



# Integrated network management

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## A vision for integrated network management

- Focusing on the movement of people and goods, not only vehicles
- Implemented across modes: road traffic, public transport (road and rail-, on demand and shared services
- Optimising urban transport system efficiency to support policy objectives
- Variables

A leading role for  
authorities

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# WHERE ARE WE TODAY ?

**Who is developing the capacity to enable integrated network management?**

Strategic – tactical –operational levels

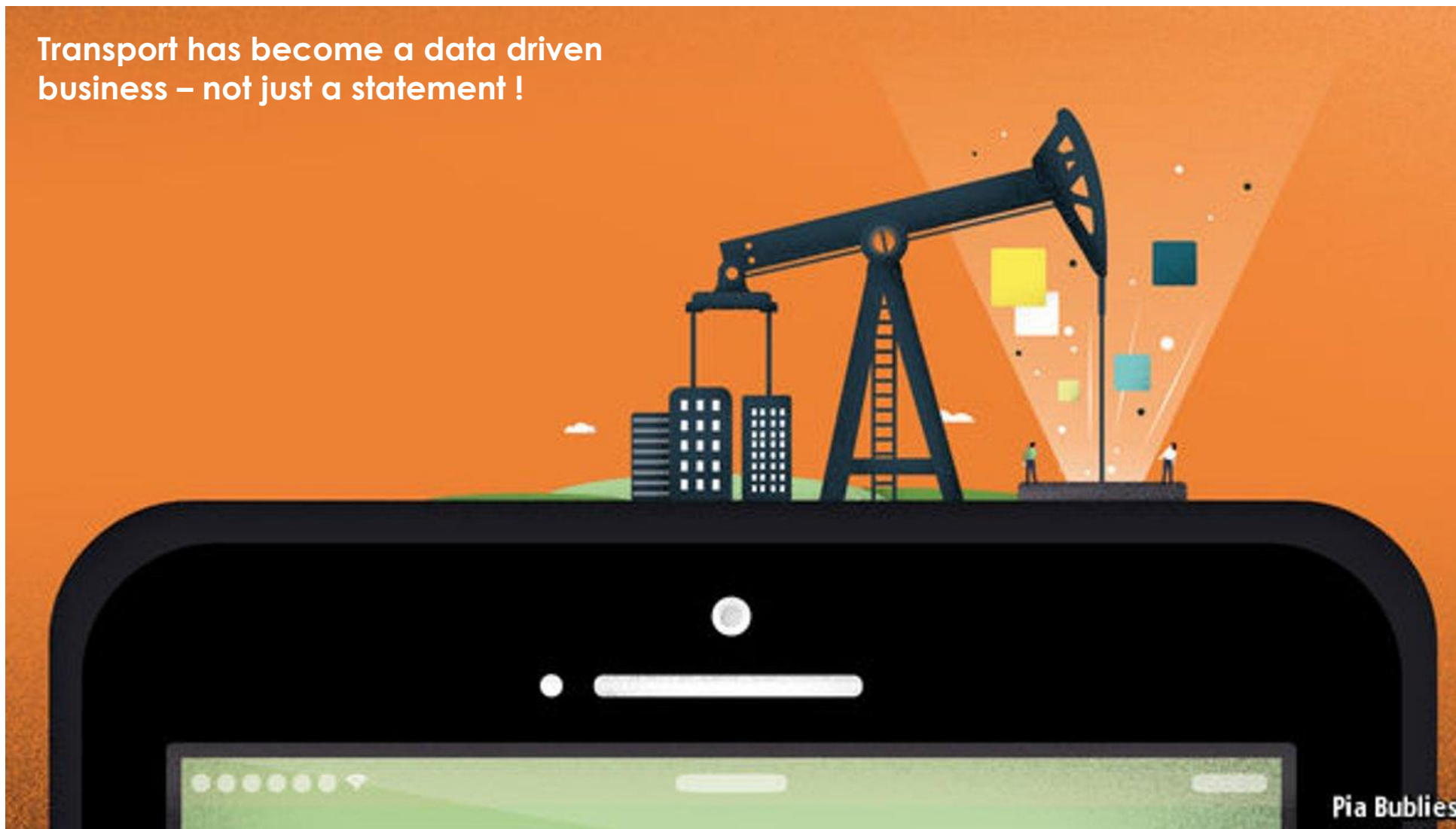
**Let's have a look at some initiatives from other regions of the world**

- Transport network companies
- New comers from other sectors



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Transport has become a data driven  
business – not just a statement !



Pia Bublies

# > DIDI, FROM RIDE HAILING TO MULTIMODAL OPERATOR AND SYSTEMS SUPPLIERS



Didi buses



Bike sharing



Didi traffic management brain operating in 20 cities in China



## Didi smart transportation cloud

### Data analytics

Traffic

OD Analytics

Traffic conditions analysis

Adaptive signals

Road capacity analysis

Prediction of traffic congestion

### Application in public transit services

Route planning

Bus schedule

ETA

Dispatching

### Big Data Platform

Drivers

Passengers

Vehicles

Detectors

Cameras

Highway ETC

Transactions

OD

Behaviour

Subway

Buses

events

Didi

Government



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# AND HERE COMES ALI BABA

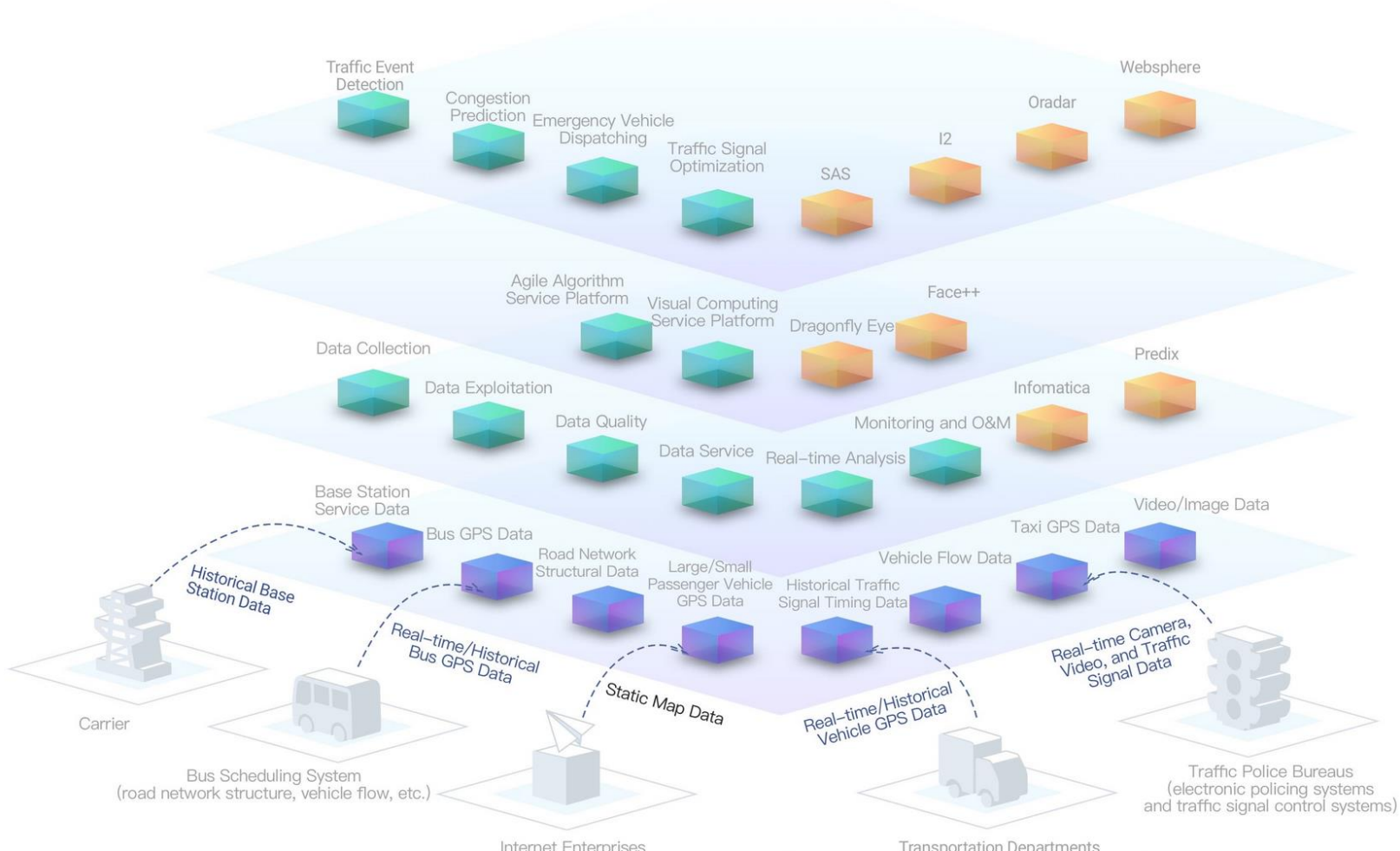
## City Brain Construction Principles

**Ali Baba  
ET City Brain**

City event detection and smart processing

Traffic congestion and signal control

Public transportation and vehicle dispatch



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## Shanghai introduces first AI-guided bus routes with Alibaba's help



*City Brain, an AI-powered traffic-management system by Alibaba Cloud, in Hangzhou, Zhejiang province, China*

PHOTO: Reuters



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# WHAT ABOUT OTHERS ?

- **Other TNCs ?**
  - Strategies vary from Uber to Via
- **Amazon ?**
  - Sky is the limit – apparent focus on air traffic management
- **Google/Alphabet ?**
  - Google transit, Pigeon, etc
  - Sidewalk Lab, Toronto, Coord
- **Others**
  - some traditional industry players: Siemens, Alstom, etc.
- **Public authorities ?**

The challenge for public authorities of managing integrated network management

**Why a model emerges  
in a given region of the  
world ?**

- Bad / absence of legacy ?
- Size of the players and role of the government
- Pressure on the use of urban space ?

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## SOME CONSEQUENCES

- **Exceptional understanding of transport challenges and of some priority policy objectives from some actors – TNCs can build other businesses than ride sharing and define a path towards profitability**
- **Build upon big data to develop algorithms and solutions focusing on urban and transport challenges**
- **Potential to disrupt several markets**
  - Systems providers
  - Traffic management ?
  - Public transport ?
  - MaaS

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# SOME CONSEQUENCES

**Built the ability and a path towards a full integrated transport network management....**

**...managed by private industry.**

**A dream ?**

**A nightmare ?**

Is it possible for public authorities to make the most out of it ? How ?

Should we be afraid of the private city ?



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