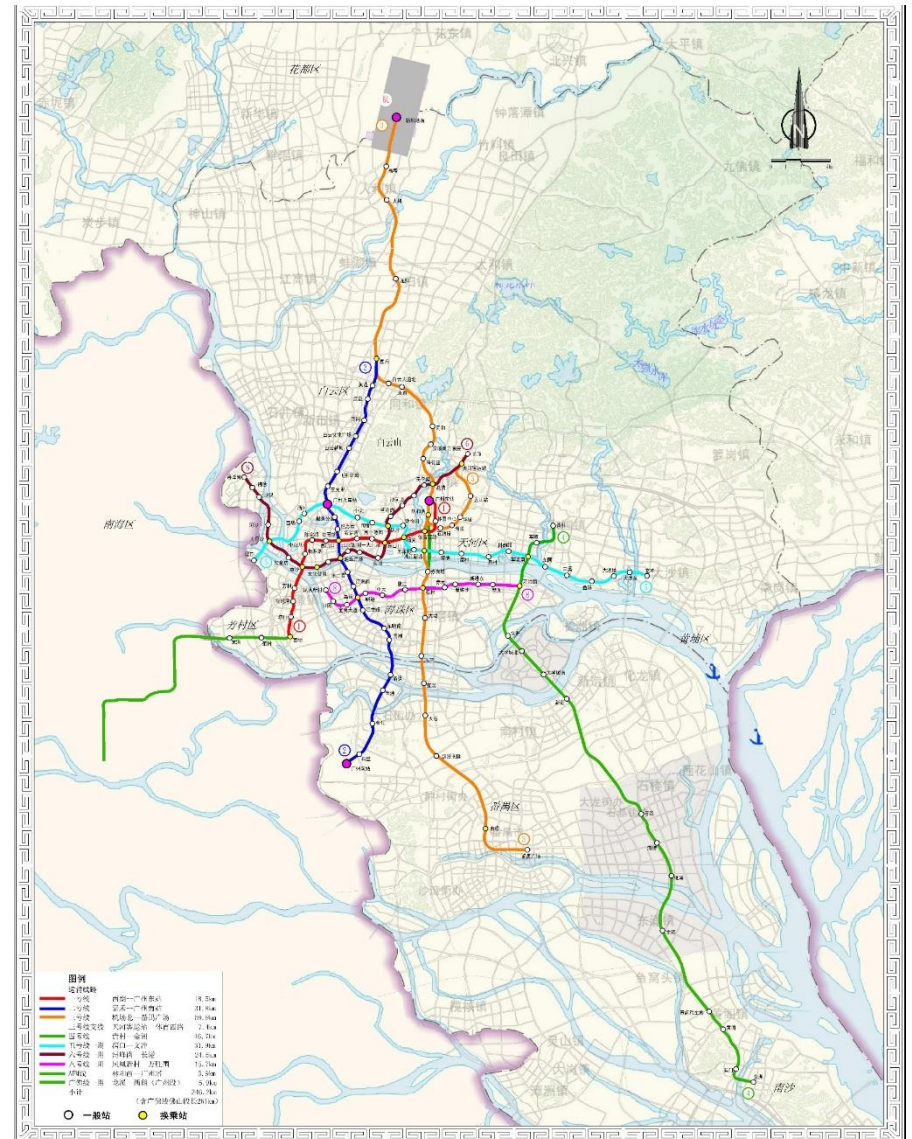
## 4.2 Focus on public transportation construction, management & service

People-centered Public Transportation: smooth, economical, convenient, eco-friendly

### (i) Construction

#### Metro

- Today: 9 metro lines, 266km
- Under construction 11 lines/sections, 303km
- In 2018: 15 lines to be completed with a total length of 564km



## 4 Pertinent Action Plan

### 4.2 Focus on public transportation construction, management & service

People-centered Public Transportation: smooth, economical, convenient, eco-friendly

#### (i) Construction

##### **BRT**

Based on the current line, take into account such factors as land use planning, road conditions, the cost, experts comments etc., carefully review the need to expand this system.

##### **Tram**

Tram Line 1&2 in GZ' s Zengcheng District will be open to traffic this year. In 2017, tram line is scheduled to start operation in GZ Higher Education Mega Centre.

##### **Parking Space**

An increase of about 600,000 parking spaces(2016–2020).



## 4.2 Focus on public transportation construction, management & service

People-centered Public Transportation: smooth, economical, convenient, eco-friendly

### (ii) Management & Service

- Reschedule the routes
- Expansion of Scats, CCTV, Police Enforcement Units and Traffic Flow Detection spaces (2016–2020)
- Scrapped high-emission passenger cars and yellow Label cars
- Number plate lottery and restricted area for heavy-duty truck

# 4 Pertinent Action Pent

## 4.3 ITS & Smart Transportation

- (i) Upgrade the existing systems
- (ii) Facilitate system integration & data sharing, data mining between different systems.
- (iii) Outsourcing for better transportation service on the basis of: cloud platform, icloud computing, IoT, IoV, Internet+transportation for mass-data storage, congestion index analysis & real-time road status info release, traffic control info, traffic incident notice, emergency decision-making assistance subsystem\*\*\*



# 5 Expected Results

## 5. Social & Economic Benefits

Improve the quality of transportation service, traffic safety and the environment to avoid waste of resources and create harmonious city image, and also achieve the direct and indirect economic benefits to satisfy people with smooth, economical, convenient, eco-friendly and sustainable transportation.