

# Freight Transport ICT: Short term actions within a conservative environment

Dieter Wild



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## Transport logistics and ICT (I)

- > Selling ICT to logistics service providers needs convincing proofs of financial gains
  - > Conservative user groups
  - > Product maturity is preferred rather than early adopting new technologies
  
- > How far would financial support for *Early Adopters* be a stimulus ?
  
- > Is there a contributing role for the EERP ?

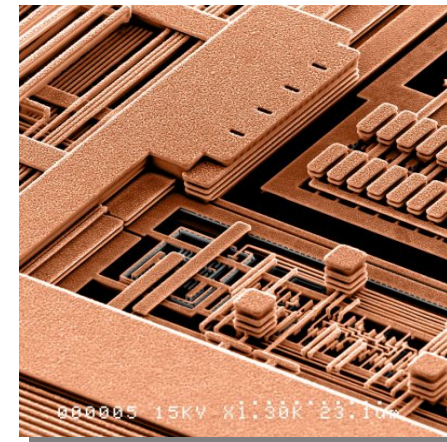
## Transport logistics and ICT (II)

- > The important role of ICT for transport logistics is more and more recognized – *from an overall perspective*
  - > ICT infrastructure is a relevant part of the transport infrastructure
  - > ICT is needed to exploit the full potential of physical means
    - ITS Action Plan
    - eFreight initiative
    - Action Plan for Freight Transport Logistics
    - TEN-T Green Paper

... and how about the *perspective of single actors* ?

## Acting locally ...

- > ICT applications with high ROI and with rather limited external dependencies were most successful in the past
  - > Navigation, transport planning, order management, warehouse management, vehicle control, material handling, etc.
- > Hesitation to invest in new technologies as long as “own” advantages are not clear
  - > Technology as an end in itself is not enough



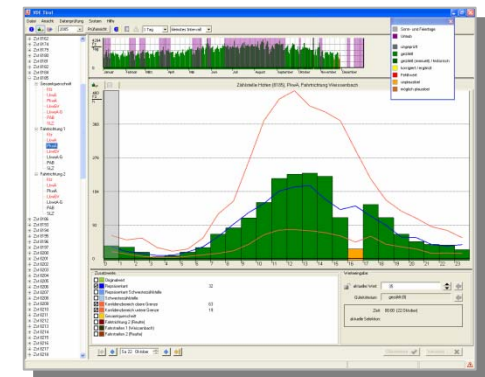
## ... and exercising restraint all together

- > ICT solutions are becoming more and more complex and often depend on a wider implementation (critical mass)
  - Hesitation to start investment
  - Waiting (too long) for standards or technology maturity

Examples:

Geographical coverage of traffic information

Terminal information (delays, time plans, etc.)



## Intelligent cargo systems – Impact assessment study

- > Still ongoing study for DG INFSO:  
**Impact assessment study on the introduction of intelligent cargo systems in transport logistics industry**
- > Some interview reactions:
  - > **Efficiency gains definitely above 10% are expected**  
(load factor increase, less empty running, error reduction, increase of transport speed, etc.)
  - > **Paperless transport processes can be achieved with available technologies** – focus on changing regulations and organisational processes
  - > **Global business needs global standards**
  - > **Better information and more transparency can have impacts on business models** – e.g. regarding the modal preferences or liabilities
  - > **An overall intelligent cargo system cannot be reached in short term**

## ICT locations (I) – (ITS Geneva 2008)

- > ICT within cargo
  - > ?? (status, condition and location measurement data logging)
- > C2I – Cargo to Infrastructure communication
  - > RFID, (identification), cargo handling, transshipment, tracking and tracing, safety, condition monitoring, etc.
- > ICT within vehicles
  - > ADAS for safety, efficiency and comfort, energy efficiency, navigation, map and POI support
- > V2V – Vehicle to Vehicle communication (Cooperative systems)
  - > Safety, traffic efficiency, etc.
  - > Transport logistics oriented applications ??



## ICT locations (II) – (ITS Geneva 2008)

- > V2I – Vehicle to Infrastructure communication (Cooperative systems)
  - > Safety, traffic efficiency, access control, reservation/scheduling (e.g. delivery space, ramps, resting areas, transshipment facilities), ETA, etc.
- > Dispatch centre to vehicle fleet communication
  - > Fleet management and monitoring, on-line dispatching, transport efficiency, SCEM, etc.
- > Dispatch centre to infrastructure communication
  - > Transport planning and execution, time tables, reservations, ETA, etc.
- > ICT within the dispatch centre
  - > Transport planning, transport efficiency
- > B2B and B2C
  - > efulfillment, order processing, supply chain planning/execution/control, SCEM, cooperation and freight consolidation, city logistics, etc.
- > ... other (e.g. modelling and simulation)

## Longer term efforts

- > Intelligent cargo systems
  
- > Transferring advanced SW technologies into the transport logistics domain
  - > SOA, SAAS, Cloud computing
  - > Framework for mobility services for goods
  - > Enabling complex solutions with different new parties in short time
  
- > V2V – Cooperative systems



## Short term stimulation (I)

- > Paperless transport processes
  - > eGovernment (regulations)
  - > Organisation and processes
  
- > Establishing conditions for reliable and trustful relationships
  - > Protection of documents, data and access
  - > eSignature
  
- > Traffic information
  - > Coverage and quality
  - > Not only for freight



## Short term stimulation (II)

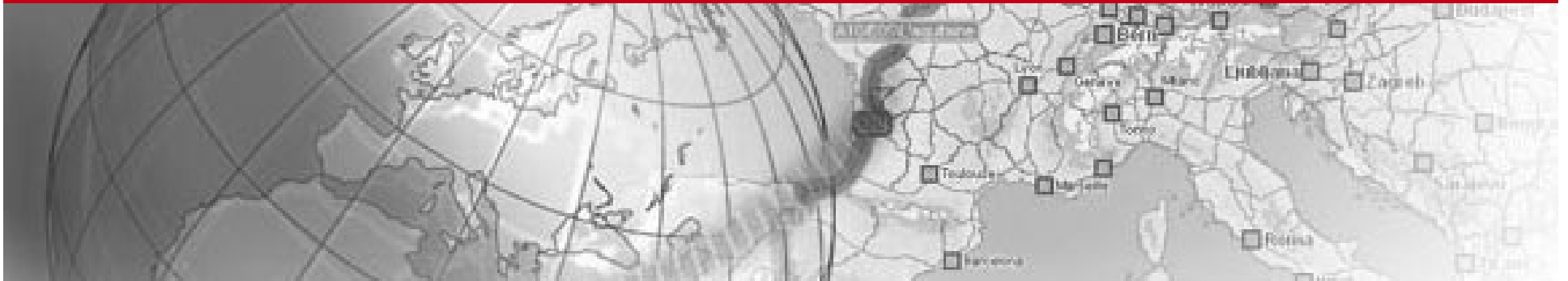
- > Intermodal information and services
  - > Terminal information (departure times, delays, offerings and requirements)
  - > Transport services information of single providers
  - > Services (booking, T&T, SCEM, etc.)
  
- > ADAS for fuel efficient driving and safety
  
- > V2I – Cooperative systems
  - > Access control
  - > Reservation of infrastructures (resting areas, delivery bays)
  
- > Dangerous goods transportation
  - > GOODROUTE and CVIS projects
  - > Directives and regulations needed

## Conclusions

- > An increasing share of available transport infrastructure budgets in Europe shall be spent for ICT **Infrastructure Investment**
- > Increasing efforts for research as well as innovation demonstrations are needed
  - > DG INFSO: Mobility services for goods **Research**
- > We have to move from “own-world solutions” to an open framework for mobility services for goods **Aim**
- > Stimulus can be given to prepare the field for such a framework (all example fields given) **Stimulation**



# PTV – Solutions for Sustainable Mobility



## Recommendation on near term R&D by the eSafetyForum WG RTD



- > Urban Goods Transport
  - > Data collection on goods distribution and freight operators to build models for goods transport flows and advanced cooperative routing
  - > ICT for consolidation strategies for urban goods deliveries and pick up
  
- > Clean and Efficient Goods Transports
  - > Infrastructure-to-Infrastructure interfaces (multiple operators, inter-modal)
  - > ICT for planning and performing green efficient goods transport
  - > Business models for green transports
  
- > Intelligent Vehicles and Secure Goods Transportation
  - > Secure vehicles
  - > Safe and secure hazardous goods transportation
  - > Harmonisation of communication protocols for cargo monitoring