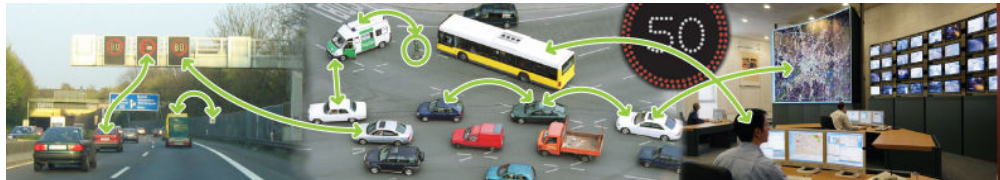




User needs and use cases

Jaap Vreeswijk, Peek Traffic bv
10 September 2009

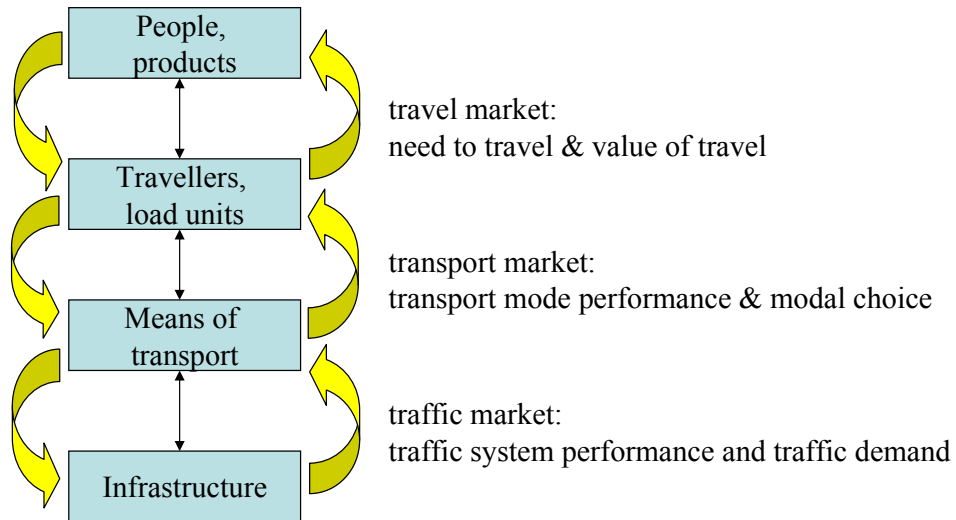


Outline

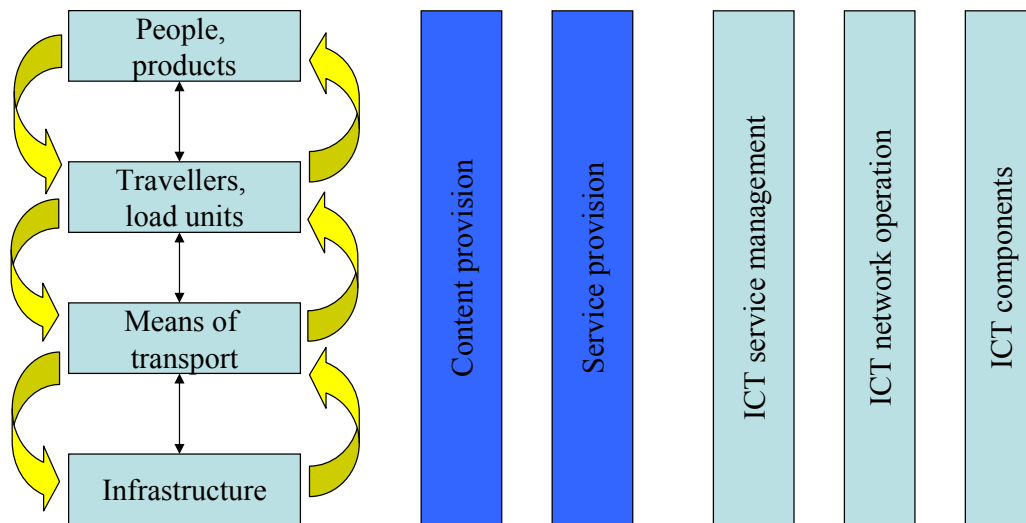
- Transport System
- ITS Architecture
- Users & needs



Transport system



Transport and ICT





Complexity



- Large integrated systems
 - Traffic information
- Many cooperating stakeholders
 - Government, manufacturers
- Multidisciplinary activities
 - Traffic modelling, Electrical Engineering, Psychology, Economics, Sociology
- Multiple manufacturers
 - Car-, PDA-, Radar manufacturers



Risks



- Incompatibility of systems
 - Equipment, information
- Multiple stand alone solutions: ITS islands
- Incompatibility of ITS services
- Market segregation and monopolization
- Lack of standardization
- Reluctance to invest in new R&D
- Expensive systems and services nobody wants



(ITS) Architecture

The purpose of an ITS ARCHITECTURE is to provide guidelines for the planning, design or implementation of an ITS application. ITS architectures come in very different forms and levels. They range from specific structures, such as the layout of a communication system or the design principles for an individual ITS element, to high-level concepts representing the underlying framework of a whole project.

Source: European ITS Architecture



In practice

- * System concept
 - User needs
 - Use cases
 - System requirements
 - System specifications
- * Detailed design

Source: KARIN Project



User needs

- Often result of a problem
- Entirely user oriented
- Plain text and informal diagrams
- Not necessarily consistent
- Completeness by numbers and types of users



Stakeholders

- Stakeholder categories:
 - *Want it* – to solve or provide
 - *Make it* – hardware and software
 - *Use it* – gain benefit and control system
 - *Rule it* – authorities

Source: CONVERGE Project

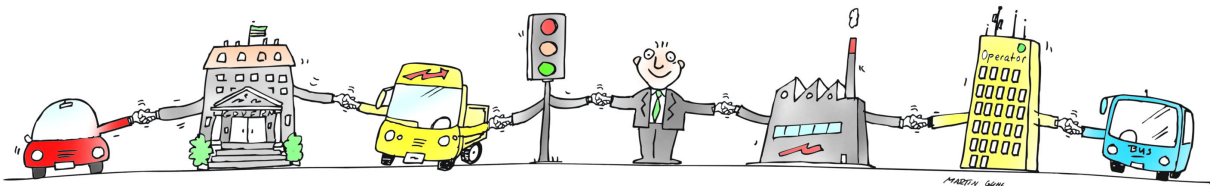




Stakeholder examples



- Traditional actors
 - Private consumers – Travelers
 - Commercial consumers – Freight and transport industry
 - Local authorities – City and district
 - High level ministries – National and federal
 - Exploitation – Operators of infrastructure and systems
 - Industry – Companies developing and producing systems
- New actors
 - Companies providing cooperative systems
 - Companies providing cooperative services



User need examples



- Reduce the time delay on road network
- Use bus lane capacity more effectively
- Free flow of public transport vehicles
- Control the use of bus lanes



Use cases



- Process to satisfy user needs
- 'Who' can do 'what' with the system
- Add detail to user needs
- Clusters of user needs
- Semi-formal diagrams
- Involve system engineers
- Involve system architects
- Remove obvious inconsistencies



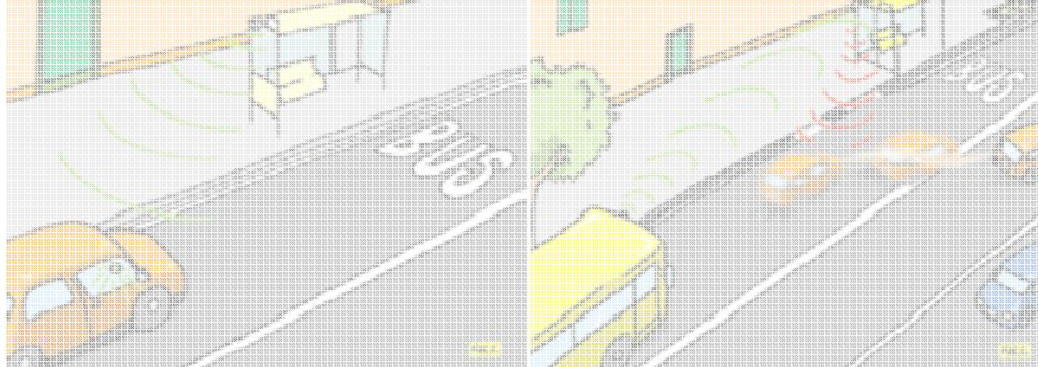
Use case examples



- Provision of licenses to use a bus lane
- Prevent disturbances to public transport vehicles



Flexible Bus Lanes??



Your turn!

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