AustriaTech – Federal Agency
for Technological Measures Ltd.

The role of co-operative systems for efficient intermodal transport management

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Intermodal land transport

Why does it not really happen on a large scale?

Truck transportation vs intermodal transportation (1)

Today:

truck transportation is the most comfortabel way to organise door-to-door delivery (for industry and logistics service provider) even for distances beyond 300km

- low risk to keep contracted QoS
- low effort to order/organise
- seemless tracking information
- low cost

Truck transportation vs intermodal transportation (2)

Multimodal transportation:

- higher effort for planning
- higher risk to keep contracted QoS
- higher transport time
- higher effort for handling
- no seemless tracking information service
- lower cost????

Passenger transport

Individual transport by car:

- most comfortabel, even increased by navigation systems and integrated traffic information
- most of the time less time consuming
- more expensive

Multimodal:

- complicated trip planning – lack on reliable information with single access (pre-trip, on-trip)
- most of the time no door to door service
- less cost

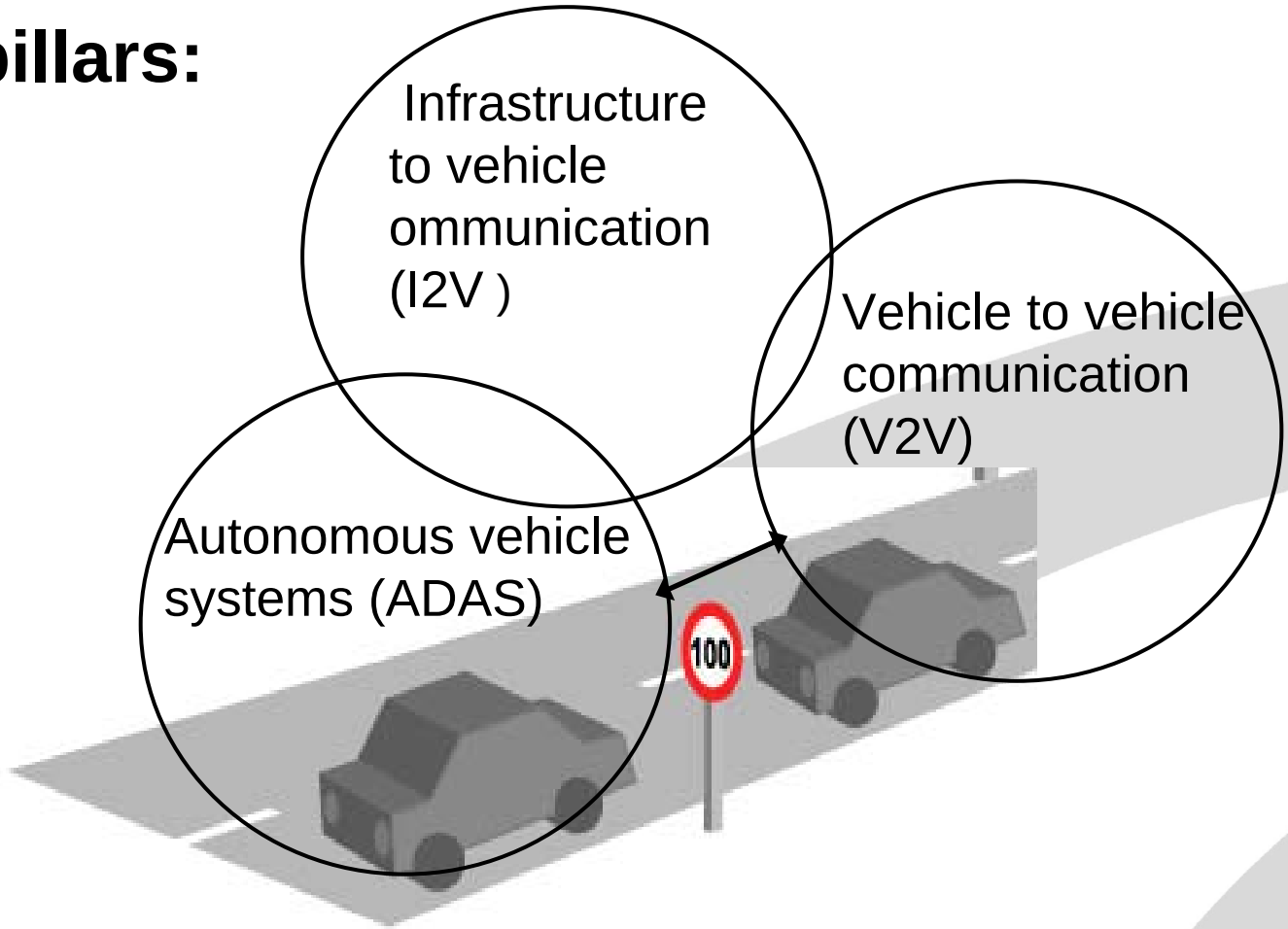
Key issue for multimodal tranportation

Information:

- reliable planning data (for route, traffic and travel time)
  - reliable interoperable traffic prognosis on all modes
- real time information on deviations against planning
  - seemless tracking on all modes
- comfortable one stop shop booking

Basics on co-operative systems for traffic management

3 pillars:



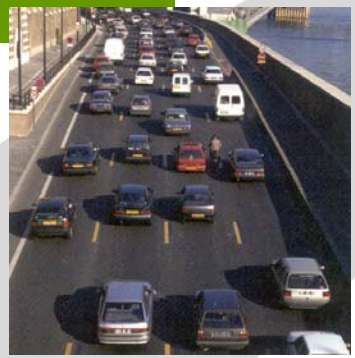
Traffic control- today

Traffic control

distributed

central

Inland navigation
Sea navigation



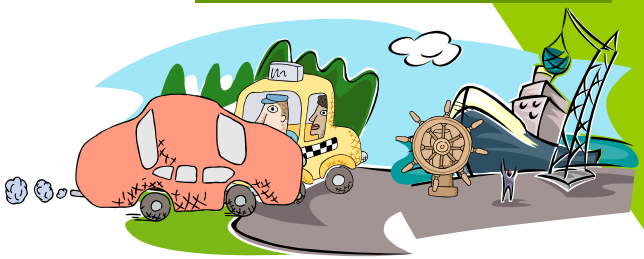
Individual Traffic

Rail

Air

Trends based on ITS developments

distributed Vs. central



More central responsibility:
- Automatic traffic data logging
- Traffic information
- Traffic control

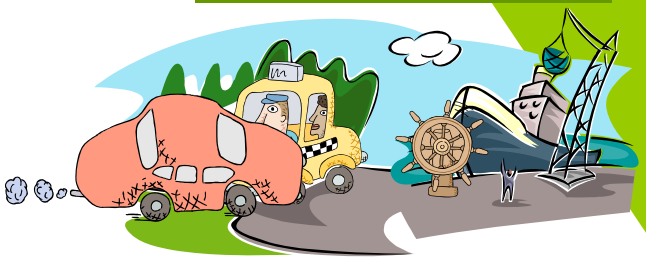
Trend

Less central responsibility:
- more information into the vehicle
- Decision support system for the train driver, for the captain

- Improved use of existing infrastructure
- Linking of transport modes via reliable information

Future

distributed



central

Co-operative Traffic Management/Organisation

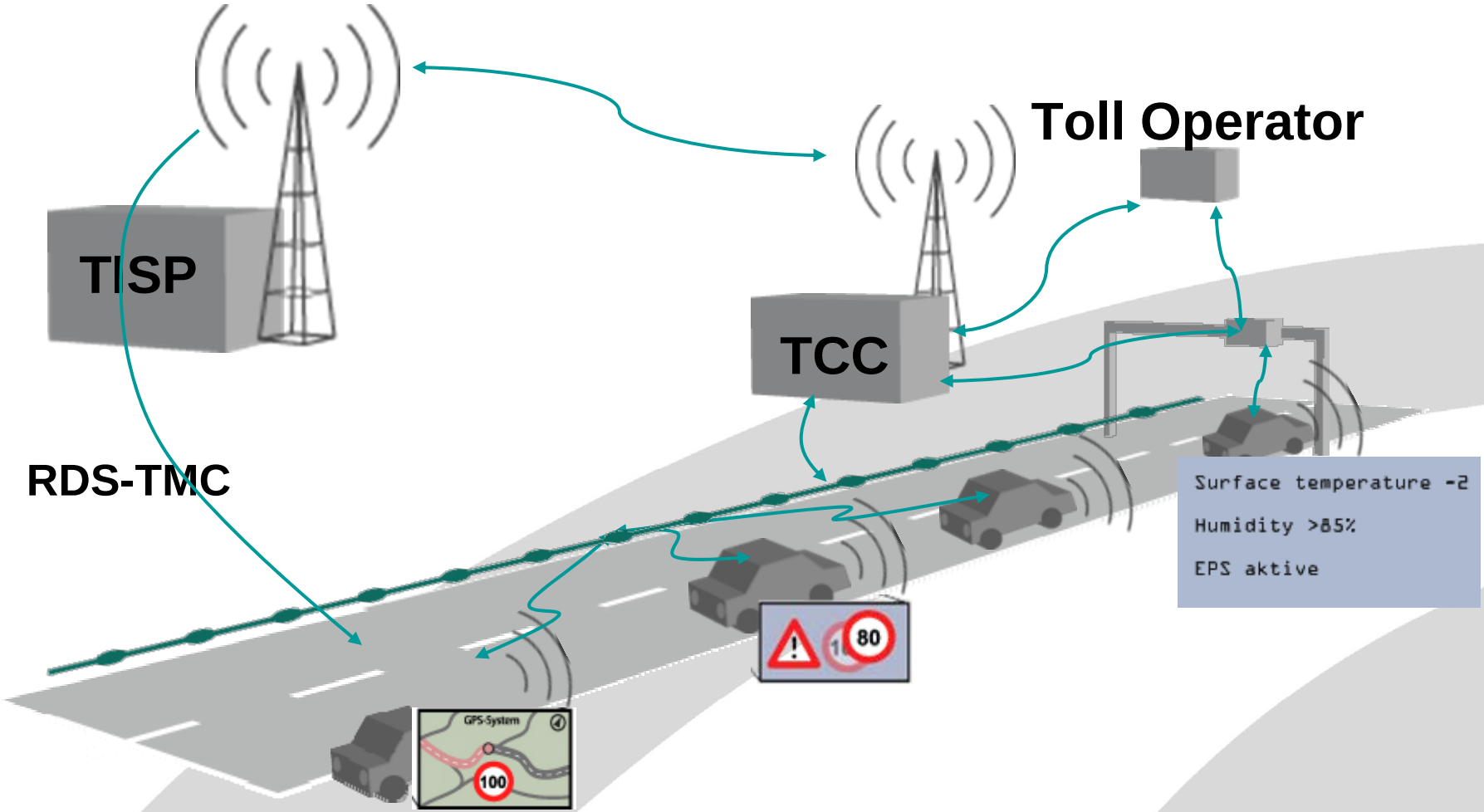
Providing a highly precise and reliable set of data for

- traffic information
- traffic prognosis
- traffic and transport planning

Is it only a vision?
Examples for actual R&D

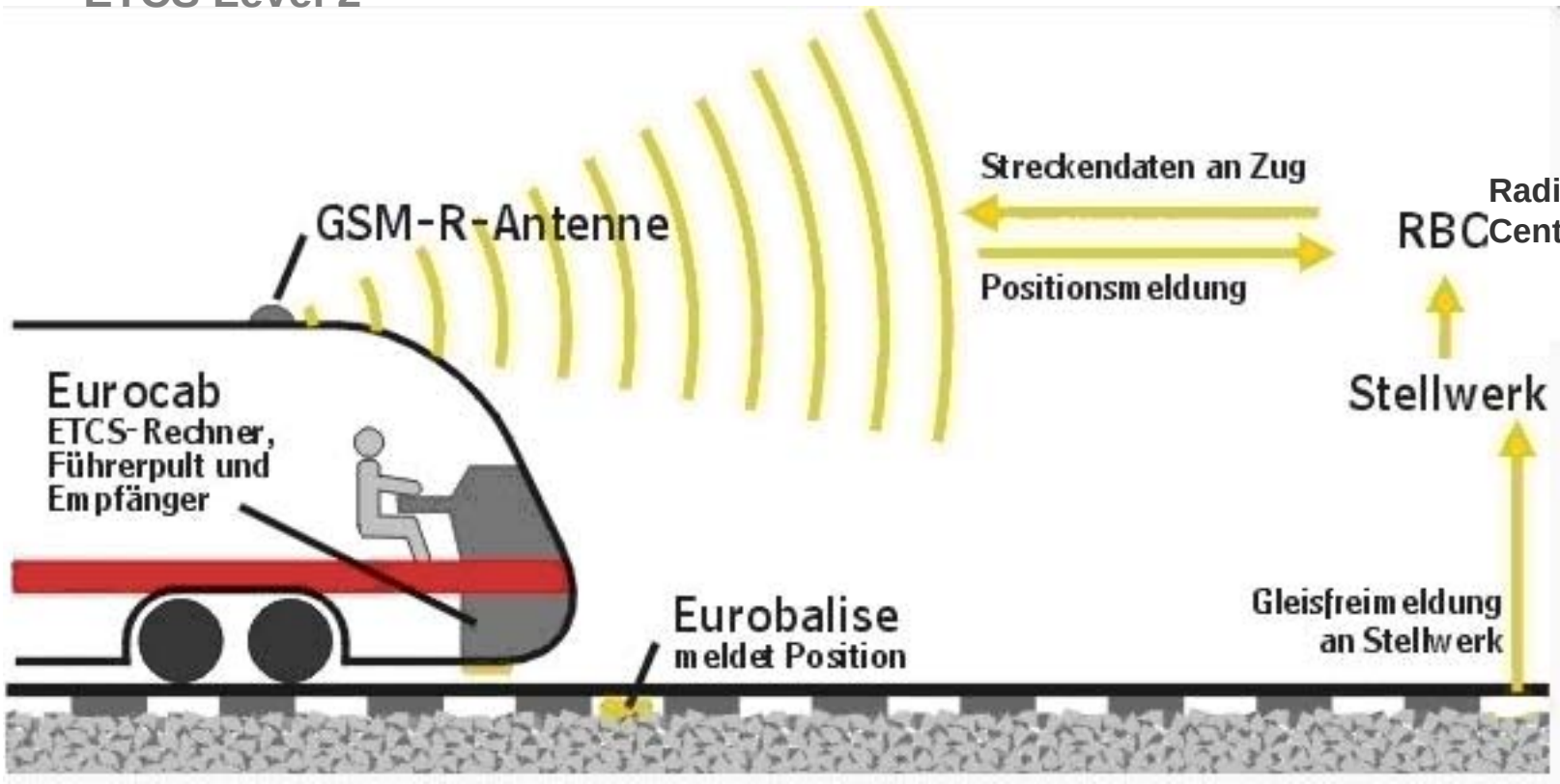
- Road: COOPERS, CIVIS, SAFESPOT
- Rail: ETCS, ERTMS
- Waterways: RIS
- Maritime: VTMS
- Air: SESAR

COOPERS Project vision

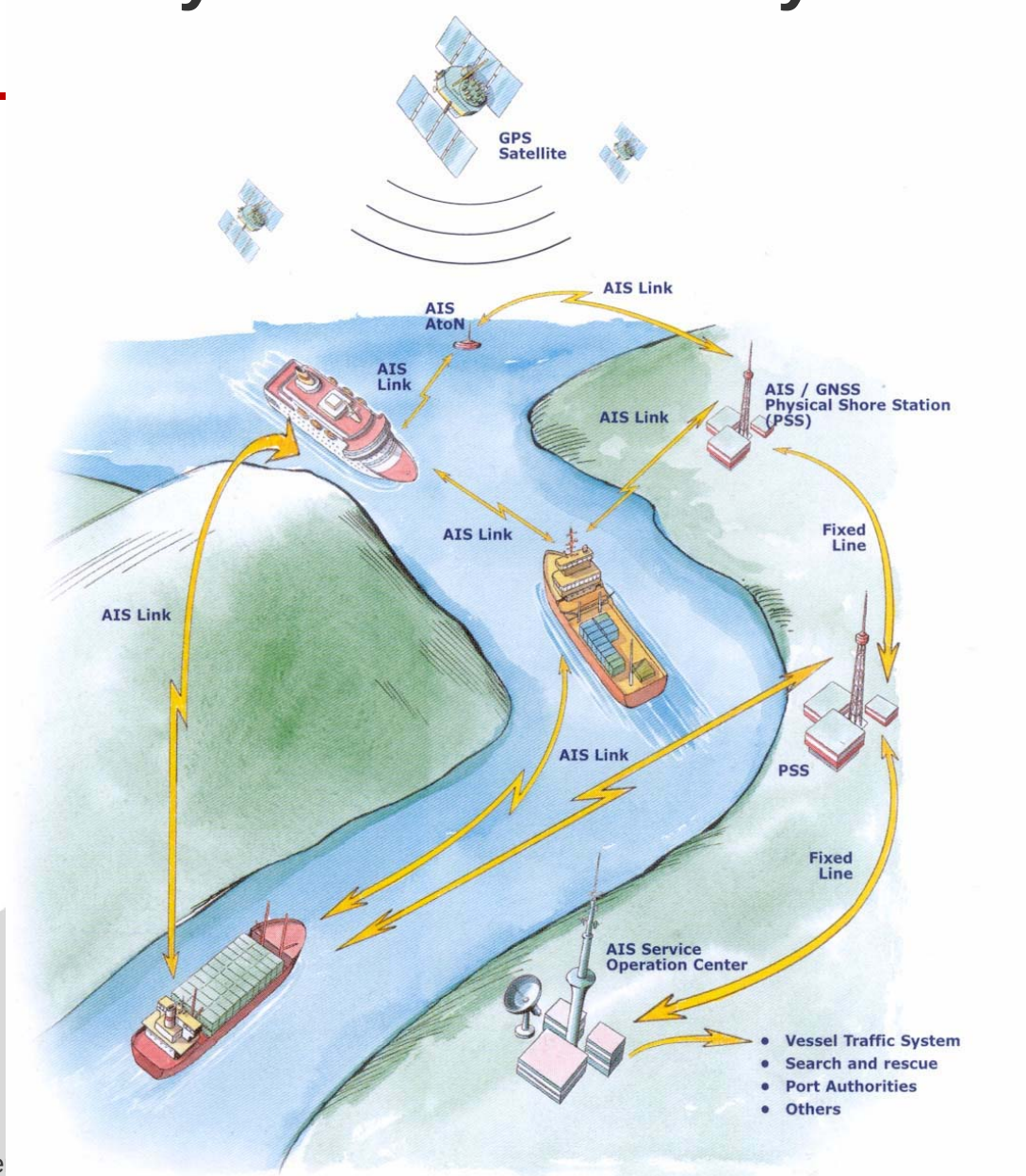


Co-operative systems - rail

ETCS Level 2



Co-operative systems – waterways RIS



Key role of ITS applications on infrastructure side

- Improve utilisation of existing infrastructure
  - More vehicles through the infrastructure
  - Increase service quality and reliability by traffic control
- Allocate demand to available capacities (road, rail, etc.)
  - Multimodal approach
- Manage crucial bottlenecks
  - Strategic transport network management

On mobility demand side

Synergies in ITS deployment

- Implementing ‚intelligence' into the whole transport system generates hugh amount of data of highest quality.

This data have to be used for a new generation of **individualised mobility services** to encourage change of mobility demand (persons and goods) with **acceptable comfort**, **less growing demand on additional infrastructure capacity** and **reduced impact to environment**

Summary

Within the frame of upcoming restrictions for road transport in respect of:

- CO2 emmission
- Fossil fuel consumption
- Land use/lack on capacity on road
- Accidents
- Congestions

A change of transport organisation will happen for both cargo and passenger – precise data out of co-operative traffic management will contribute to future solutions

Thank you for your attention

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