Next generation of Traffic Management: the TM 2.0 Platform

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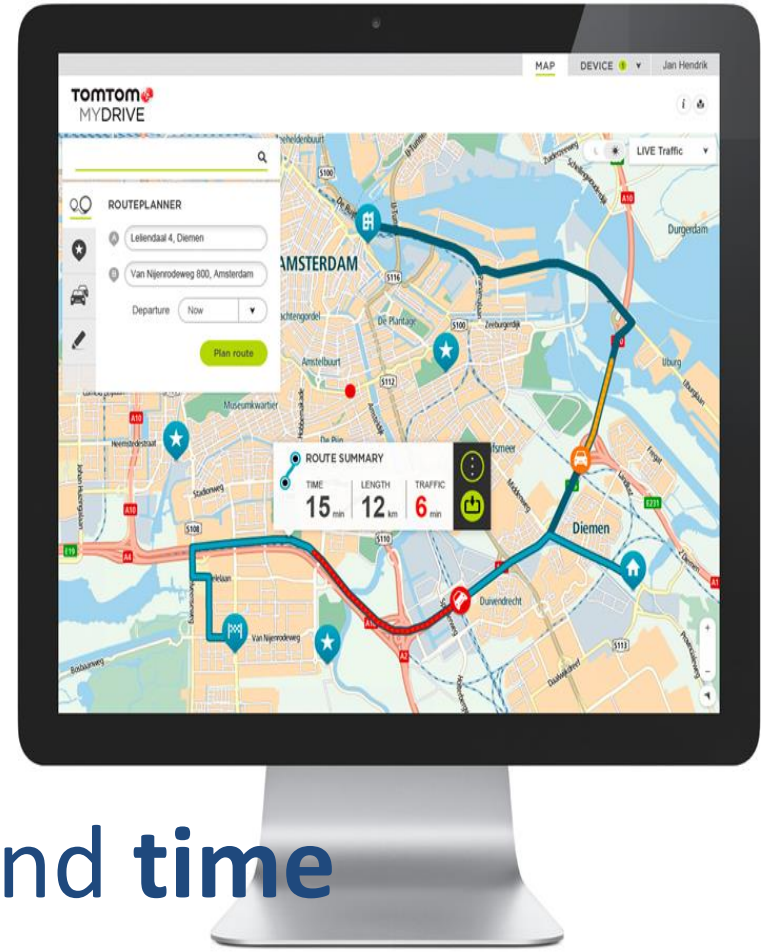
TM 2.0
ENABLING VEHICLE INTERACTION WITH TRAFFIC MANAGEMENT

“In theory, the solution to the problem of traffic congestion could follow three different approaches:

a) reducing the total number of vehicles on the roads;
b) increasing the existing road infrastructure;
c) increasing traffic flow on the existing road Infrastructure”

Self-Organized Traffic Control . Paper by Ferreira; Fernandes; Conceição; Viriyasitavat; Tonguz from University of Porto (PT) and Carnegie Mellon University (USA). VANET’10, September 24, 2010, Chicago, Illinois, USA.

creating real-time traffic information



Optimal and **time dependent** quickest route calculation

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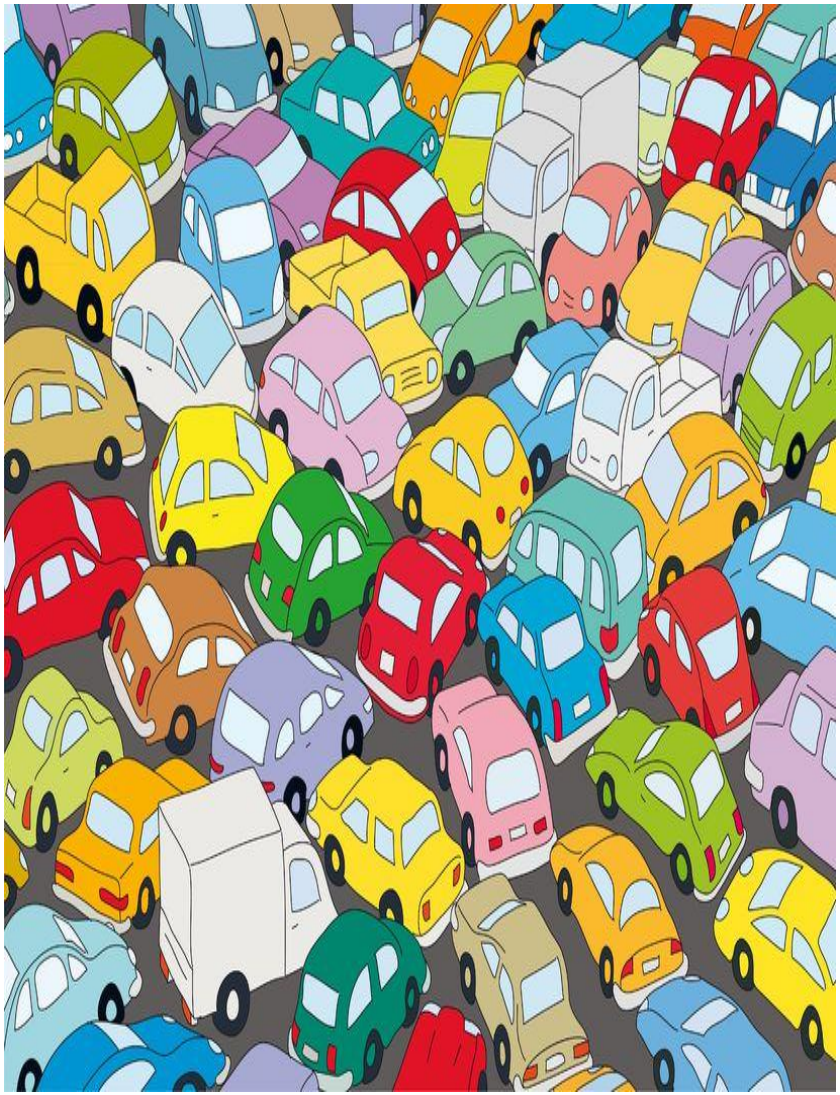
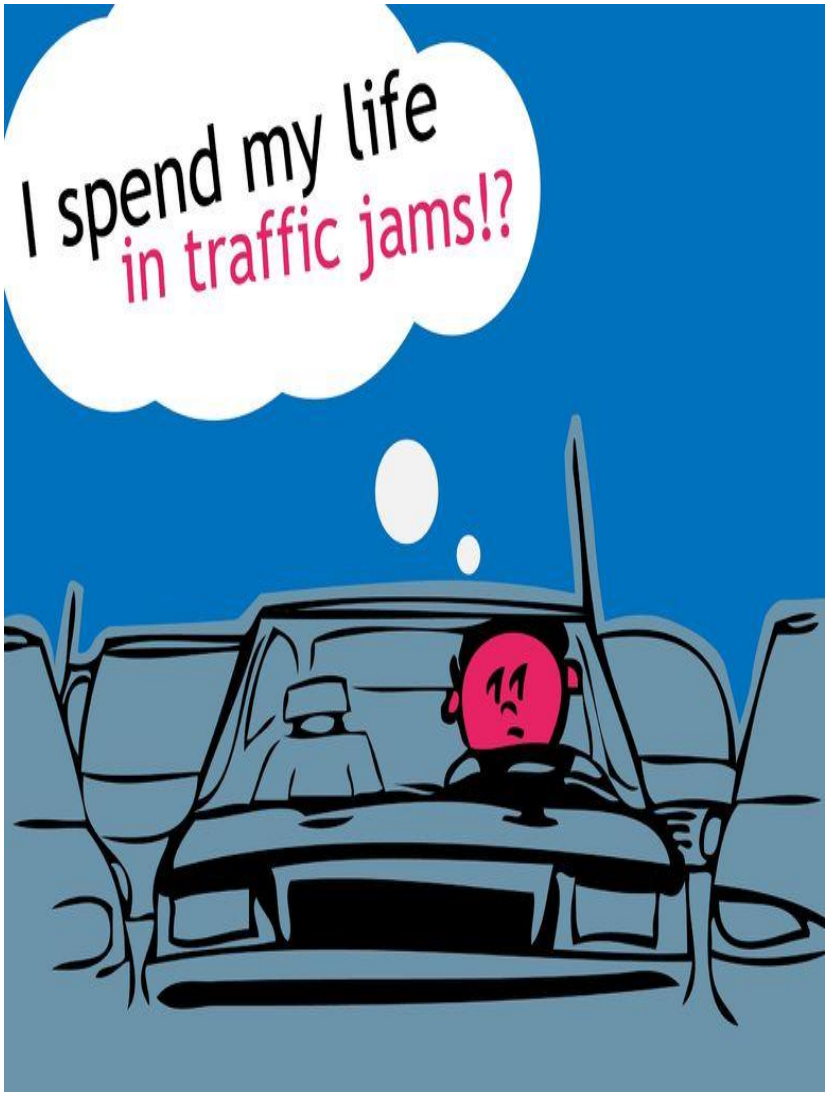
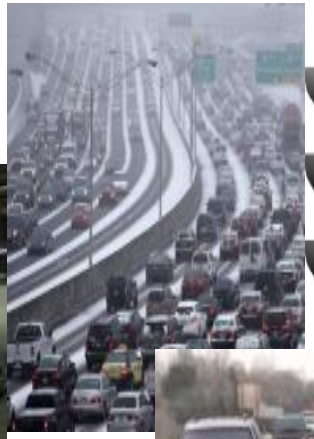
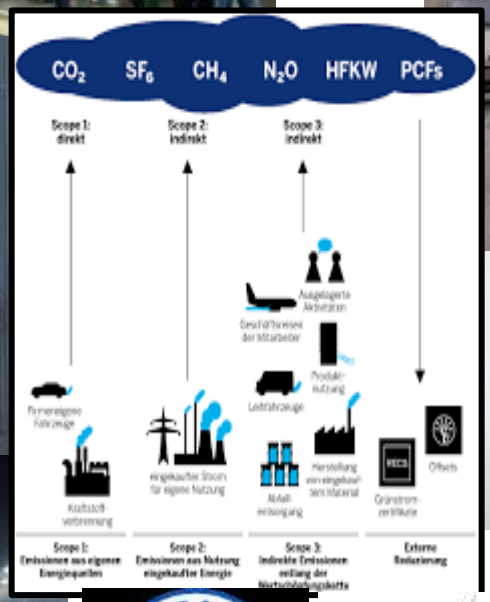
still… roads remain congested

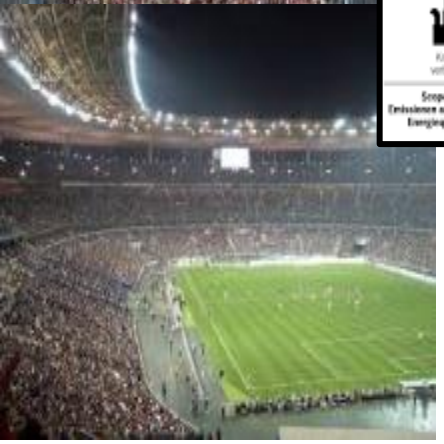




PA Challenges







challenge: how to reach individual road users

Loop Detectors
- Road side equipment
- Detection of all traffic
- High maintenance cost

License plate recognition (ANPR)
- Only from/to locations of camera’s
- Road side equipment

Bluetooth tracking
- Sample based
- Only from/to locations of trackers
- Biased by professional drivers
- Road side equipment

the power of Floating Car Data (FCD)

from within the car…

The car becomes connected:

- Navigation is broadly spread
- In different forms: PND, smartphone app, blackbox, in-dash
- Data is collected continuously

non-aligned priorities

Road Owners/Operators

- Optimise the road network capacity
- Meet policy targets (env-com-energy)
- Provide access to/close part of the network according to TMP
- Prioritise on certain user categories

Road Users/Service Providers/OEMs

- Fastest and Safest route
- Most efficient and less fuel consuming route
- Quality and valid Traffic Information
- Simple and easy directions

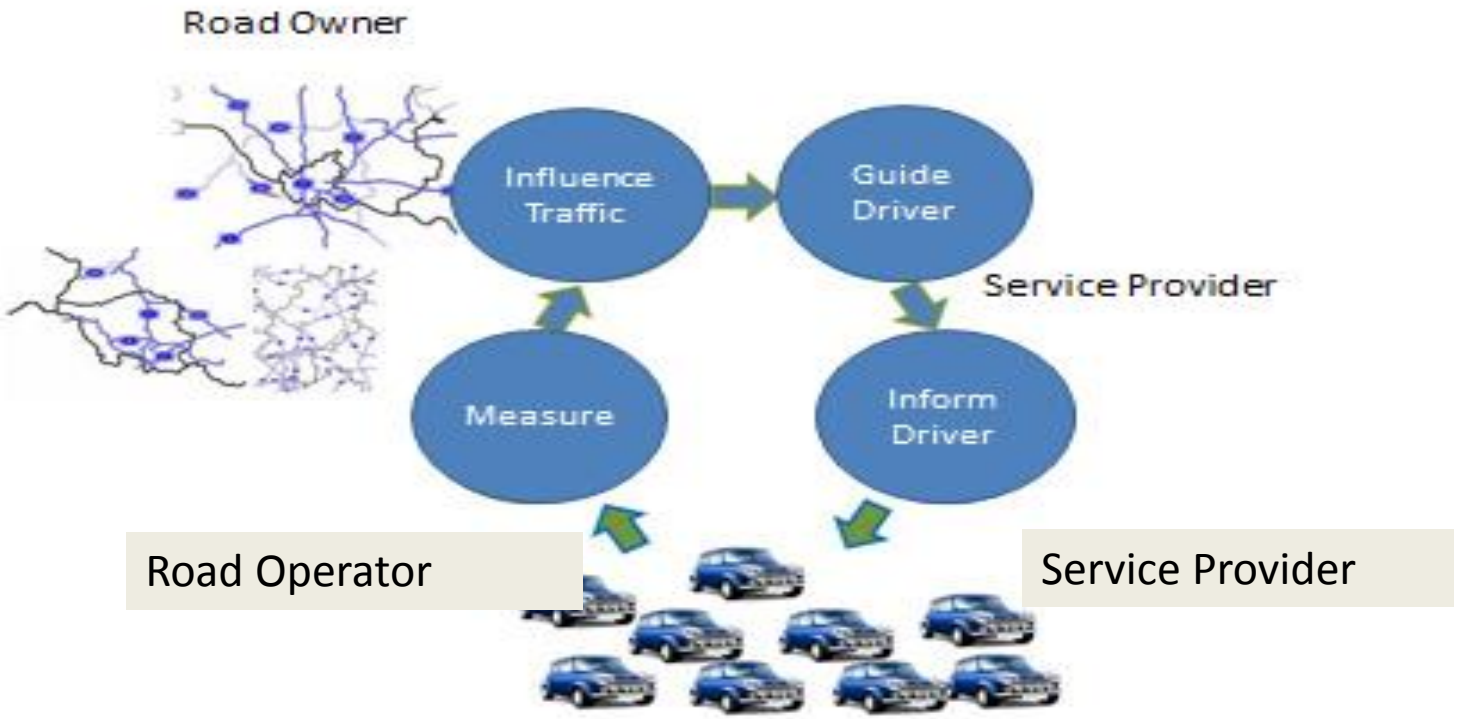
Traffic Management: TM 1.5

- Road operators vs service providers

Road operators & service providers

Road Operator

Service Provider



TM 2.0 aims to:

Create an interface, which will facilitate the exchange of data between vehicles and TM procedures supporting the entire value chain for consistent TM/C and TInf services.

ERTICO ITS EUROPE

TM 2.0

TM 2.0 is an ERTICO innovation platform of 35 member organisations

Associations

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Vehicle Manufacturer

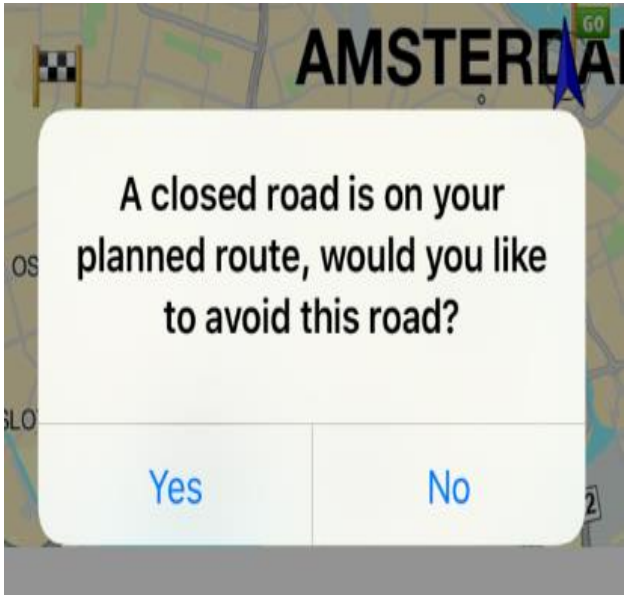
BMW

14 Steering Body members

TM 2.0 concept of active moderation

Traffic Centres can use the communication channels of service providers and influence routing

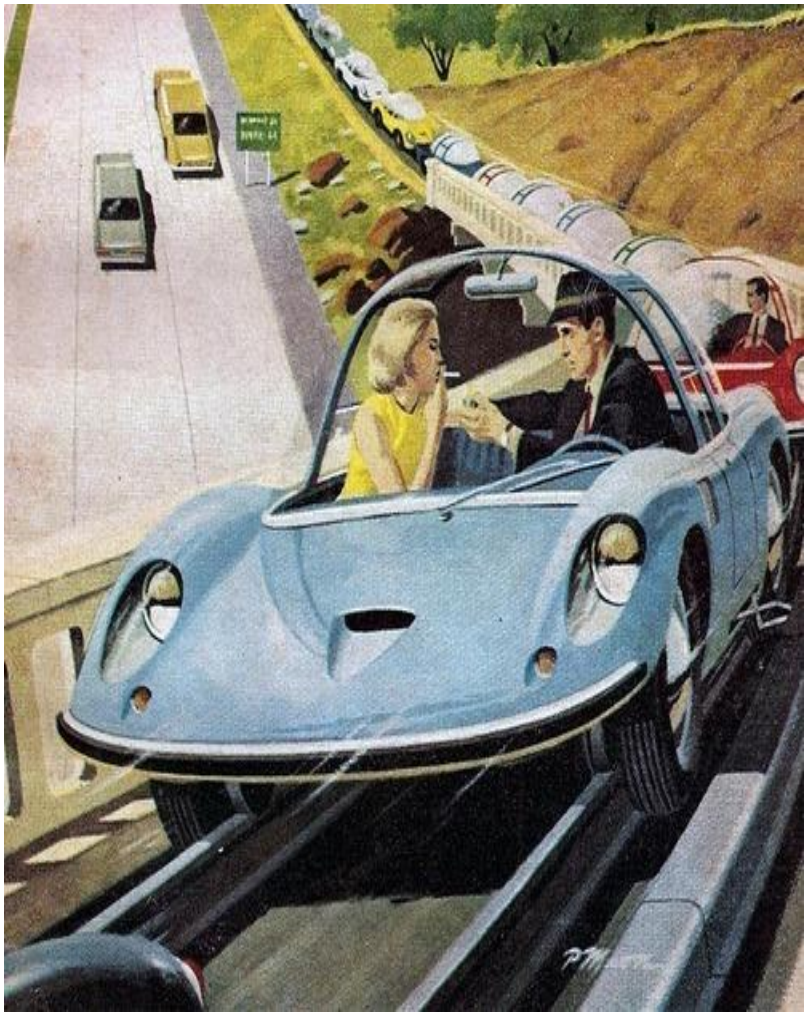
Directly access many drivers and cars	Influence via Mobile Apps, In-Dash Navigation and PND's	Routes automatically adjusted

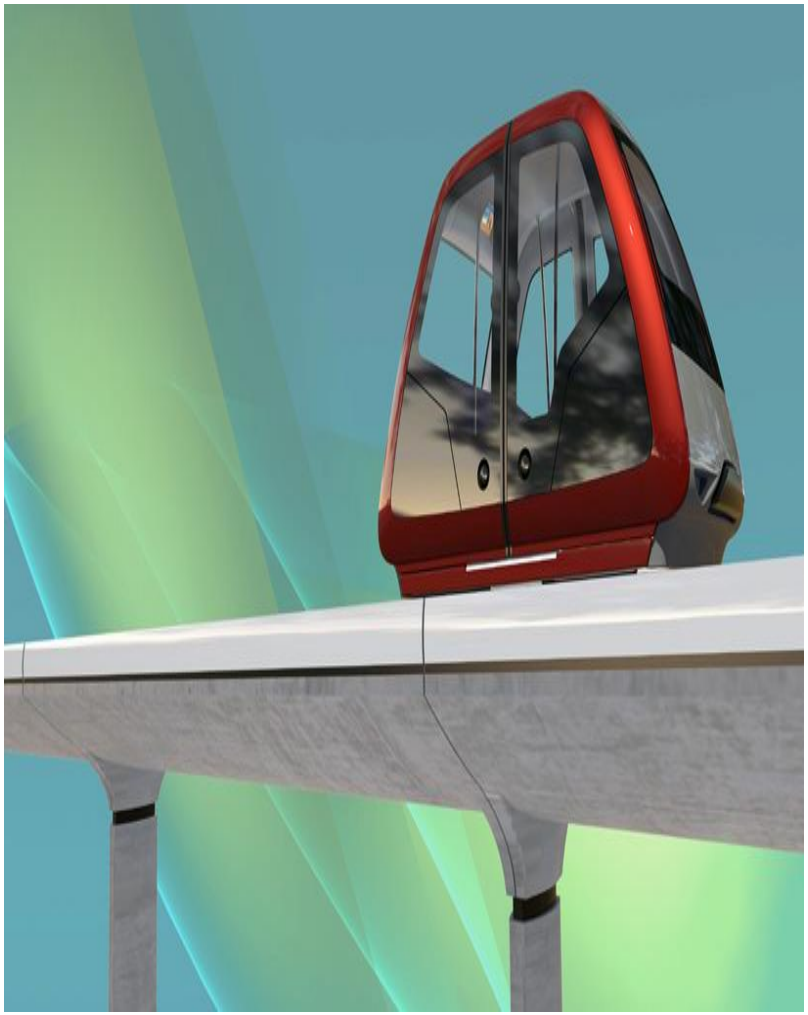


Phase III

- Links to hinterland transport infrastructure
- Links to other modes of transport

The future is not so far away..





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