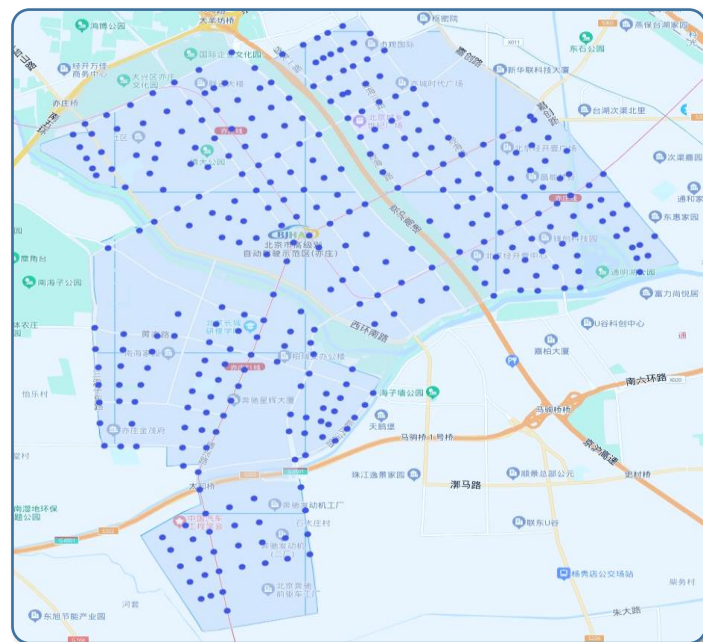


Beijing's Exploration in the Autonomous Driving Industry Development

**Beijing High-level Autonomous Driving
Demonstration Zone Work Office**

BJHAD | Application Achievements



60 kilometers intersections construction



Robotaxi



Unmanned Retail Vehicles



Autonomous Patrol Car



Autonomous Sanitation



Robobus



Autonomous Shuttle



Last Mile Delivery



Autonomous Trunk



23,800,000 km
Testing Mileage

2,000,000
Robotaxi Service Orders

4,460,000
AV delivery service

◆ Up to now, road test licenses have been issued to 811 vehicles from 28 companies

442
Passenger vehicles

85
AVs without safety driver

340
Autonomous Delivery & Retail Vehicles

3
Autonomous shuttles

11
Autonomous Trunk

10
Connected buses

The First Inter-Provincial Operation of Autonomous Trucks



Autonomous Shuttle Service



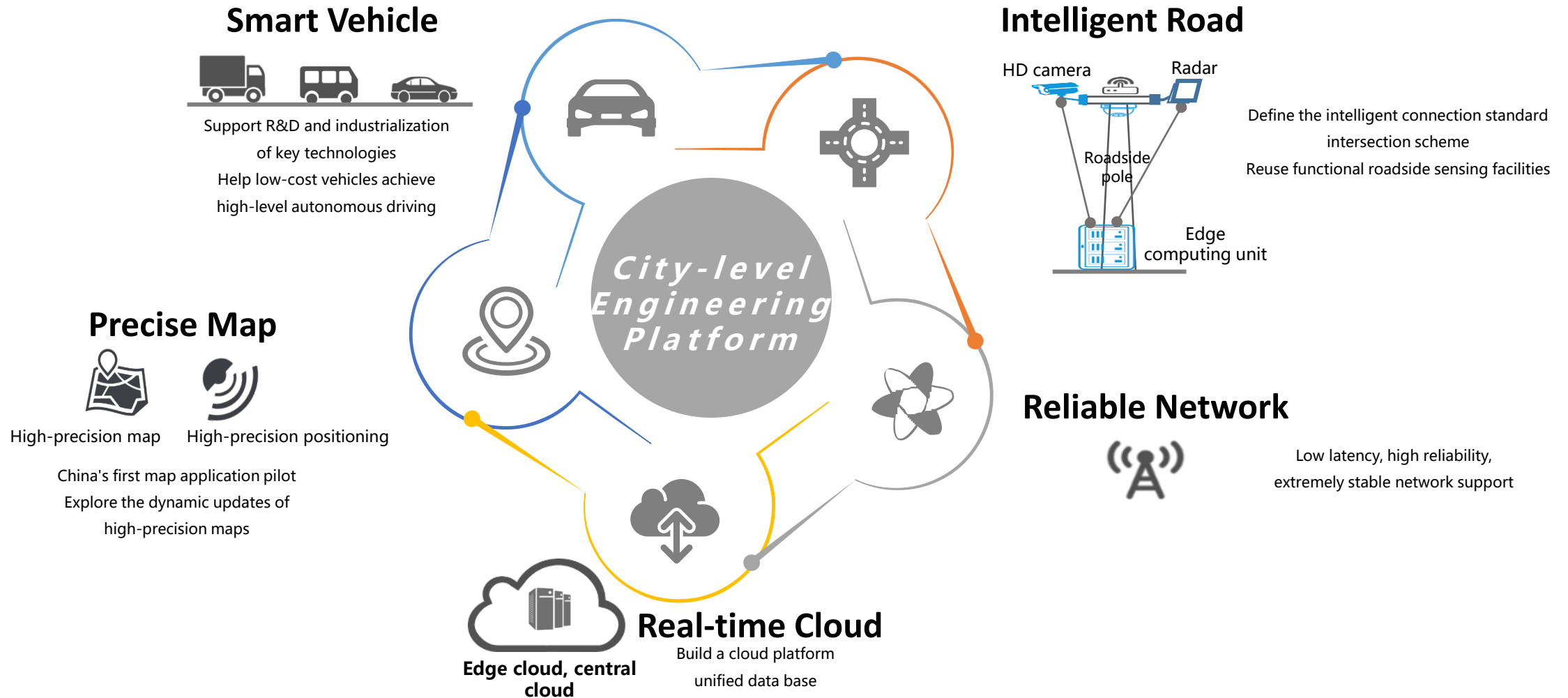
Autonomous Sanitation Vehicle Service



Regular Autonomous Shuttle Service at Daxing Airport



In September 2020, Beijing decided to build High-level Autonomous Driving Demonstration Zone



Intelligent Connected Vehicle (ICV)



Collaborative Perception



Collaborative Decision Making



Cooperative Control

Intelligent Transportation System (ITS)



Transportation Guide



Traffic Signal Optimization



01

ICV

Supporting Intelligent & Connected Vehicles

Use Vehicle-Road-Cloud Integration Technology to empower AV function upgrades, effectively improving AV safety and traffic efficiency

Effectively improve safety

Empowering AV to achieve crowd intelligence collaboration

V2X应用：感知协同



Dynamic blind spot occlusion

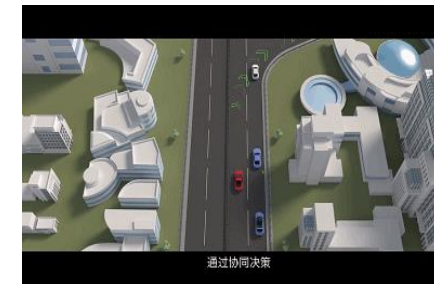


Traffic light fusion perception

Lane Change



Lane change can easily cause traffic obstruction



Multiple vehicles collaborate to achieve safe lane changes

Perception



Fleet Driving



Driverless trucks platooning in mining areas



High-speed autonomous truck platooning



Traffic light signal updates
27,169 times /week.



V2X communication
8,736 times /week




Delivering Roadside
Perception and Traffic Light
Countdown Information
Services 700 Million Times



Daily Generation of 60,000
Roadside and Cloud Control
Platform Events



Vehicle-Road-Cloud Integration Cloud Platform

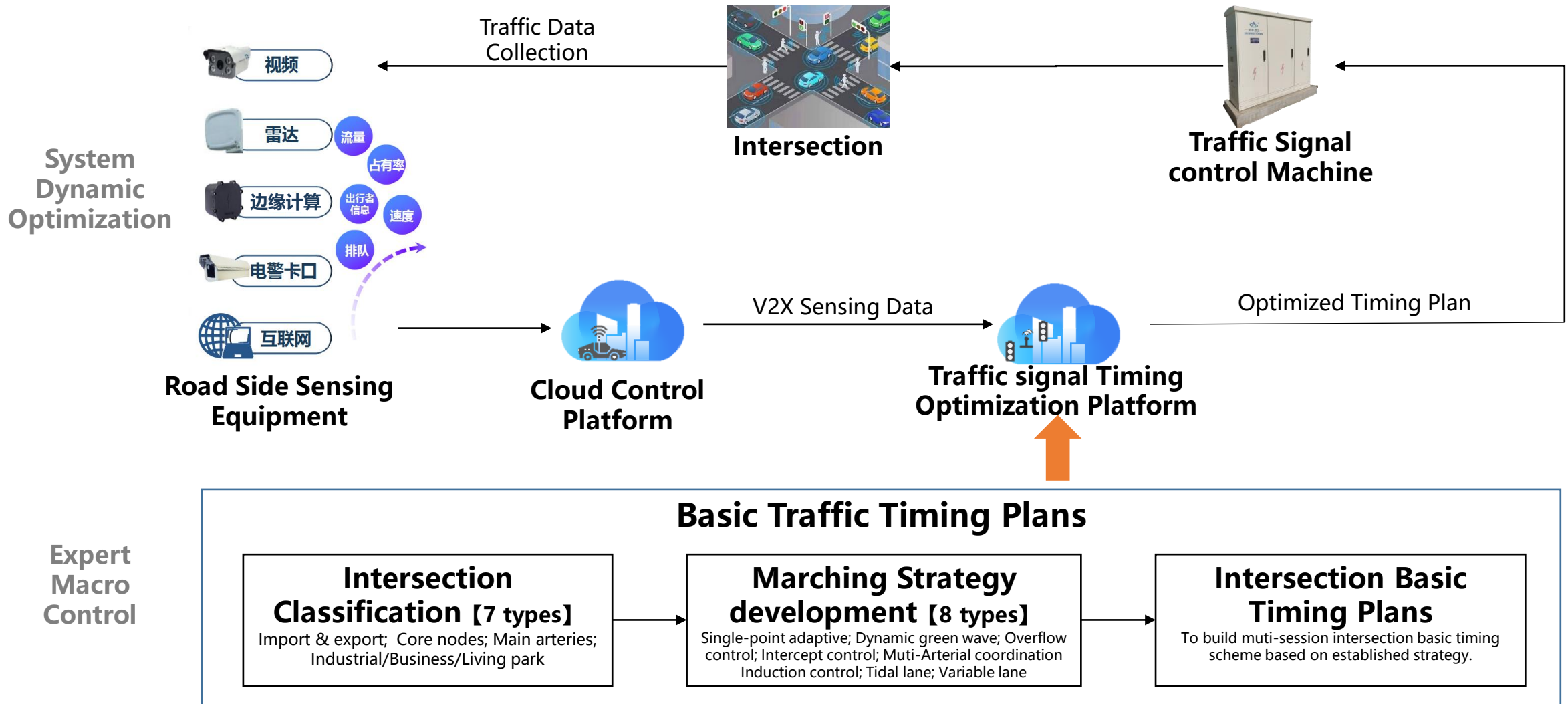


02

ITS

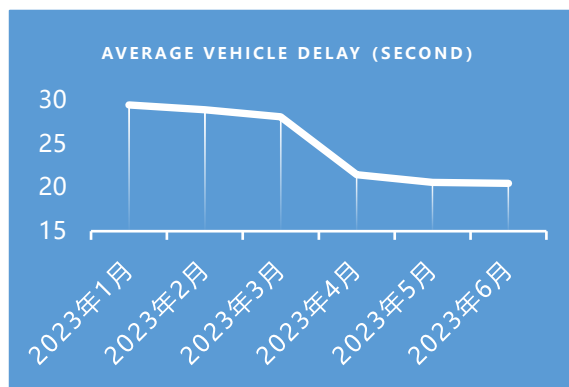
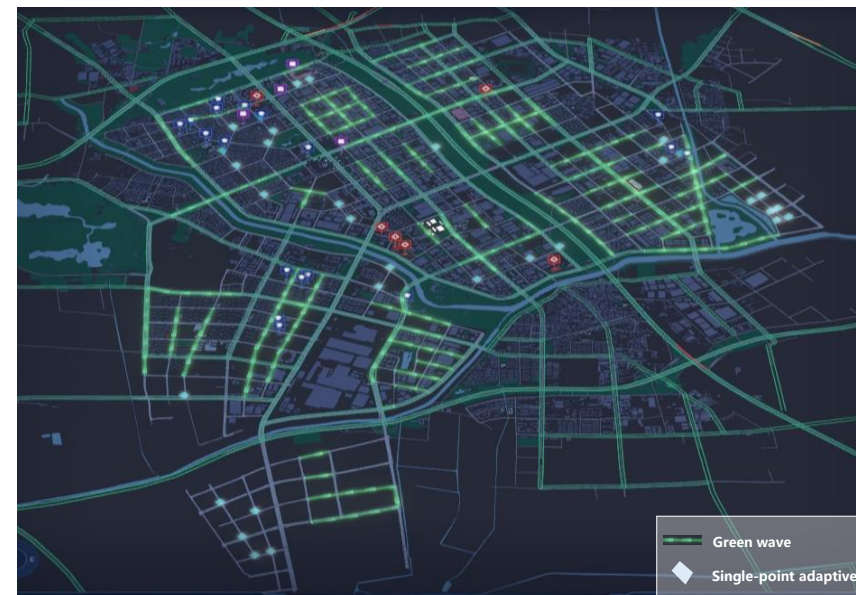
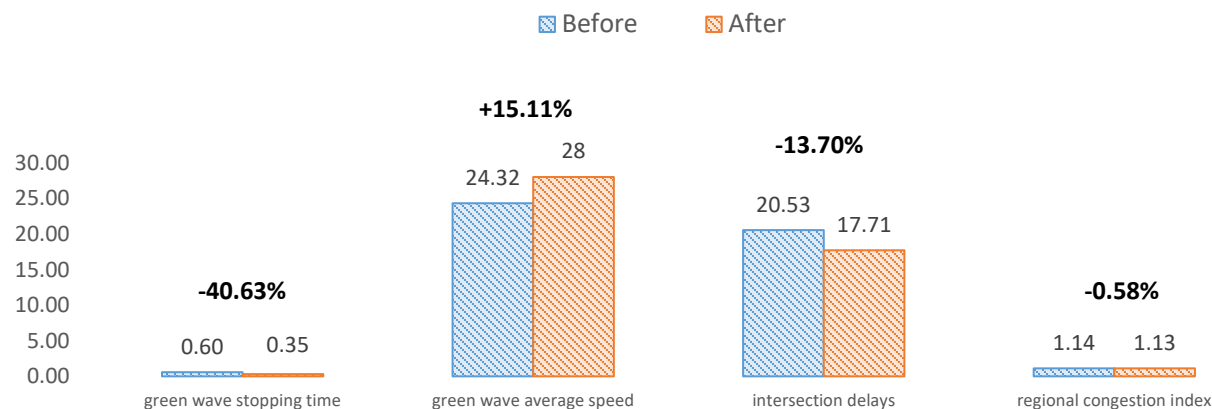
Empowering Intelligent Transportation

1. Architecture of human-machine traffic signal optimization

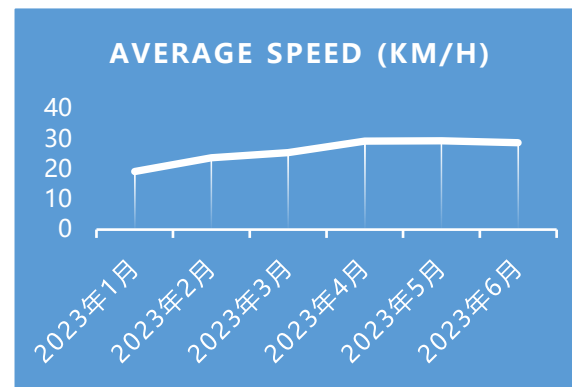


2. Effect of traffic signal optimization

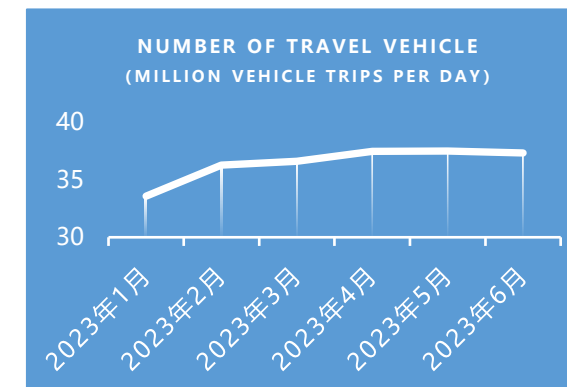
Before and after comparison of signal Optimization effects :



A decrease of 30.48%




An increase of 50%



An increase of 11.20%

Statistical Period: 7:30-19:00 on weekdays



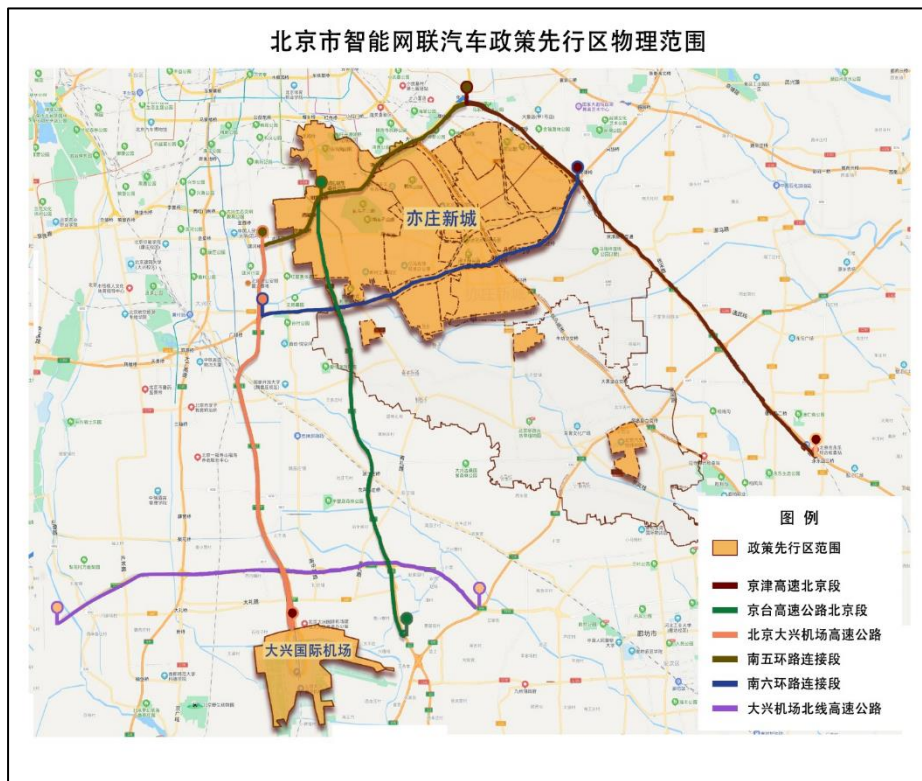
03

Application Achievements

Innovation Policies and Regulatory Mechanism

Achievement | Development of the Policy Pilot Zone

In April 2021, Beijing approved the establishment of the Beijing Intelligent & Connected Vehicle Policy Pilot Zone



Coverage:

225 square kilometers of planning area in E-Town and also Beijing Daxing Airport

Expressways:

Six expressways sections with a total length of about 143 kilometers

Advanced Technologies

- 01 | To promote the unmanned technical verification of AV
- 02 | To conduct road tests of AV on expressways

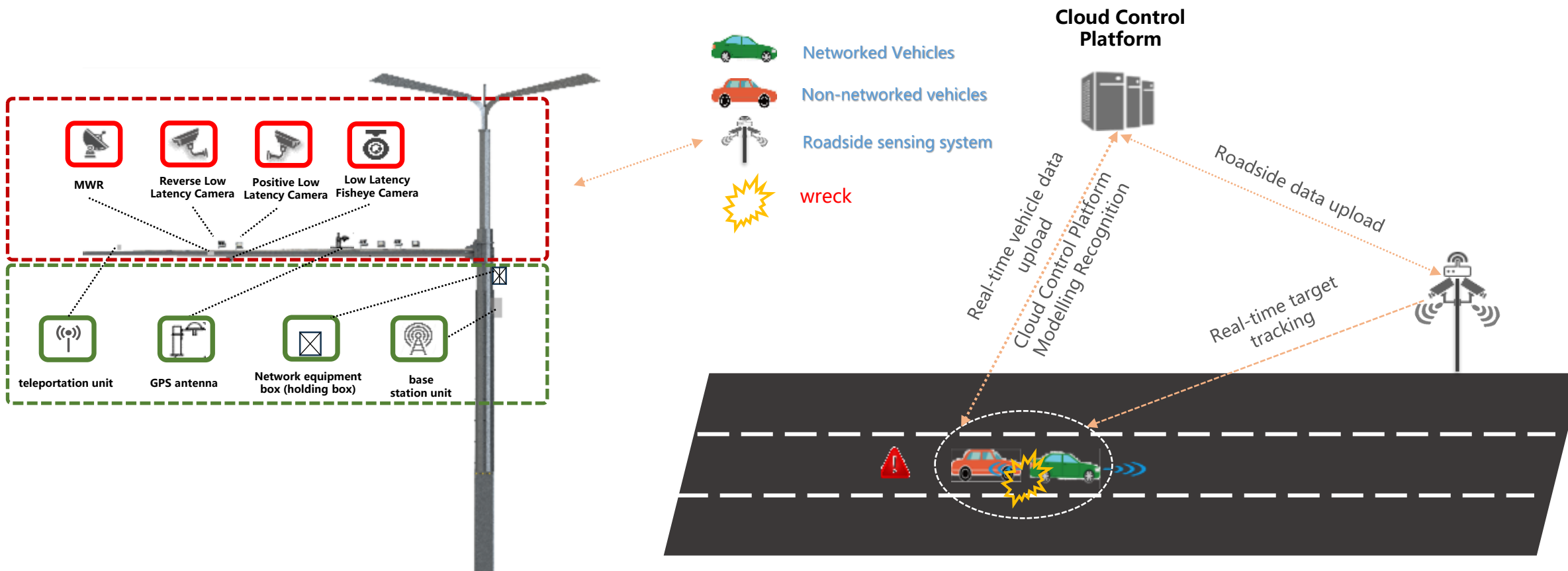
New Products

- 03 | To publicize AV codes and to allow autonomous retail and delivery vehicles on the road
- 04 | To trial road tests of autonomous cleaning vehicles
- 05 | To support short-range operation of Robobus

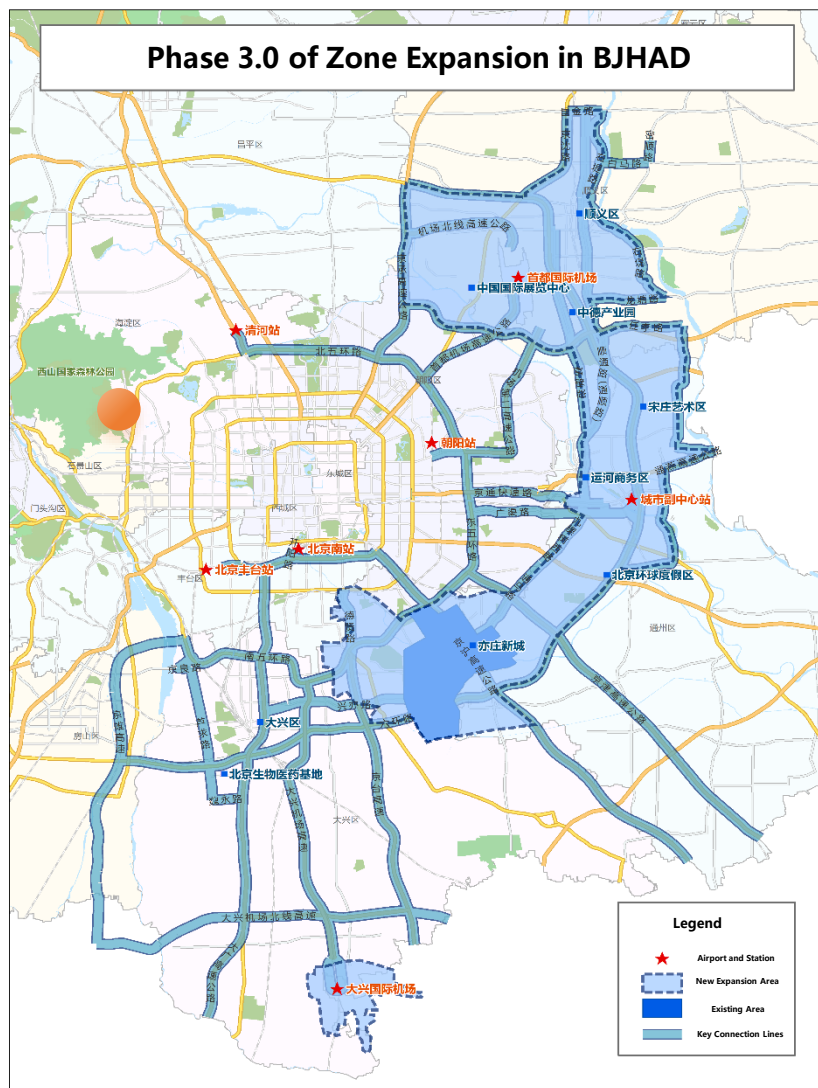
New Modes

- 06 | To trial commercial operation of AV
- 07 | To support mutual recognition of remote road test results and test exemptions

Establish the "Traffic Management Bureau" for AVs.



Our Commitment for the Future



Autonomous Driving Services to Every Corner of Beijing

In the future, the demonstration zone, building upon the existing **160 km²**, will further expand to cover more of Beijing, reaching a total of **600 km²**.



Daxing International Airport



Capital International Airport



Beijing South Railway Station



Chaoyang Station



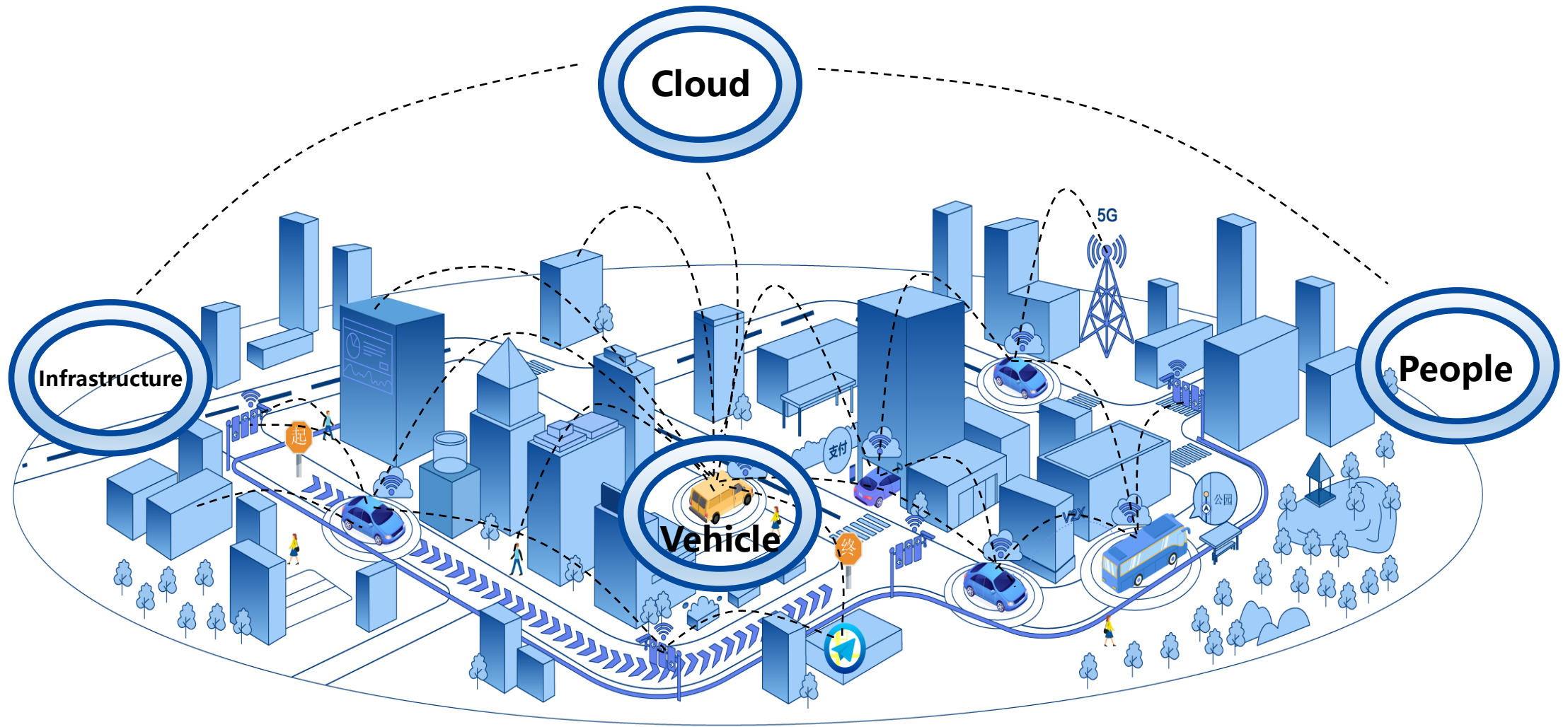
Sub-center Station



Fengtai Station



Qinghe Station



Interconnections of Multiple Urban Elements

Openness, Inclusiveness, Cooperation

Sharing the Industrial Reform Opportunities



Contact



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