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REMOBILISE

ClusterXchange

Co-funded by the COSME programme of the European Union

Part 3
The new age of urban mobility

Prof. Daniel G. Costa
Department of Electrical and Computer Enginnering
Faculty of Engineering (FEUP), University of Porto
danielgcosta@fe.up.pt

ACCREDITATIONS MEMBERSHIPS RANKINGS

We will always need transportation

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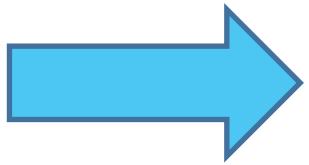
Transporation



- Work
- Education
- Health
- Recreation
- Shopping

5 Trends for Future Development

1. Electric vehicles

An ongoing transformation in urban mobility (??)

- Sustainable fuel
- Zero CO^2 emissions
- Noise reduction

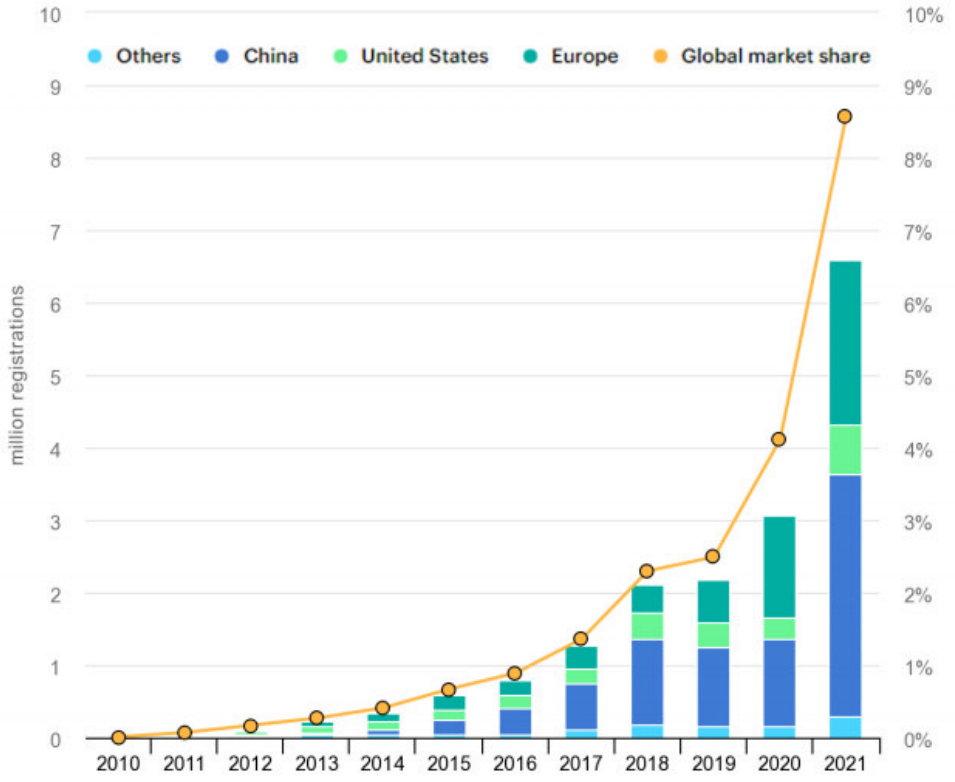
A lot of public and private investiments

- Great product, with huge market

Society as a whole is beneficied…

?

1. Electric vehicles – current scenario



22% Of New Car Sales In China Were 100% Electric In 2022!

U.S. Electric Car Sales Climb Sharply Despite Shortages

A scarcity of semiconductors and raw materials held back production, but buyers remain enthusiastic.

1. Electric vehicles – current scenario

The European Union proposed an effective ban on the sale of new petrol and diesel cars from 2035

In a 2020 survey, 86% of Chinese would like to buy an EV

(However) In 2020, only 1% of vehicles sold in Brazil were electrical

1. Electric vehicles

In a perspective to support higher EV adoption, we need:

- Tax reductions
- More charging points across cities
- Specialized parking

Since electric vehicles are also enhanced “digital entities”, increased automation is expected

- Allow Mobility-as-a-Service initiatives
- More EV -> better mobility?

1. Electric vehicles

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A. We need to <u>replace</u> existing "combustion cars"

B. We need to leverage electric smart vehicles for better mobility

C. But we also need to promote other types of vehicles

1. Electric vehicles, not only cars

2. Autonomous vehicles

Mobility patterns and traffic congestions will be deeply impacted when fewer people take driving decisions

- Driving assistance
- Full automation

Ride-sharing services should be the first to adopt it in large scale

- 24/7 service

2. Autonomous vehicles

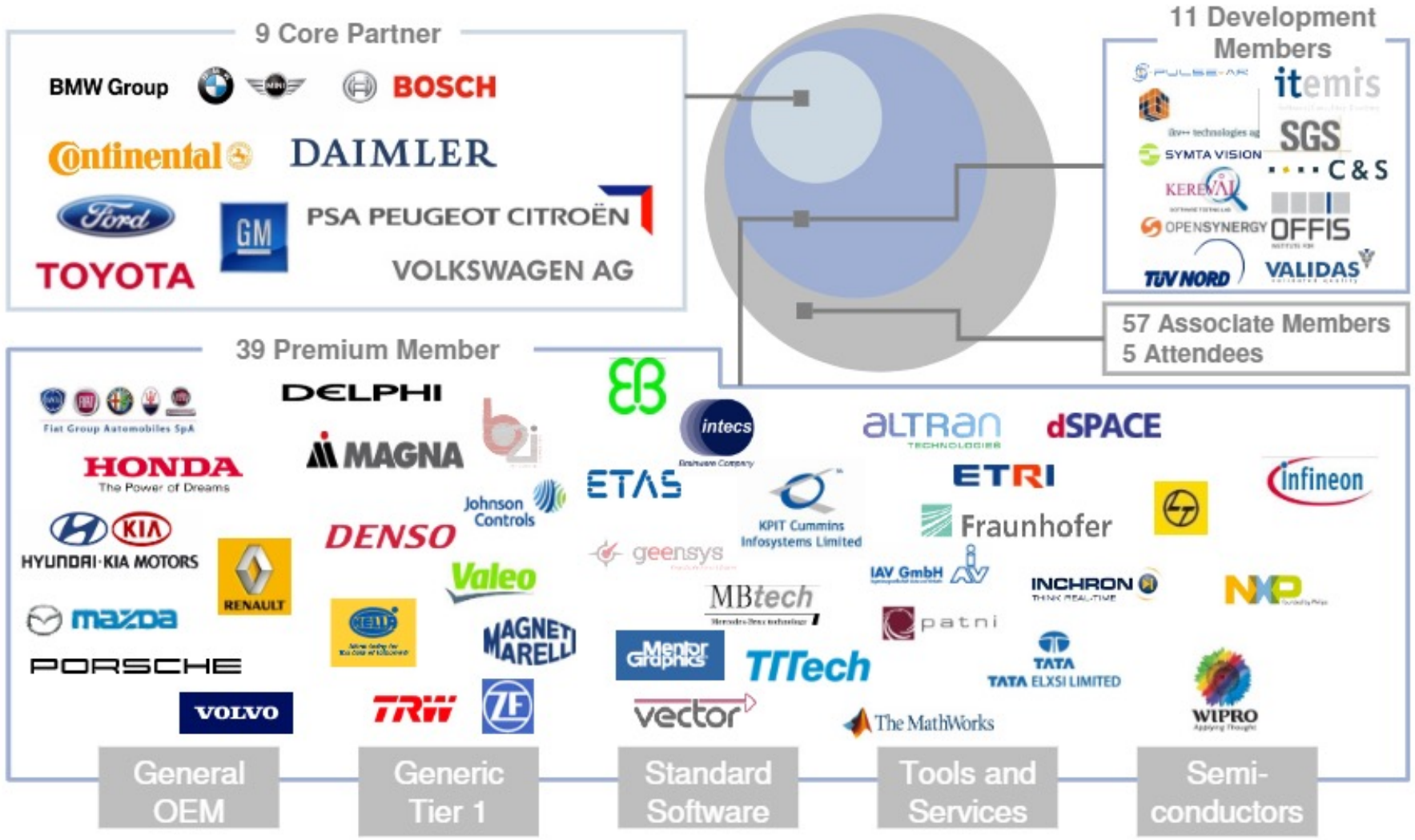
Two development trends

- 1) Vehicles that are autonomous (driverless)
- 2) Vehicles that communicate among themselves AND with the city

We need technology

- Cameras and visual computing algortihms
- Sensors and embeded systems
- Artificial Inteligence (Machine Learning)
- High-bandwidth networks

2. Autonomous vehicles - AUTOSAR



3. Mobility as a Service (MaaS)

Shift the way mobility is performed

- Vehicles are only a mean, and not the purpose
- We should not move vechiles, but people

- Shared mobility is a key concept
  - Better use of the available “mobility resources”
  - A parked car is useless for a city
    - A car is used only for 1-2 hours a day


129
151

3. Mobility as a Service (MaaS)

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New services are expected to be created

- Door-to-door rental
- Parking sharing
- Enhanced multi-modal sharing

MaaS to achieve *Newly Car Free* cities **-> Autoluw**

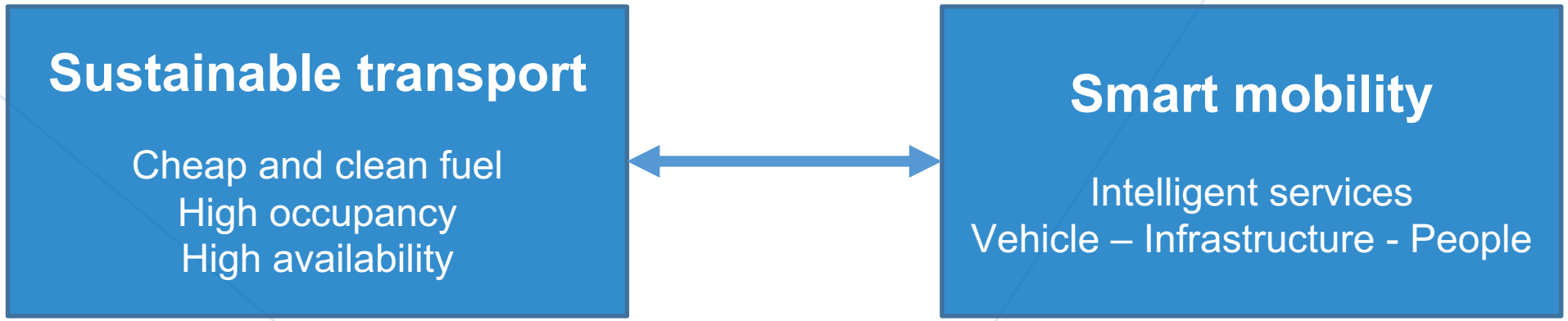
4. Sustainable transportation

Economic viable

Multi modal

Low carbon footprint

The trap is promoting unsustainable means



Cyclying as a key element for sutainability

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Cycling is faster, healthier, safer and promote social interactions

Bike is also cheap and ocupy little space

- In Copenhagen, 50% of inhabitants commute using bikes

We need on-road and off-road facilities to promote cycling

Cyclying as a key element for sutainability

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The case of Munster, Germany

- Good infrastructure
- More than 1 bike per inhabitant

4. Sustainable transportation

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Second United Nations Global Sustainable Transport Conference

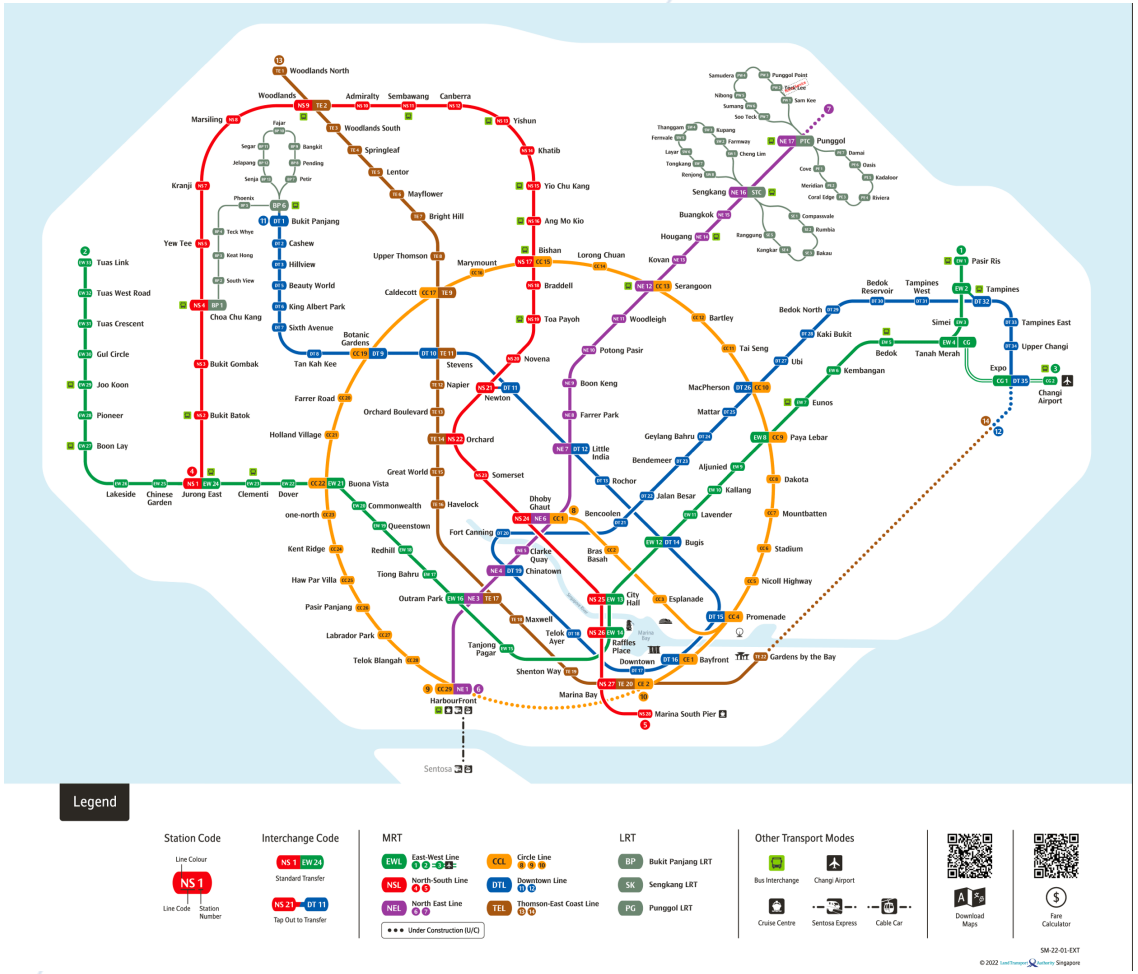
14-16 October 2021, Beijing, China

Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Improved public transportation

- Metro and bus
- VLT
- LRT
- BRT
- ART
- …

MRT (Mass Rapid Transit)



The French Senate has passed legislation requiring parking lots with at least 80 spaces be covered in solar panels.

Ideas for the coming years

Car-free districts

Traffic cells

Low traffic neighborhoods

Low-emission zones

5. Gender inequalities

Access to transportation is unequal

- Socio-economic issues
- Gender inequalities

Most users of private transportation means, drivers of public transport and police makers are man

Women shoud have higher levels of participation as both users and planners

5. Gender inequalities

Our mobility infrastructures were conceived in a age of man dominance in the economic life

Bad patterns are also transferred to mobility

The current and future smart mobility…

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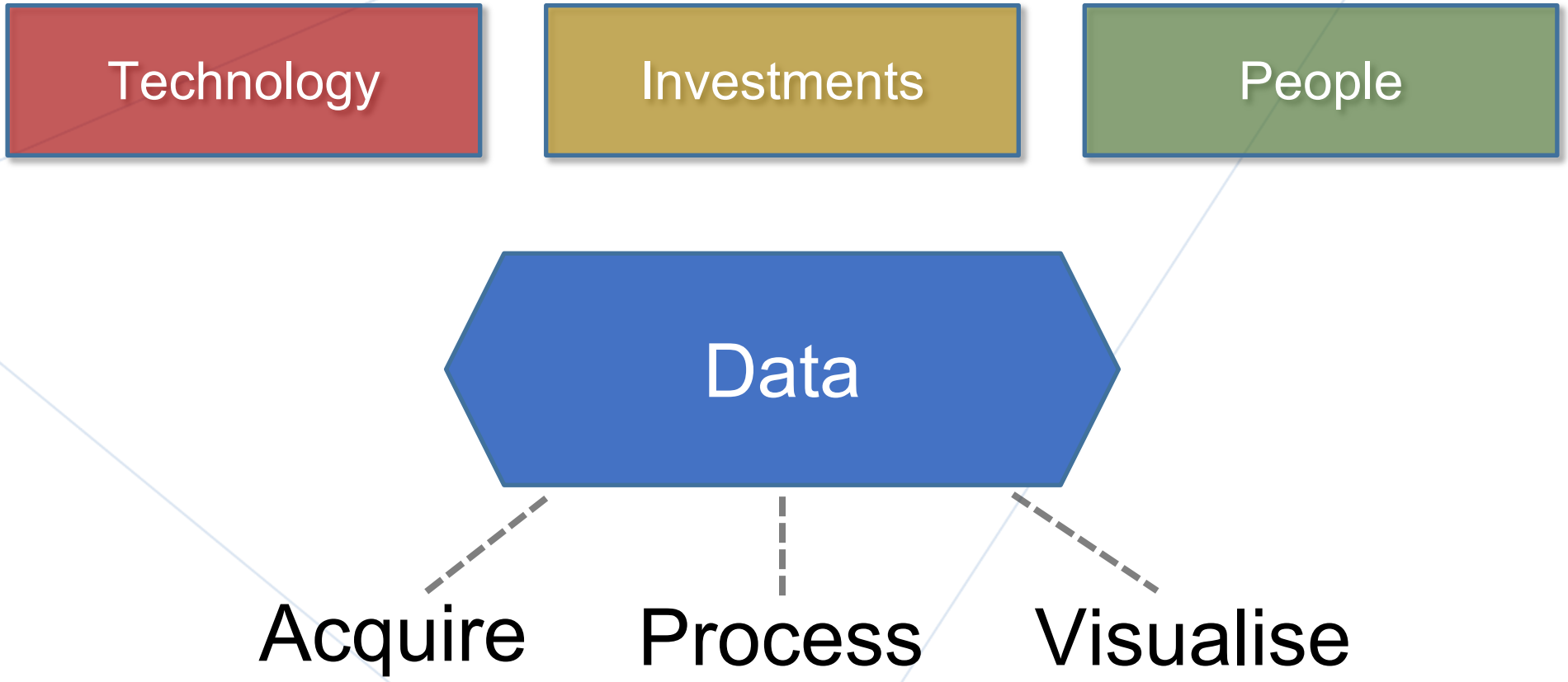

Data is a valuable asset

- Indicate historical behavior concerning mobility
- Points promising directions
- Support different types of evaluations

Public data visualisation

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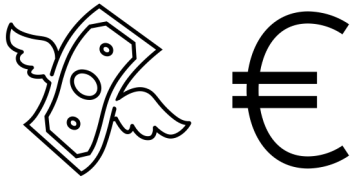
Multiple sources

- Global, national and regional

Some useful sources:



Our World in Data

https://ourworldindata.org

eurostat

https://ec.europa.eu/eurostat

Public data visualisation

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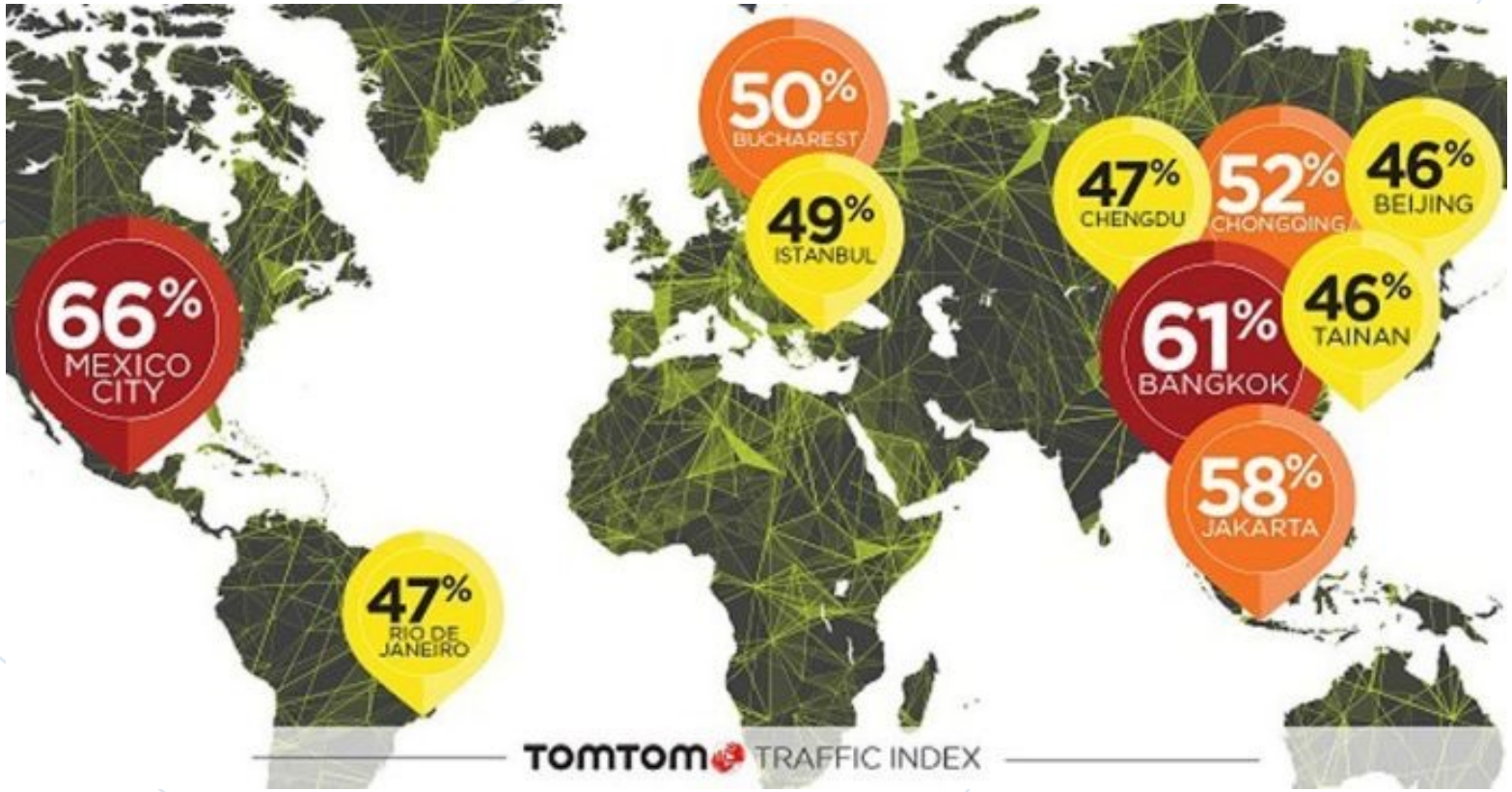
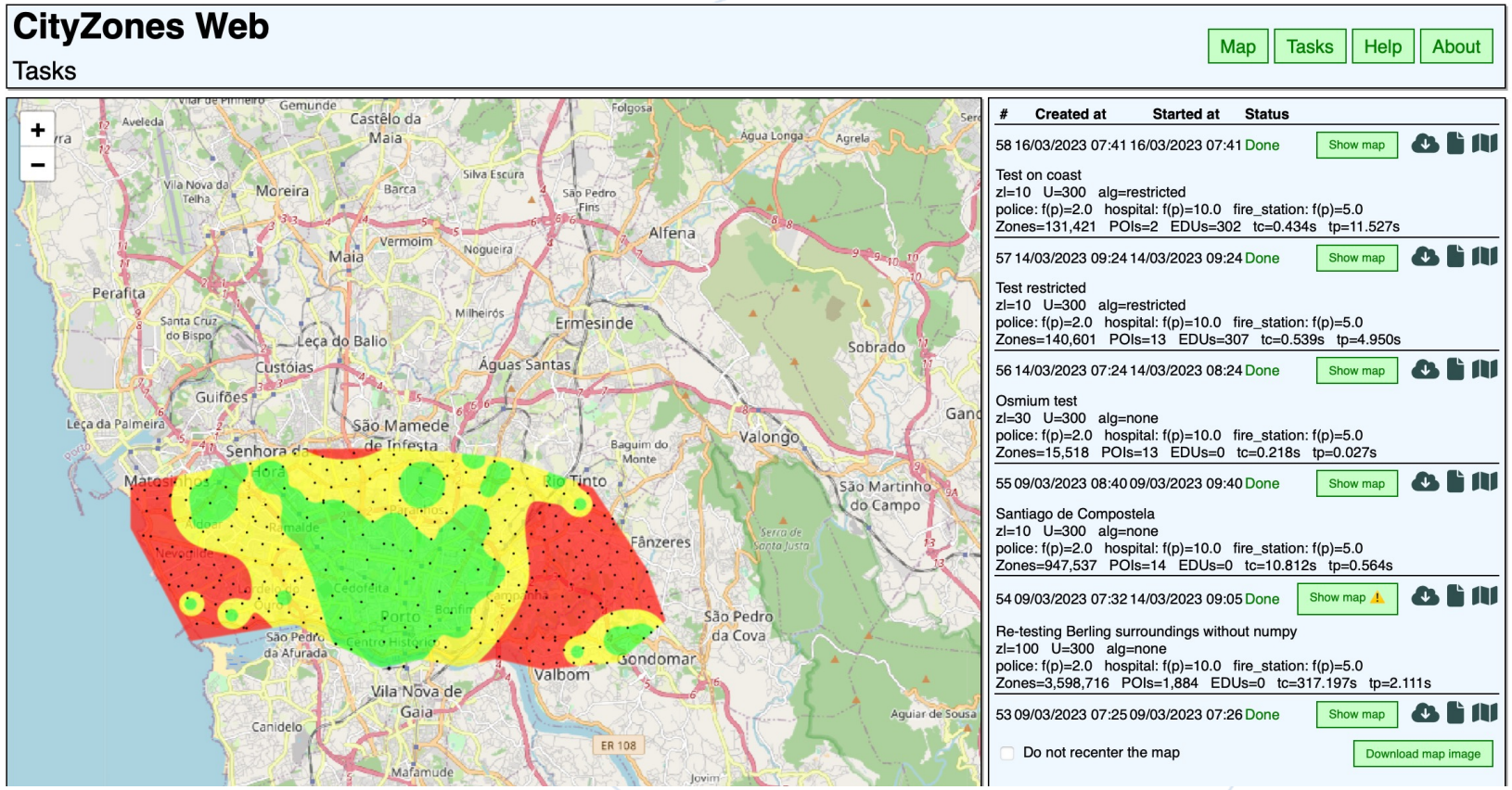
2017



https://www.tomtom.com/traffic-index/mexico-city-traffic/

Specialized tools

- CityZones: https://cityzones.just.pro.br/



Conclusion

People want **liveable** urban spaces

Mobility is a key element to achieve that

Sustainability is the ultimate goal

New technologies should be used to improve the way we move and also live

Thank you!

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