SUSTAINABLE URBAN MOBILITY

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Solving a problem

Two main challenges

Pollution

Congestion

A woman wears a face mask as heavy air pollution continues to be a problem in Bangkok, Thailand, 21 January 2019 // EPA/EFE PHOTO
Mobility Challenges

CO2 Emission in Europe

- Energy Production: 22%
- Transport: 28%
- Industry: 11%
- Residential: 14%
- Others: 25%

GHG Emission

- Road: 72.8%
- Air: 13.0%
- Sea: 13.1%
- Rail: 0.6%
- Other: 0.5%
Intermodality

Mobility in 2020

- Air
- HSR
- Car and PT
- Soft Mobility

Length Trip (KM)
Mobility in 2020

Autonomous Vehicles

Electric Vehicles

PT
Mobility in 2020

Sales EV in China (in thousands)

- 2015: 300
- 2016: 500
- 2017: 800
- 2018: 1,300
- 2019: 1,900

Sales in China have significantly increased from 2015 to 2019.
Urban Mobility

- Shenzhen made the complete switch to E-bus more than one year ago.
- More than 16 thousands E-Bus
Urban Mobility – Other options

From Natural Gas to Hydrogen fleet
Urban Mobility – Efficiency of Operators

Big Data

Technology

Maximizing Revenue and Cost Efficiency

Agreement with Third Party

Data to/from the assets

Data to/from passengers
Seamless Urban Mobility

Autonomous E-Bus

Metro Backbone

Sharing Soft Mobility

Autonomous E-car
THANK YOU FOR YOUR ATTENTION

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