

## Smart transport – smart city

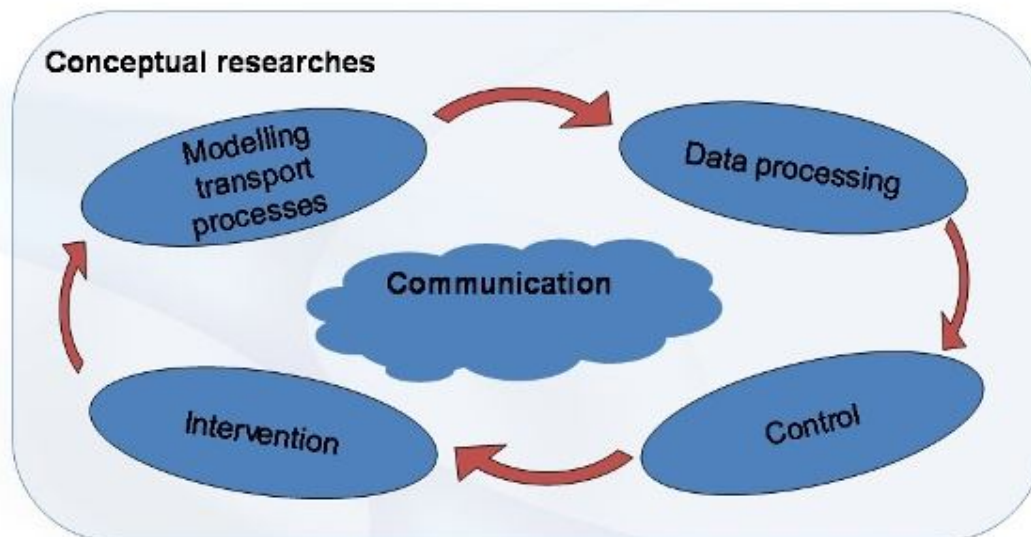
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head of department  
Széchenyi István University – Department of Transport



## Smart transport in research

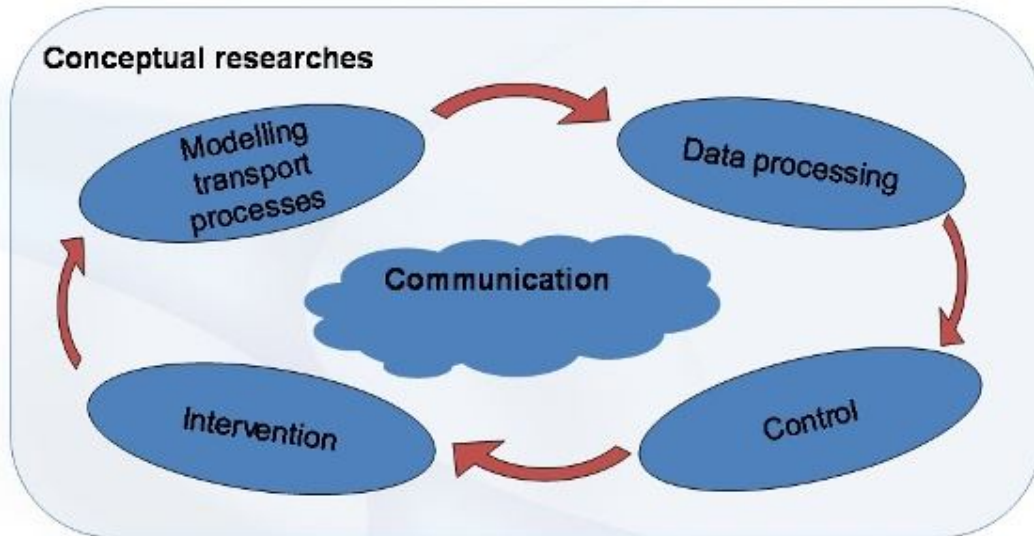
- „*Smarter Transport*” –  
IT for co-operative transport system  
– TAMOP-4.2.2.C-11/1/KONV-2012-0012
- Széchenyi István University
- Kecskemét College
- Óbuda University - Alba Regia University  
Centre
- Universitas-Győr Non-profit Ltd.

1. **Conceptual researches**  
System analysis of transport, demand and solution in the field of ICT
2. **Modelling transport processes**  
Macro-and microscopic modelling of transport systems
3. **Data processing**  
Collecting and handling of data warehouses
4. **Control**  
Centralised and distributed control systems based on ICT
5. **Intervention**  
Solutions for supporting drivers through V2X communication
6. **Communication**  
Communication between intelligent vehicles and its surrounding, factor of safety and security



- What is smart transport?
- How can be a transport system smart?
- Possible solutions
  - An urban transport system with uniform info-communication support
  - Network of communicating sub-systems
  - Group of intelligent solutions

- ...smart transport:
- An urban transport system with uniform info-communication support
  - Road (infrastructure)
  - Vehicle (and/or user?)
  - Control
- or a bit more...

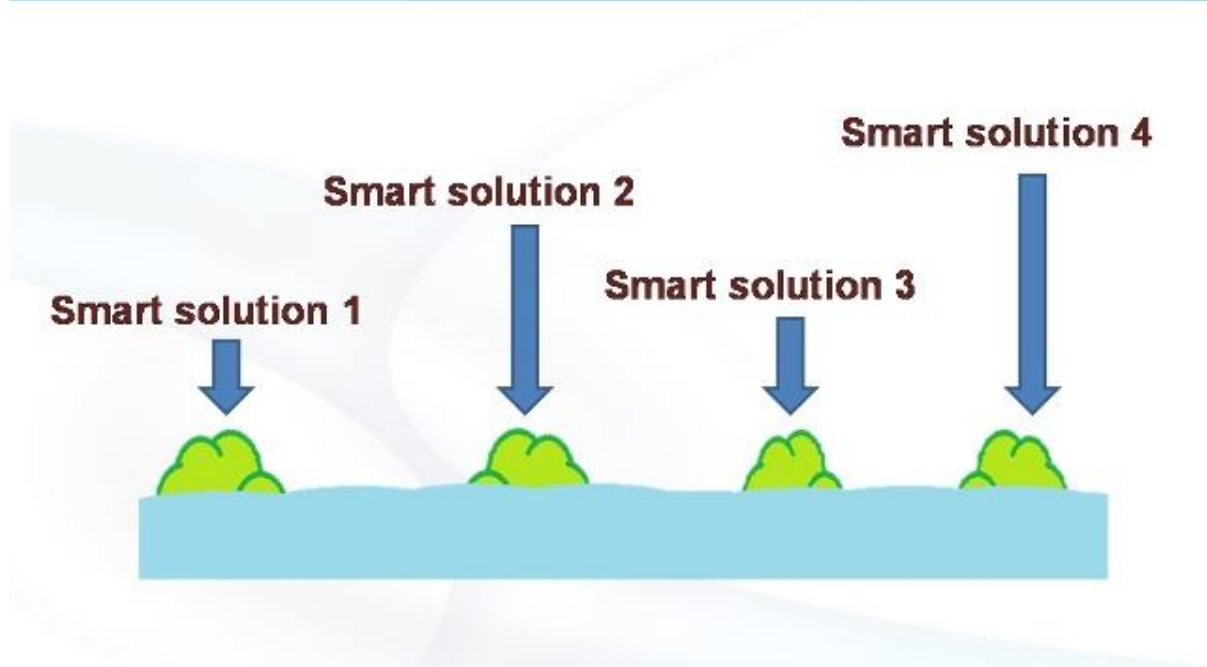


- E-ticketing
- On-line passenger information system
- Smart cards – payment
- Apps for smartphones
- Car (or plate) recognition
- Incident recognition
  - Route suggestion
- Traffic lights
- Integrated traffic management
  - mobility management
- ...

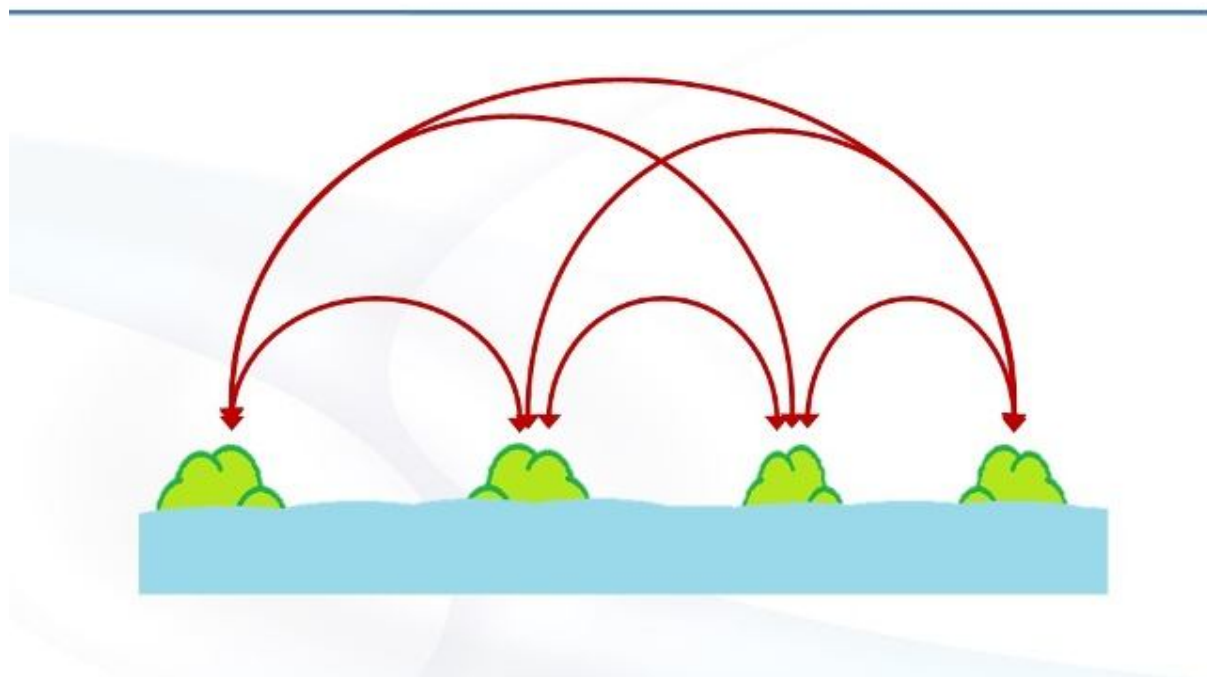
## What is the aim?

- Pollution (air, noise...)
- Financial
- Quality of life
- Security
- Safety
- ...

## Present situation (at least in Hungary)



## Hoped situation



## Cards, cards, cards...



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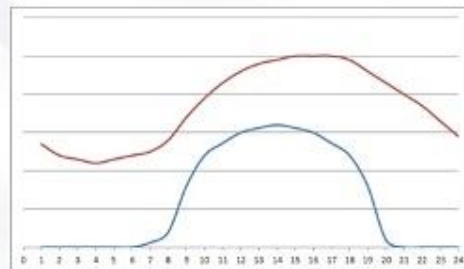
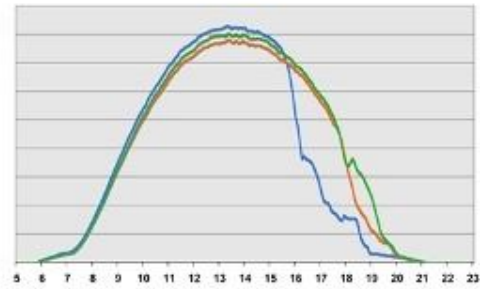
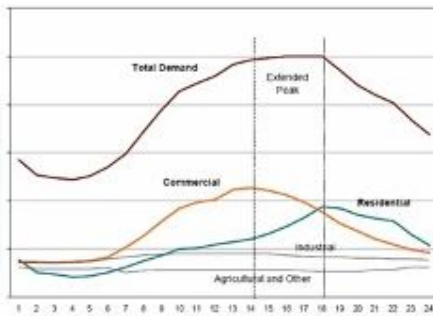
## One media for all aim!



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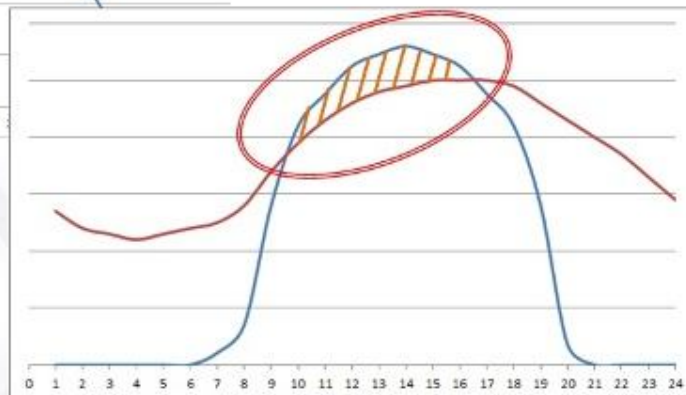
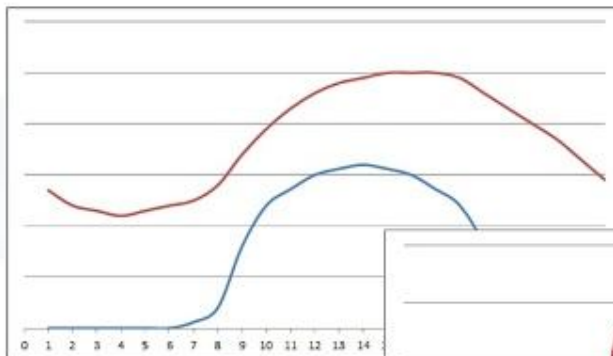


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- Effects
  - Changing modal-split
    - Less vehicles on the road
      - Less accident
      - Less pollution
      - Less space needed
  - Better spatial service (possibility of mobility)
    - For ill people
    - Elderly
- How?
  - Planning – demand based
  - Operation – pro-active control and operation
  - Üzemeltetés – pro-aktív irányítás és üzemeltetés



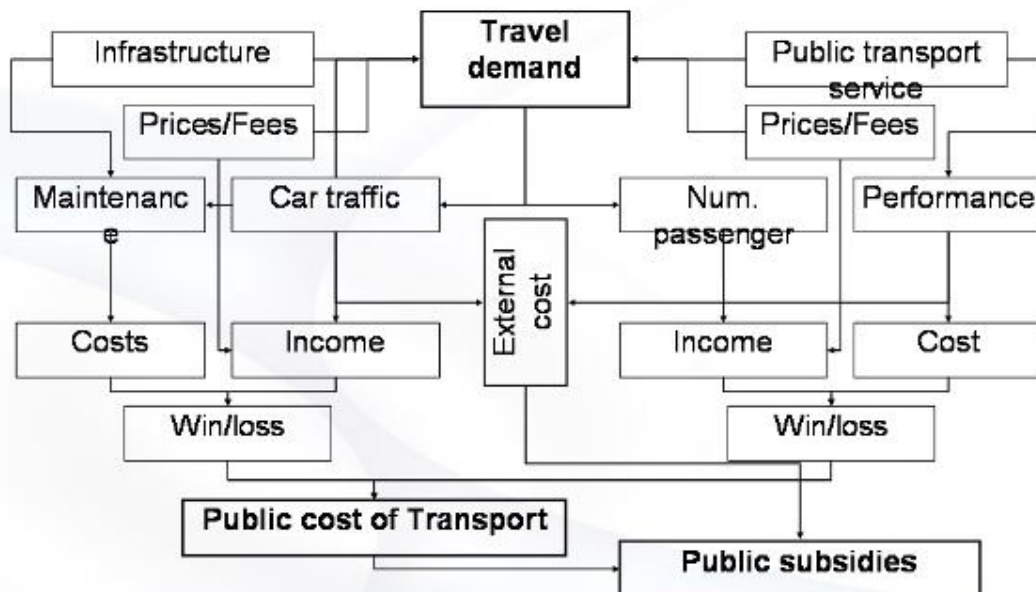
- Car traffic
- Public transport (and users)
- Bicycle, pedestrians...

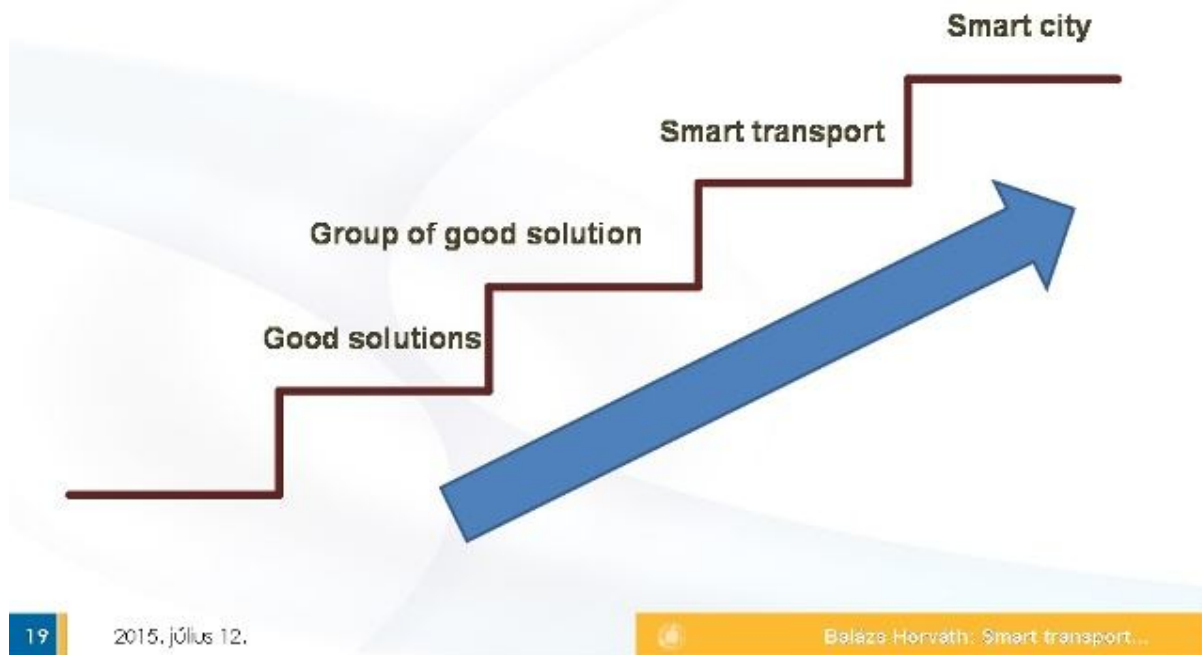
shall be in balance (good- and passenger transport) to reach the aim:

- Environmental friendly
- Safe and secure
- sustainable

## Mobility

- For all (included children, active groups, elderly, disabled...)





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## „Smarter Transport” Kooperatív közlekedési rendszerek infokommunikációs támogatása

TÁMOP-4.2.2.C-11/1/KONV-2012-0012

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MAGYARORSZÁG MEGÚJUL



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