

BESTUFS II.

Aspects for Modeling Urban Freight Transport



Dr. Janos MONIGL

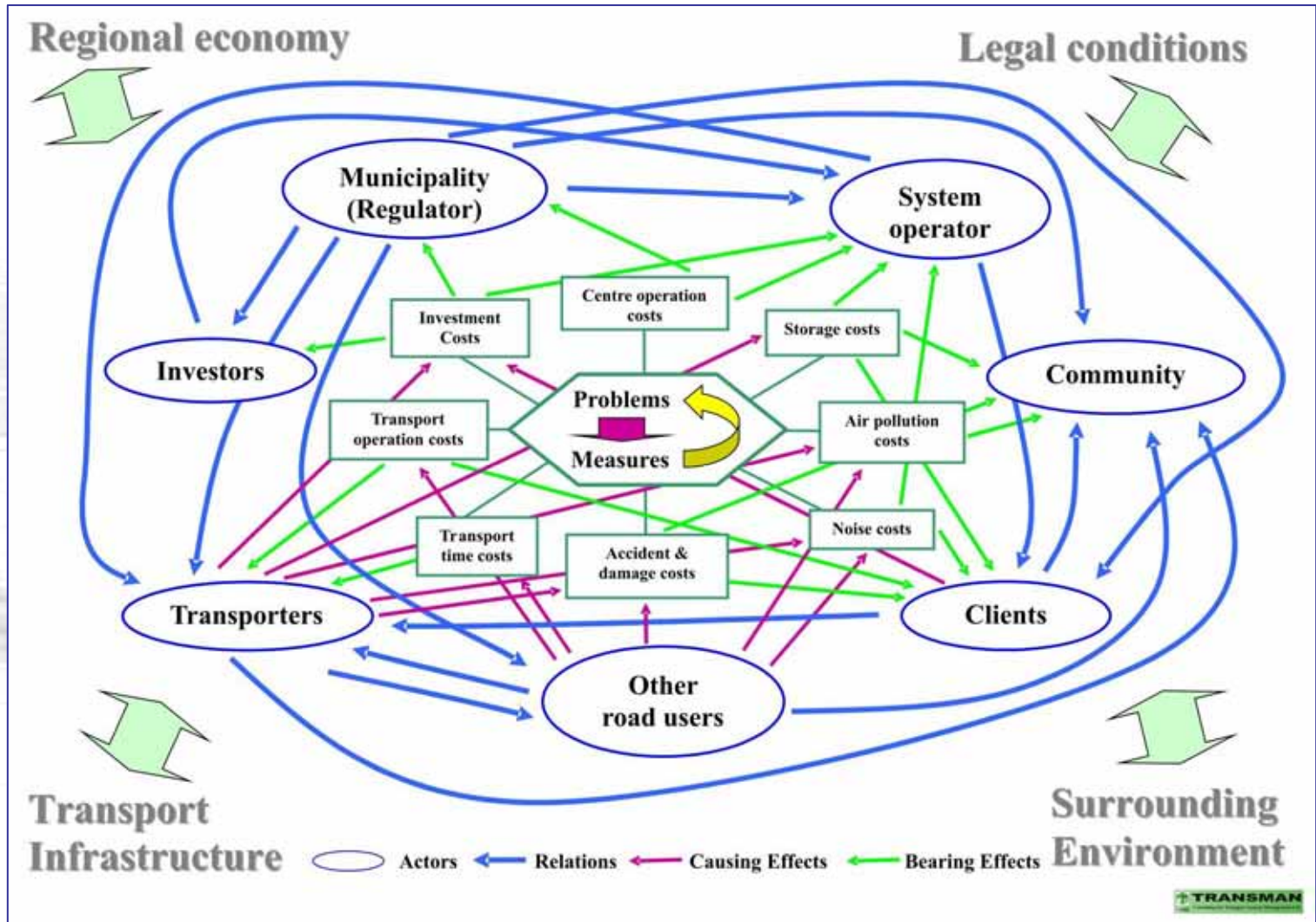
TRANSMAN, Budapest

www.transman.hu / transman@transman.hu



TRANSMAN

Main Actors, Relations and Effects of the Urban Freight Transport





Main goals and steps of urban freight modeling:

Urban infrastructure planning – Urban goods transport operation optimization

Main modelling steps	Involved actors
Demand generation	Clients, Operator (Centre)
Demand distribution	Clients, (Operator)
Goods - vehicles conversion	Transporters, Clients, (Operator)
Time-distribution	Clients, Operator, Transporters
Touring, routing + assignment	Operator, Transporters, Clients
Traffic network loadings ▼	Operators, Transporters, Clients

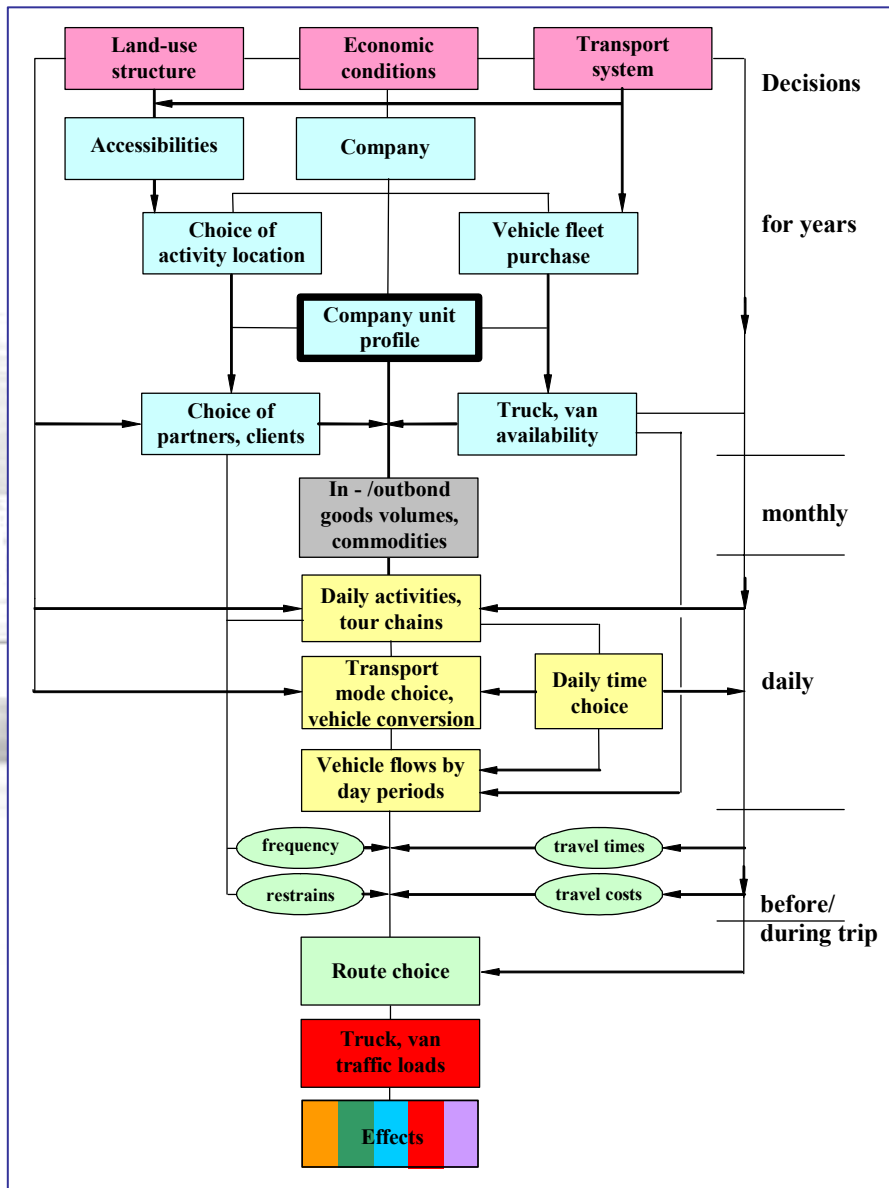


Main modeled effects and exposed actors

Traffic network loadings ▼	Costs – Benefits ?
Caused effects	Bearer the effects
Transport operation costs Transport time costs	Transporters, Other Road users (Operator)
Air pollution costs Noise, vibration costs	Community, Environment
Accident & damage costs Storage costs	Transporters, Other Road users (Operator), Clients, Community
Centre operation costs	Municipality, (Operator), Clients
Investment Costs	Investors



Conditions and decisions influencing the daily goods transport process modeling





Systematic Framework for UFS Evaluation

Non organised UFS

(base case: 0)

Organised UFS

(do something case: i)

Measures

- Create M+D centre / lagers
- Improve vehicle fleet
- Establish loading places
- Traffic organisation / ITS
 - Assigned routes
 - Dedicated time-windows
 - ...



Economic and Social Effects (X)

Effects: $\Delta X = X_0 - X_i$

- Investments costs (MU, IN)
- Implementation costs (MU, SO)
- Centre operation costs (SO)
- Storage costs (CL)
- Transport operation costs (TR, OU)
- Transport time costs (TR, OU)
- Air pollution costs (CO)
- Noise costs (CO)
- ...



Thanks for the Attention!

TRANSMAN Consulting

www.transman.hu / transman@transman.hu