Geospatial Information Technology for Mobility Services

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DiDi

MORE THAN A JOURNEY

DiDi: World's Largest Transportation Platform

+31 million work opportunities

+550 million registered riders

10 billion trips/year

To Consumers

- Taxi
- Express
- Enterprise
- Premier
- Luxe
- Bike & E-Bike
- Car Sharing
- Designated Driving
- Food Delivery

To Cities

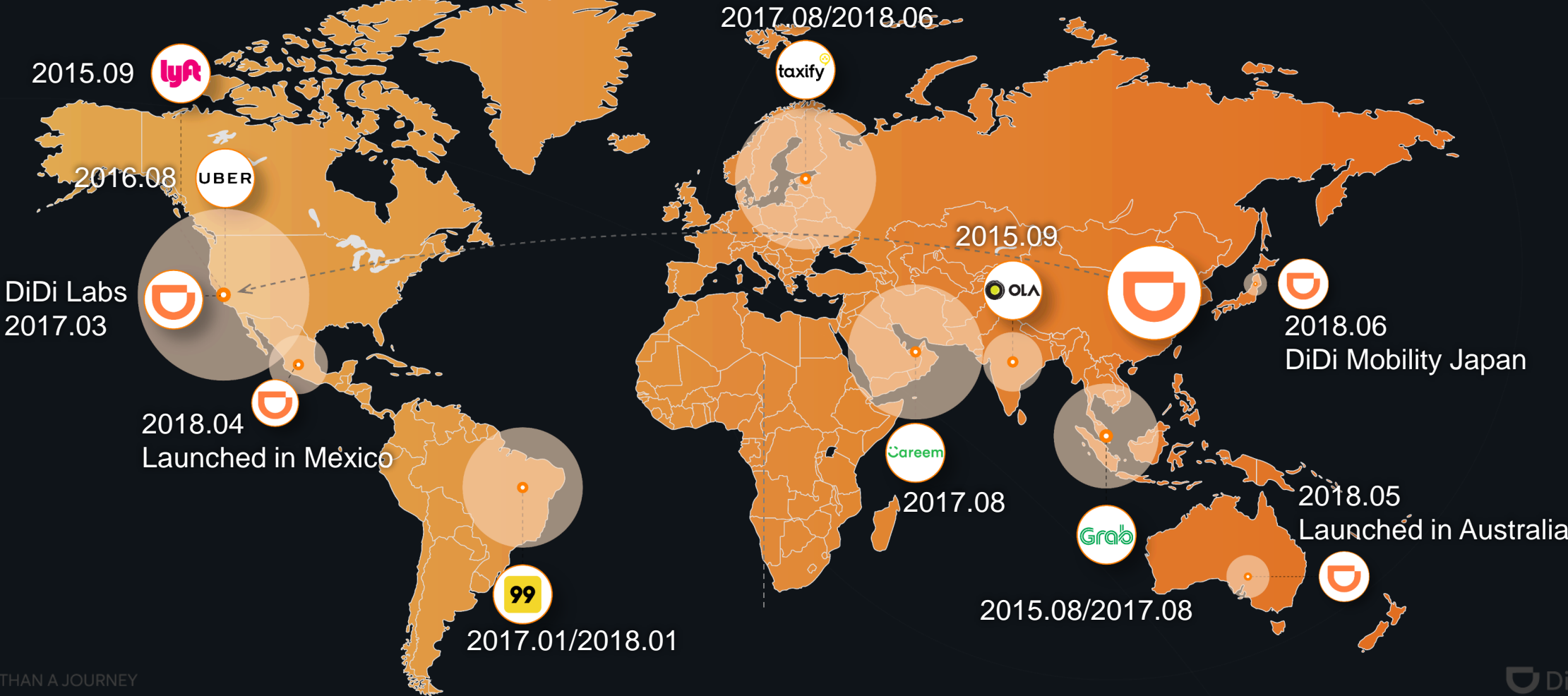- Public Bus Mgmt System
- Minibus
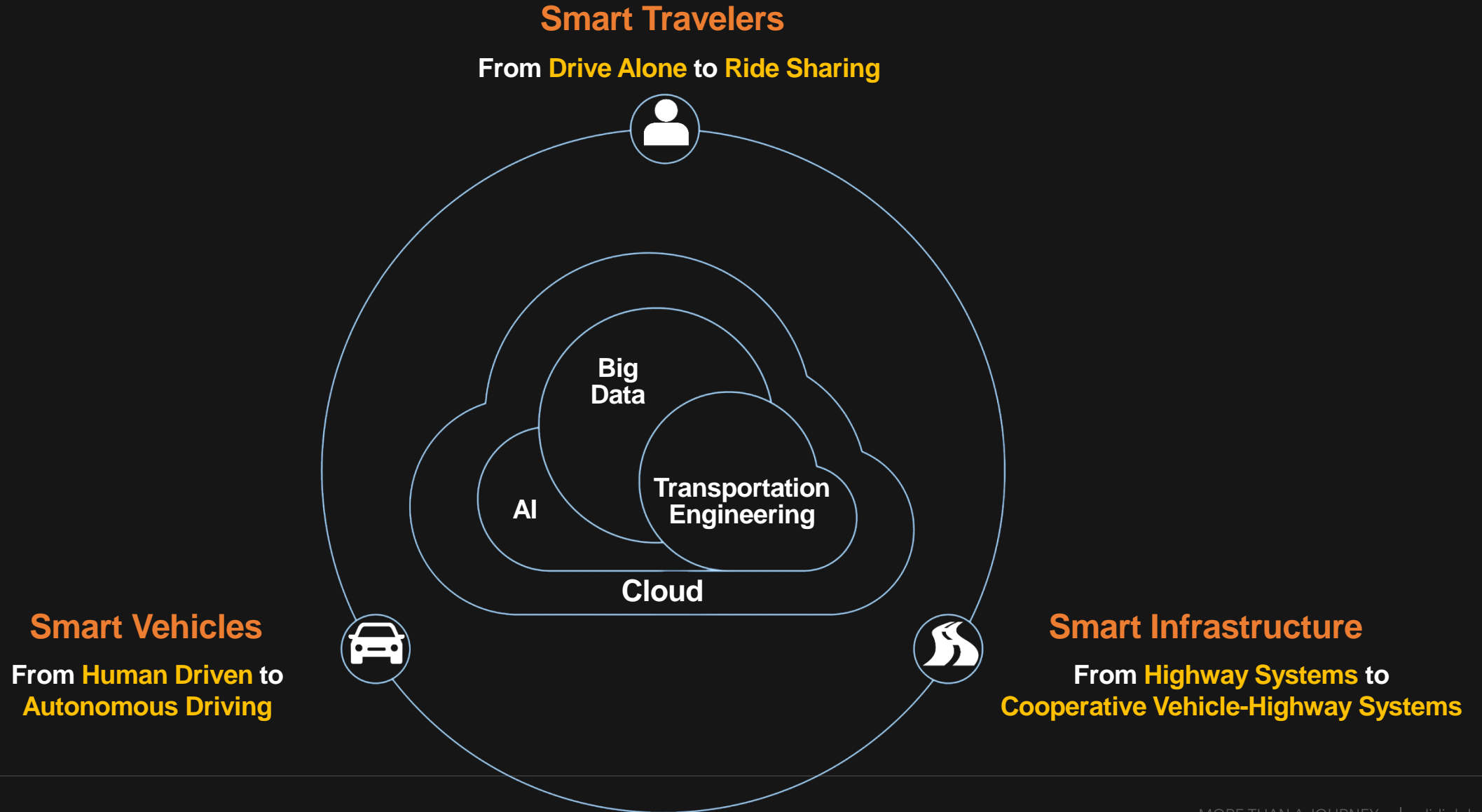- Clean Energy Solutions
- Smart Transportation

MORE THAN A JOURNEY

DiDi

Global Community, Collective Adventure

1000+cities   **80%**of world's population

2017.08/2018.06

2015.09

2016.08

DiDi Labs
2017.03

2015.09

2018.06
DiDi Mobility Japan

2018.04
Launched in Mexico

2017.08

2018.05
Launched in Australia

2017.01/2018.01

2015.08/2017.08

DiDi

Smart Transportation System

Smart Travelers

From Drive Alone to Ride Sharing

Big Data

AI

Transportation Engineering

Cloud

Smart Vehicles

From Human Driven to Autonomous Driving

Smart Infrastructure

From Highway Systems to Cooperative Vehicle-Highway Systems

Mapping Service: Seeing Through A Rider's Lens
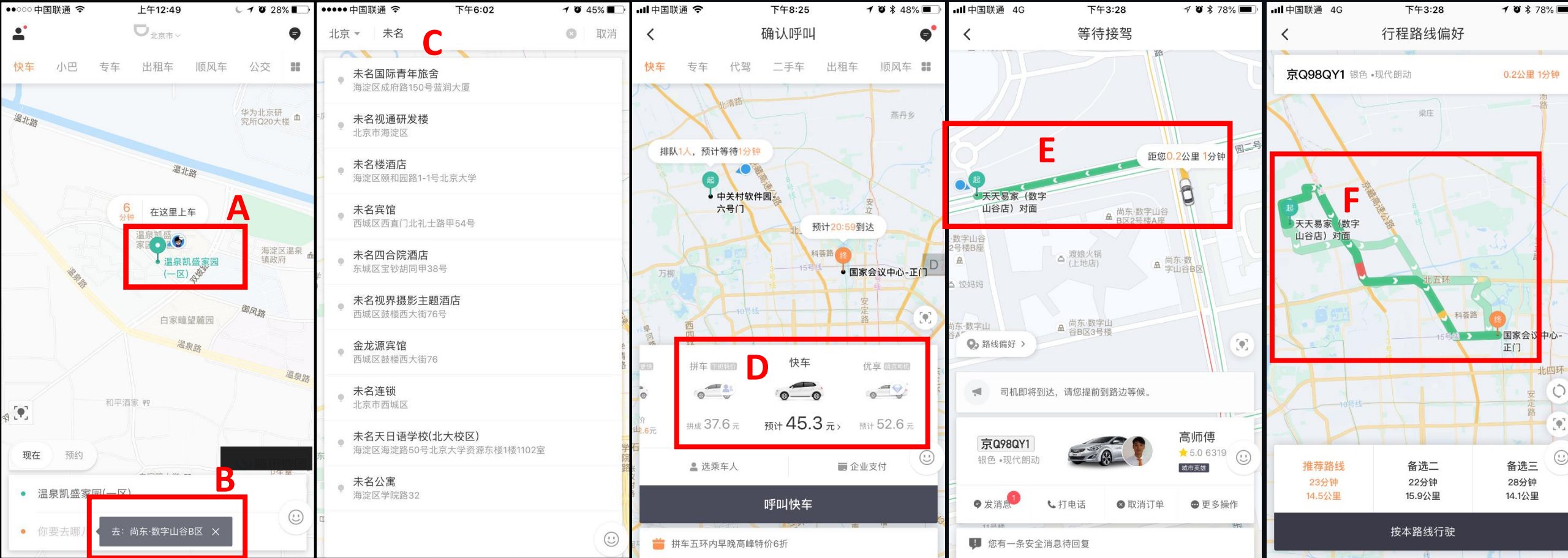
Geospatial Information Application in DiDi

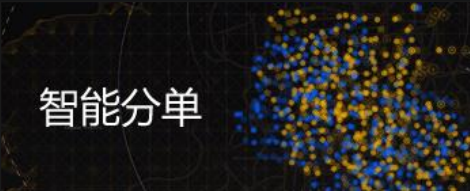**Business Scenarios**

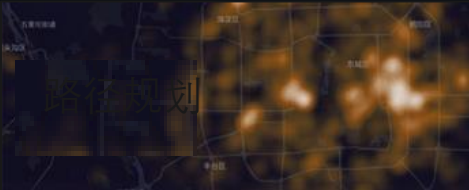Supply & Demand Forecasting

Capacity Management

Carpooling

Smart Dispatching

Map Services

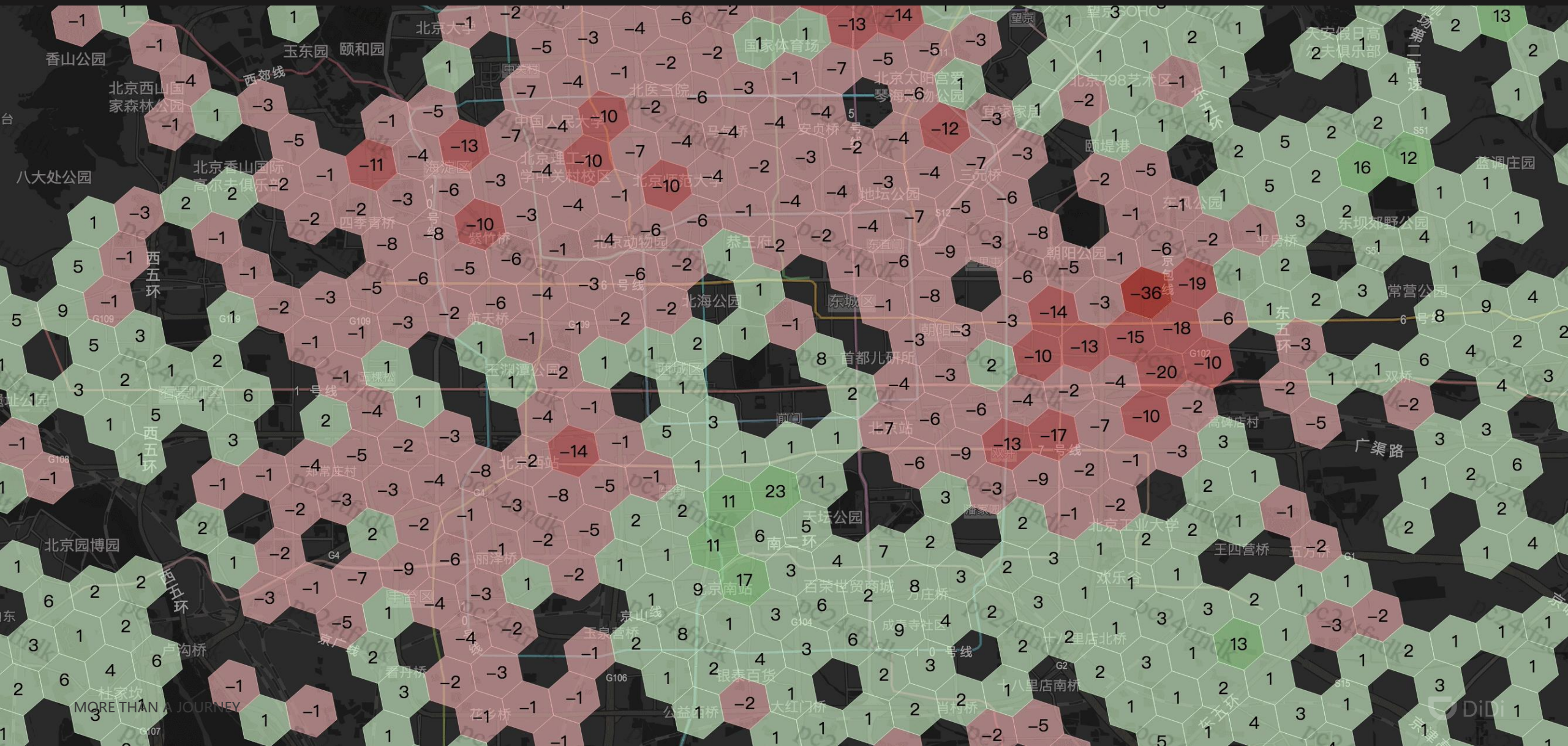Estimated Time of Arrival

Route Planning

PUDO (Pick-up & Drop-off)

"R-U-Going…"

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AI Powered Demand and Supply Forecast

AI-Powered Mapping Services

Route Planning

- To minimize cost
- To maximize driver efficiency
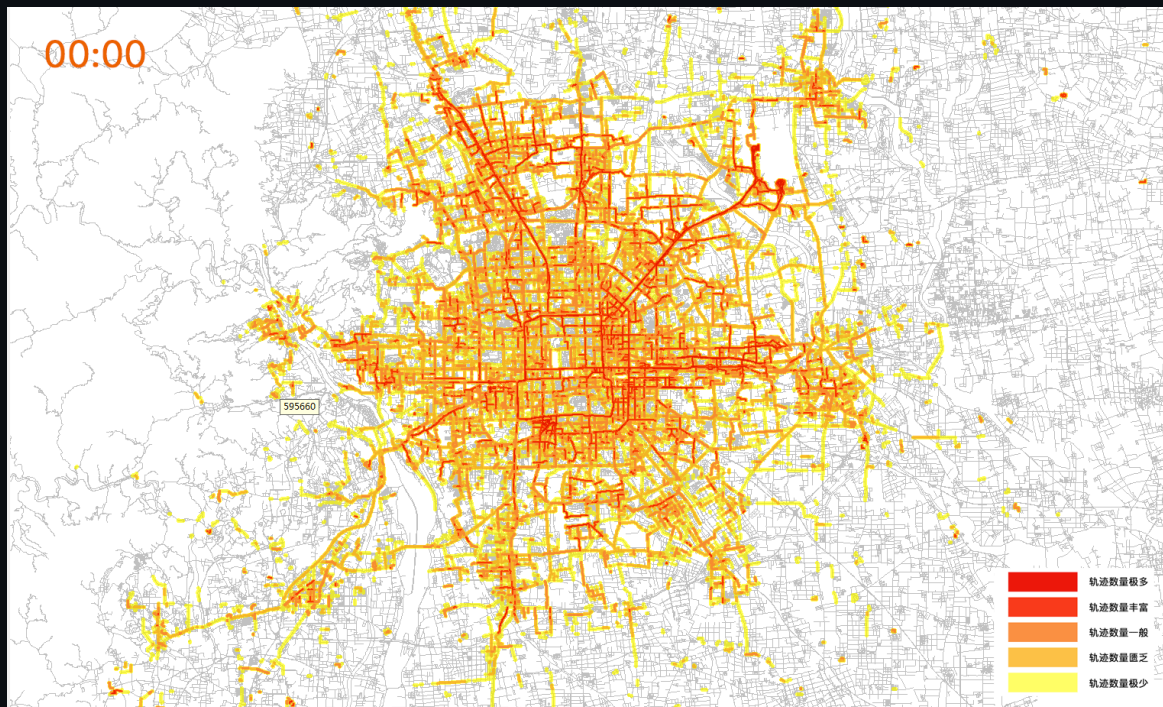- To optimize transportation efficiency

ETA
(Estimated Time of Arrival)

To estimate the traveling time and the waiting time of each ride

$$ETA = T_{travel} + T_{wait}$$

Wang et al., KDD 2018

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Big Data

📊 | **106⁺ ᵀᴮ**   trajectory data/day

🖥 | **4875 ᵀᴮ**   data processed /day

⊘ | **40 billion⁺** routing requests /day

⊟ | **15 billion**   location points/day

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Smart Transportation Management

Smart Traffic Lights over 20 cities

1300+

10 ~ 20%

Wuhan

Jinan
Smart Traffic Lights:
Variable Message Signs:

Chengdu
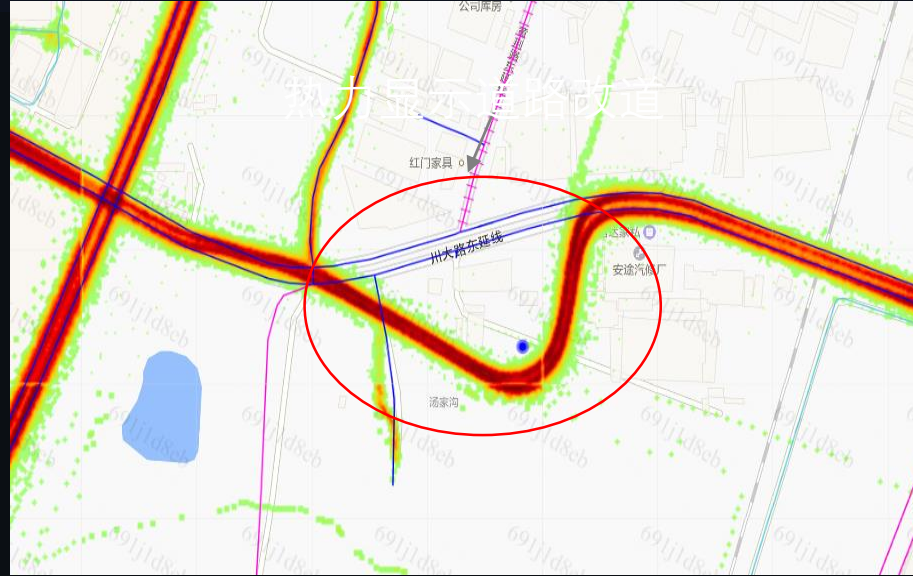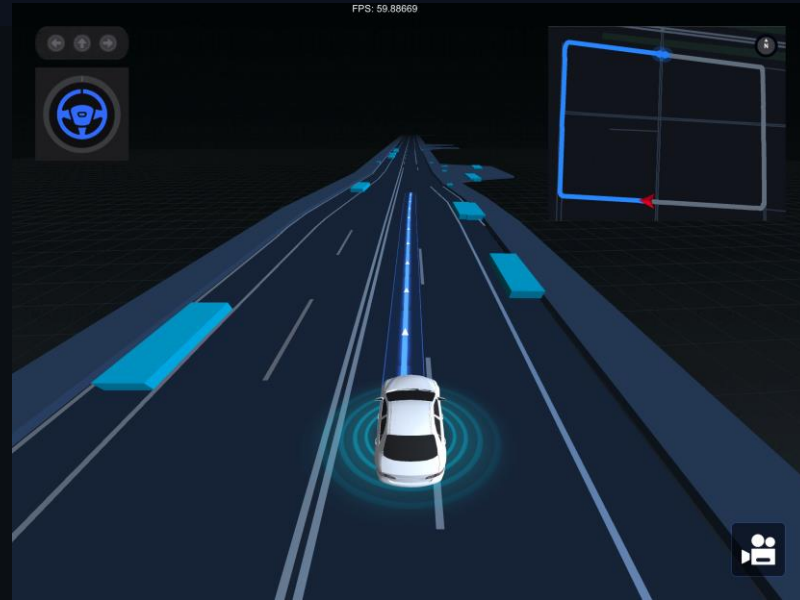
Nanjing
Smart Traffic Lights:

Shenzhen

Suzhou
Smart Traffic Lights:

Guangzhou
Smart Traffic Lights:
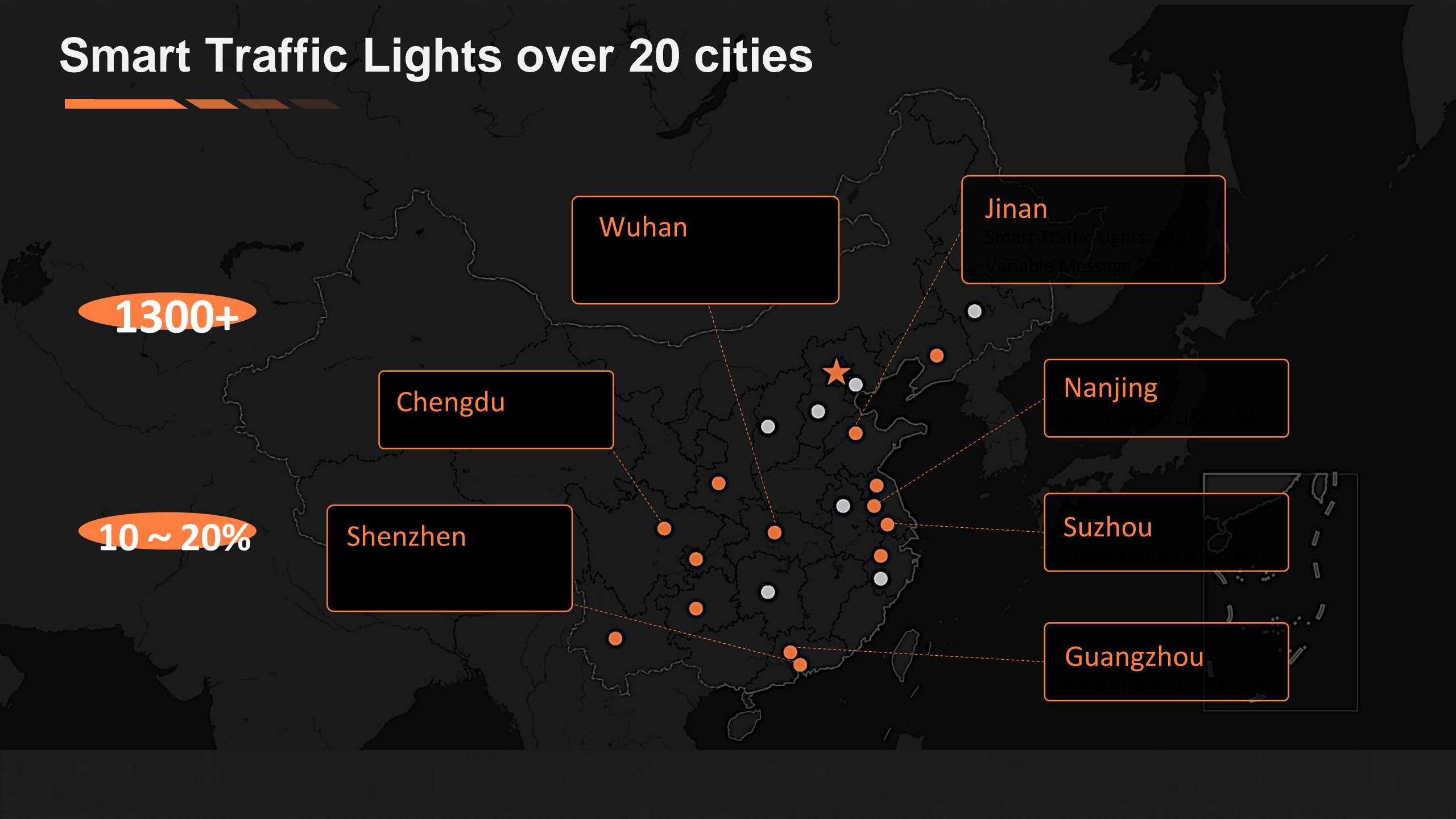
Towards a New Stage with GI Technology

Smart Vehicle

DiDi GAIA Open Data Initiative

Open Data | Computing Infrastructure | Other Support
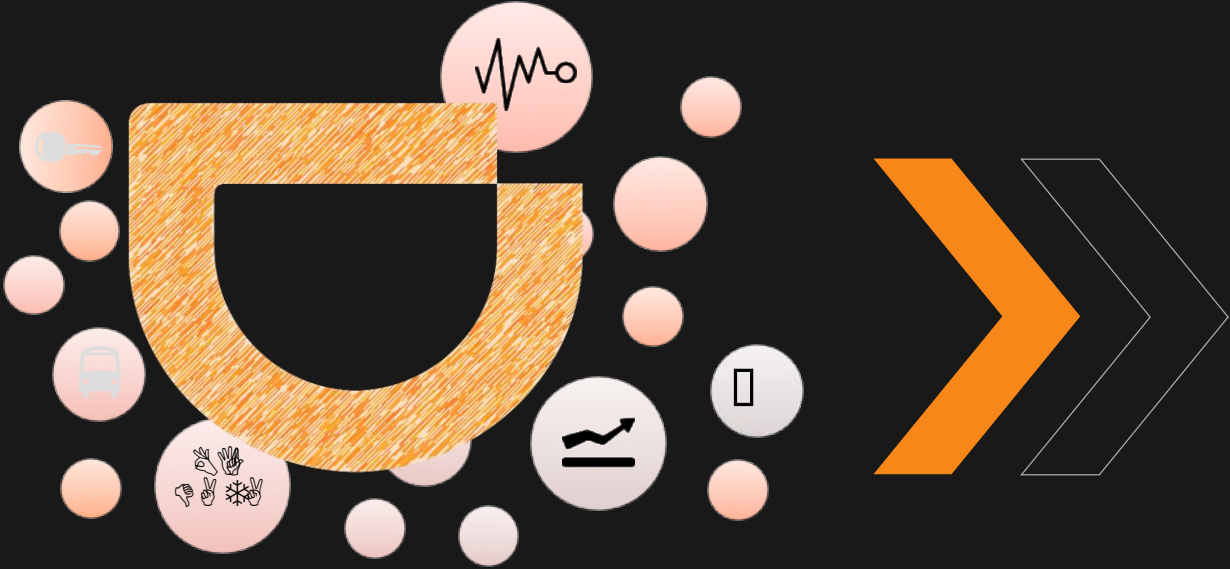
- Open Dataset
- Theme-Based Research Projects

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Together, we can transform transportation.

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