

The Need for Urban ITS and ITS Architectures

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Today's Urban Traffic in Vietnam

- Increasing traffic volumes and already severe congestion.
- High share of motorcycle traffic. Ongoing shift to four-wheelers will increase capacity problems significantly.
- Low competitiveness and modal share of public transport.
- Safety problems and too many accidents and fatalities.
- High level of pollution and related diseases.
- Time losses and negative impacts on social welfare.
- Limitations in traffic management and user information.

Three major requirements:

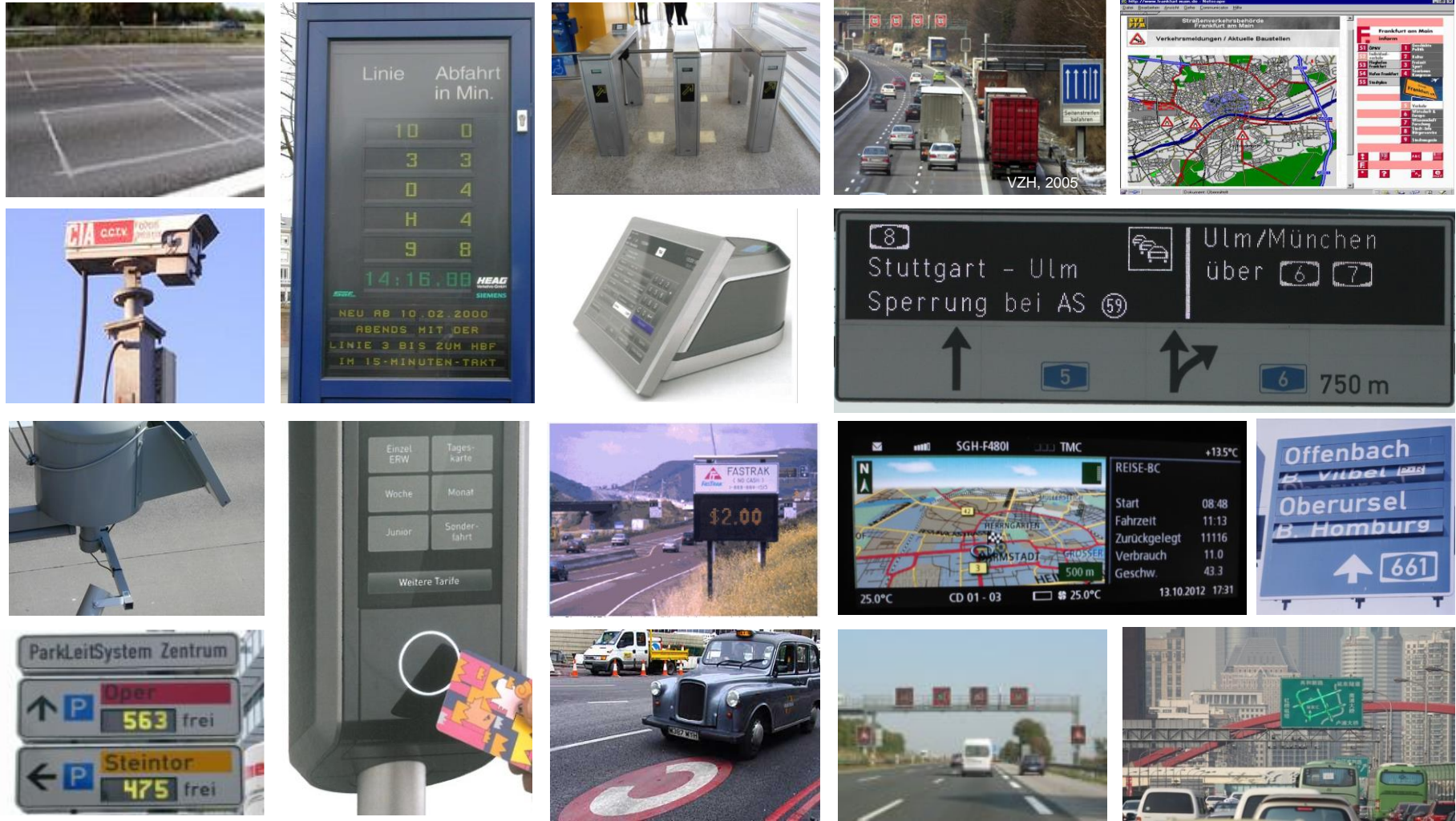
Traffic management to influence demand and supply.

Advanced technologies to support traffic management.

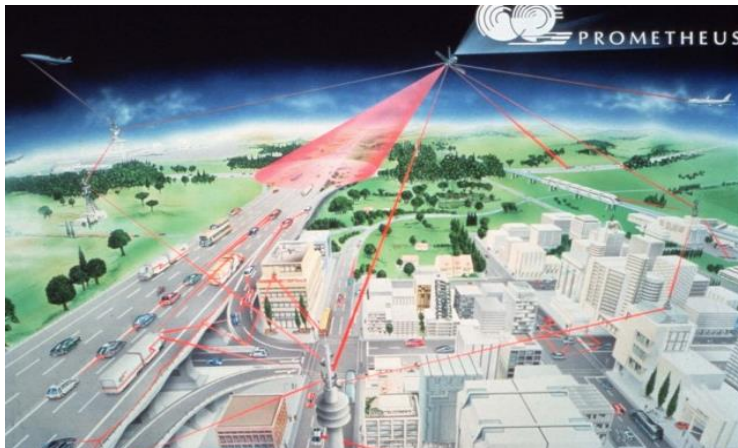
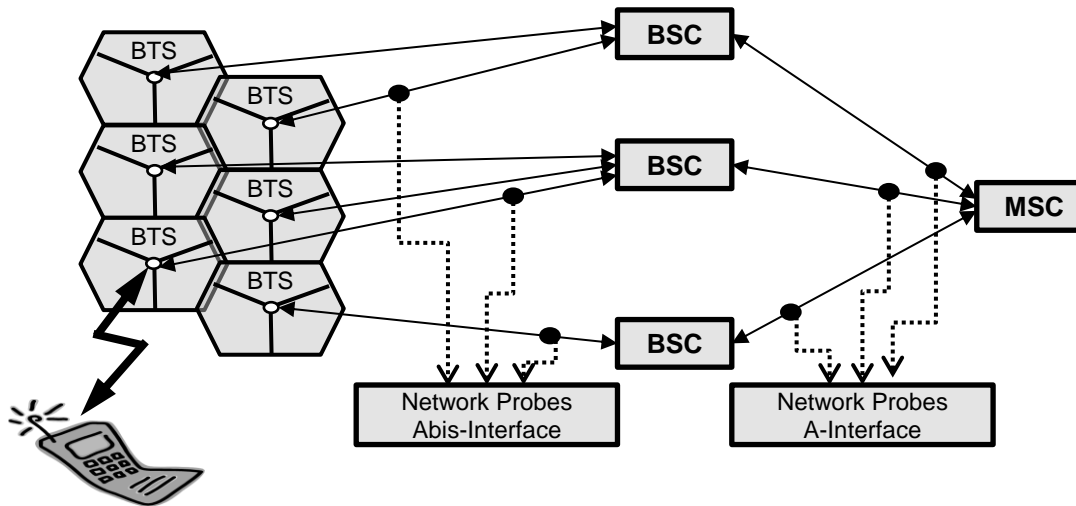
Infrastructure improvements and enhancements.



Advanced Technologies Supporting Traffic Management (1)



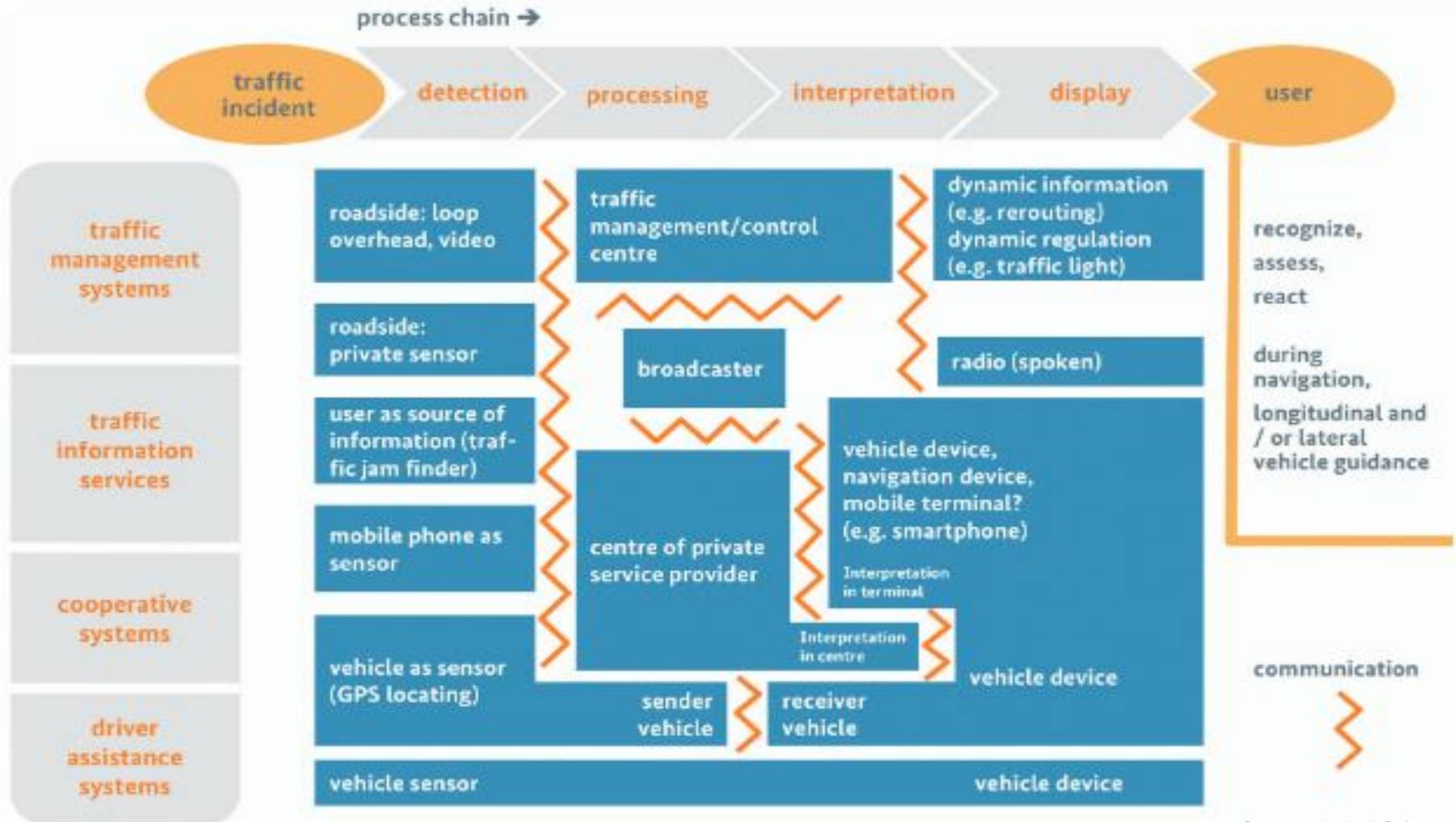
Advanced Technologies Supporting Traffic Management (2)



Quelle: PROMETHEUS - Informationsmappe zum Board Member Meeting, Paris 1994

Quelle: www.navigon.de

Need for Integration



Source: BMVBS (2012)

What Will Happen Without an ITS Architecture?

- Systems will be implemented with different standards.
- Especially where financial support comes from outside Vietnam, a strong attempt will be made to follow (different !) foreign standards.
- Islands of technology will exist. Operators will depend on specific manufacturers. Competition will be reduced.
- Costs will increase. Motivations for advances in product development will be limited.
- Interoperability of systems will be limited as well as benefits for users. Systems will be less efficient and less attractive.
- All together, a missing architecture will lead to economic loss. Since deployment of good ITS will be hindered, the traffic and transport systems will be facing more problems regarding capacity, safety and environmental problems.



Conclusions

- ITS are essential elements of urban traffic management, and the need for ITS will increase even more in future.
- ITS has no end in itself, but it is regarded as a tool for traffic management.
- The number of ITS is large, ITS are developing rapidly. Vietnam is cooperating with many national and international partners. An ITS architecture is required to give clear guidelines on integration and to avoid isolated systems.
- Vietnam needs a specific ITS architecture. But existing experience and knowledge on how to develop a National ITS Architecture should be utilized.
- At this stage of development, Vietnam has the chance to pave the way towards efficient use of advanced technologies in traffic and transport.



Today's Focus of Discussion:

- What are the demands for ITS at present and in future?
- Given so many different ITS systems, are we running into problem of system integration and compatibility?
- How much architectural design and standardization for ITS is needed? Do we need a National ITS Architecture for Vietnam?
- Is it necessary to develop an ITS Vision, an ITS Framework Architecture and ITS Reference Architectures on national level as well as on the level of urban transport authorities and major traffic and transport operators?
- Who should take the lead to initiate such developments?
- Do we need a national association “ITS Vietnam”?

