Project Management Agency for the

Federal Ministry of Economics and Technology

TÜVRheinland®
Precisely Right.

Innovation policy, information society, telecommunications

30 years German-French Cooperation in Transport Research (DEUFRAKO)

Workshop A: Intelligent Logistics and Freight Traffic

Dresden, 17. 10. 2008

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www.tuvpt.de

Workshop A: Intelligent Logistics and Freight Traffic

Structure:

A.1 Overview about the results of the 2nd R&D-Programme „Mobilität und Verkehr“ (2000-2007)

A.2 The priorities of the new (3rd) R&D-Programme “Mobilität und Verkehrstechnologien” (2008 - 2011), column “Intelligent Logistics”

A.3 Discussion of Ideas for DEUFRAKO cooperation

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A.1 Overview about the results of the 2nd R&D-Programme „Mobilität und Verkehr“ (2000-2007)

Programme - aim:

- Improving the premises for traffic-innovations
- Upgrading the corresponding technological progress in a sustainable way

Announcements of subprogrammes (with focus to goods traffic):

- “Flexible Transportketten” (1997-2001),
- “Optimale Transporte in der Kreislaufwirtschaft” (2000-2005),
- “Europäischer Schienengüterverkehr 2010” (2001-2005) and
- “Intelligente Logistik im Güter- und Wirtschaftsverkehr“ (since 2006).

In anticipation of the 3rd R&D-Programme „Innovative Seehafentechnologien – ISETEC II“ was announced in 2007

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Selected results of the subprogrammes (1):

“Flexible Transportketten” (flexible transport chains) :
16 demonstration projects
- avoiding or shifting 143 Mio. Lkw-km/a
- shifting from road to rail (40%),
- shifting from road waterway (8%),
- avoiding road traffic (52%).

“Optimale Transporte in der Kreislaufwirtschaft” (optimized transports and recycling management of wastes):
- small scaled branch involved in the program
- avoiding road traffic with 20,8 Mio. Lkw-km/a.

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Selected results of the subprogrammes (2):

- High potential of technological and logistical innovation:

- Specific boxes with greater time-flexibility and transport-safety

- Improving simulation models for traffic-analysis and -forecast

- developing planning-systems for
  - goods/vehicle-disposition
  - route-planning.

- cooperative solutions between shippers and carriers:
  - new distribution-structures
  - more effective transports.

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New subprogram of BMWi starting in 2006: **"Intelligent logistics"** was the input for the new **R&D-Programme "Mobilität und Verkehrstechnologien.**

Aim:

to keep alive international competitiveness of the logistics and to develop logistics further on

Content:

- New ideas for rail, truck and inland navigation must be realized faster.
- Still central questions for goods-traffic are: security, energy, fuel-consumption, environmental protection, economic viability and capacity-utilization.
- New drive- and vehicle-concepts to decrease energy-consumption
- adaptation to logistical requests

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Fields of future R&D-activities in the programme-column “Intelligent Logistics”:

Reduction of bottlenecks in cargo handling hubs

(Cargo handling technologies and automation)

Optimisation of transport by cooperation and networking

(Information and Communication-technologies, avoiding empty drives, diminishing of detours, intermodal transport)

Safety-related requests for logistics must be held payable

(electronic seal, safety regulations, global satellite-navigation-system Galileo)

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Now it‘s time for discussion!

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A.3-1 High Speed air cargo transport on rail (Hinterland traffic by rail from / to the airports)

Goal: avoiding transport of air cargo between airports on the road

Solution / Criterium:

- Dispersed network of airports (linking European main ports)
- Enlargement of airports by rail as interlinked hubs
- High speed rail system for cargo (air- and landtransport)
- Unification of the rolling stock Europe-wide

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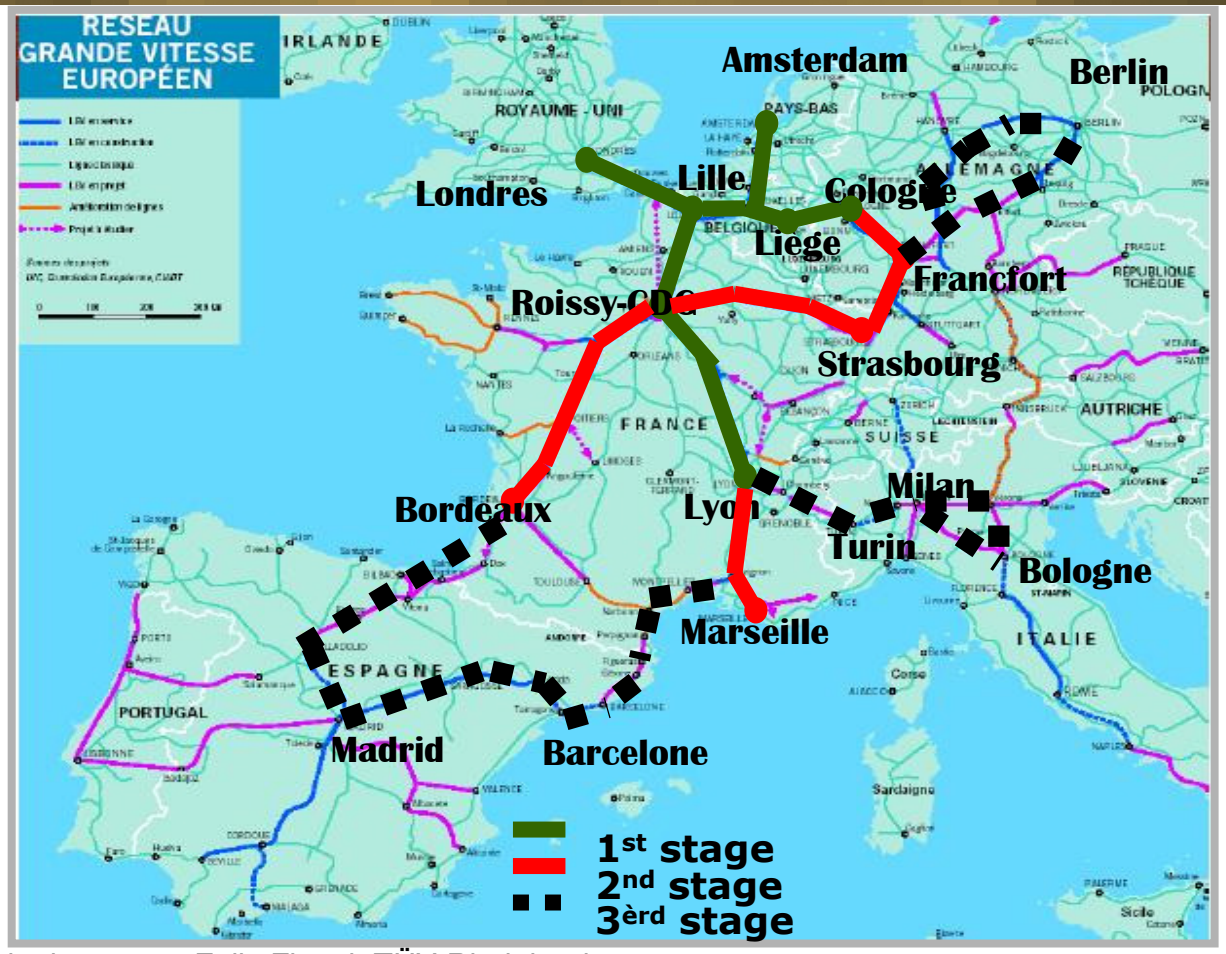
EUROCAREX: stages



Source:
Yanick PATERNOTTE
(MP of Roissy)

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A.3-2 Adoption of an "Advanced Truck Load Firms - ATLF"-Model to Europe (Reference to the German national project Cargo Exchange)

Goal:

- Industrialisation of complete-load freight-transport networks to generate efficient working time of drivers, circulation of trucks and capacity utilization

Solutions/criteria:

- Geographical distributed great basis of clients
- Strategic area-positioning of the fleet
- Optimization of Cargo-distribution by decoupling trucks and crew-planning of truck drivers within a circulating pool using standardized equipment of trucks and trailers
- Centralized contact with clients, (Single point) disposition and centralized contract-management via telematics
- Process-cost based structuring of Pricing
- "One-way" fleet operations (relay-transports)
- Coperative business models of operating companies in a network

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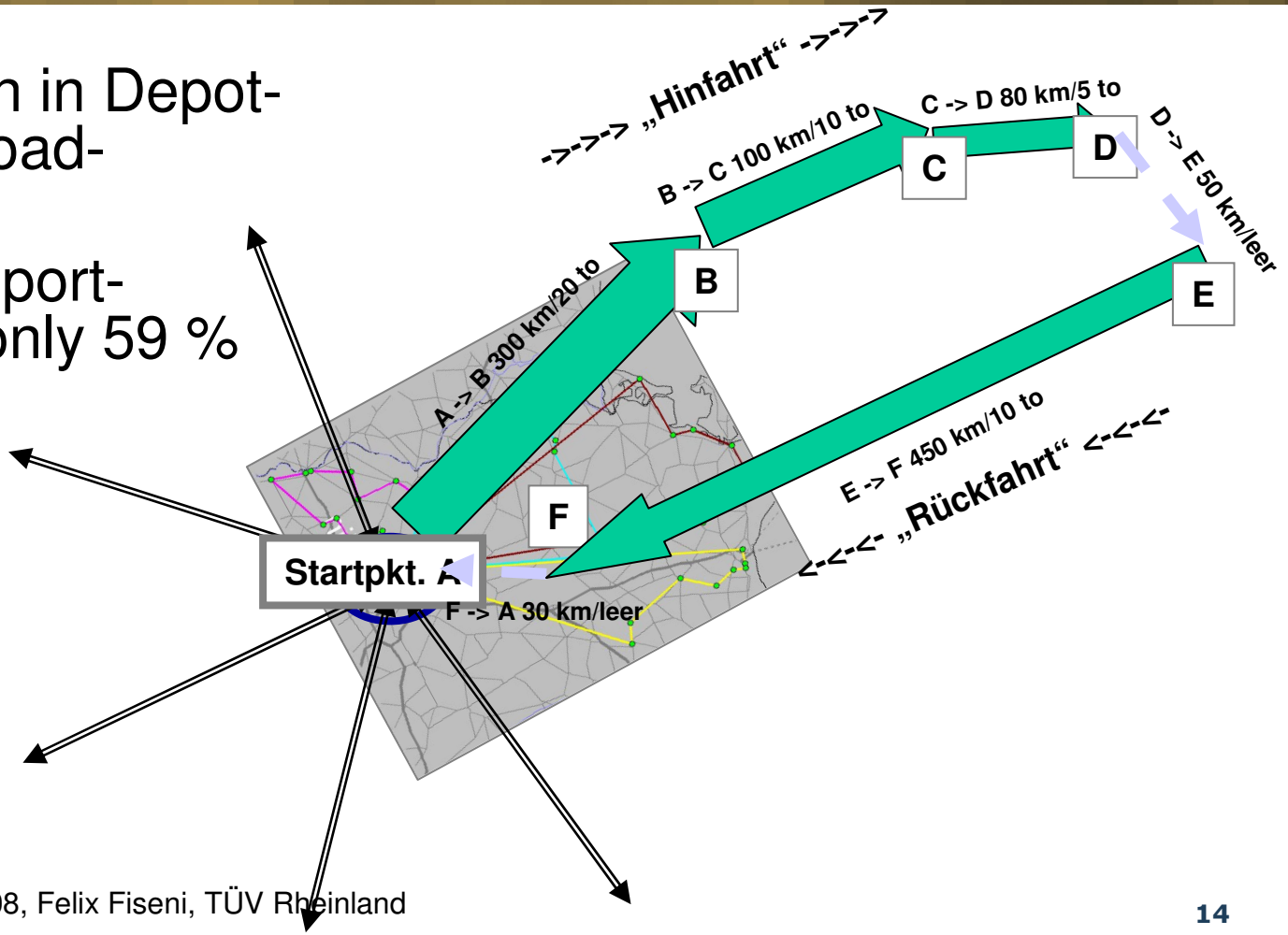
Poor utilization in Depot-related Truckload-Business:

Effective transport-performance only 59 %



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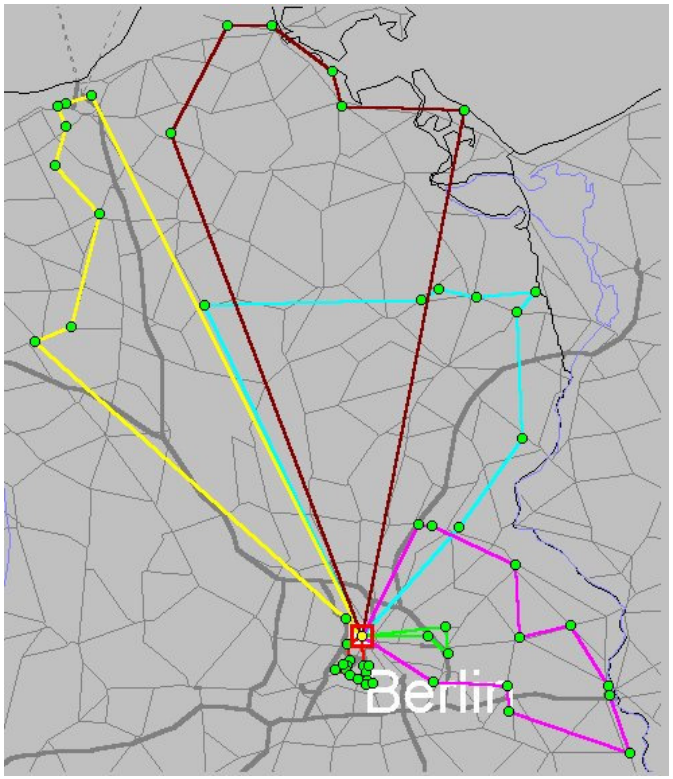
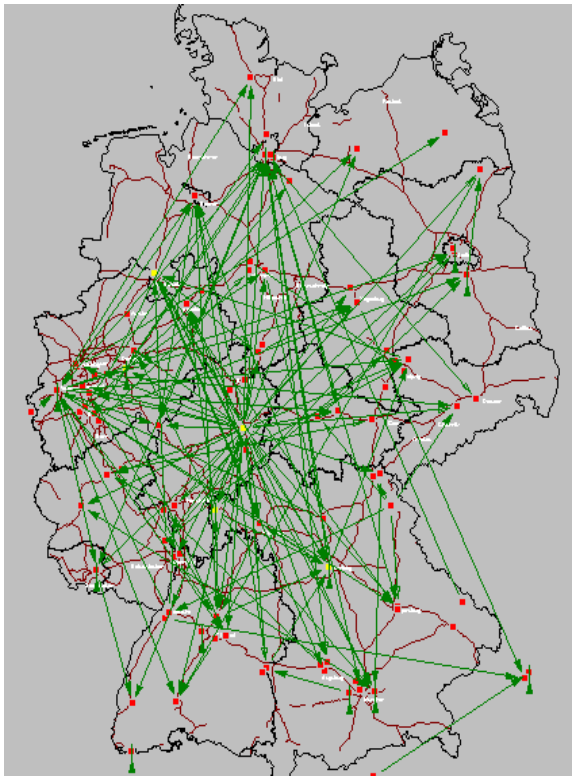
Depot-related round-trips,
Tramp- Loading



Network of an
Advanced Truck-Load System



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A.3-3 Combined Land- and Seatransport

Goal:
- Widening and interlinking the land-based logistics chains via Short Sea Shipping
- Substitute road freight transport for coastal transport

Solutions/criteria:

- Conception of a linkage between existing logistics chains in Land-Transport and existing or new lines for navigation in Maritime-Transport
- Creation of an information network for shipowners, operators of shipping lines, import/export companies, road and rail transporters

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Source: **Directorate-General for Energy and Transport European Commission; 2003**

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A.3-4 High Quality Railfreight Service France-Germany-CIS (HighQRail-CIS) – (1)

Objectives:

- Implementation of a direct train service between France/Germany and CIS countries (Ukraine/Russia/Kasachstan) with defined consolidation points in France, Germany and Poland
- Intermodal and conventional wagonload
- Transit times competitive to road transport
- One-Stop-Shop for users including provision of transport status information
- Quality management with focus on border crossings and transhipment points between rail gauges
- Continuous transport data flow between participating rail operators including access for users

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A.3-4 High Quality Railfreight Service France-Germany-CIS (HighQRail-CIS) – (2)

Challenges:

- Current competitiveness problems due to rail transport quality deficits (e.g. border crossings, transport organisation incl. data transfer)
- Harmonisation and completion of data on market demand, commodities, user requirements, identification of consolidation points etc.
- Commitment and confidence of potential users
- Overcome equipment shortages (e.g. wide gauge wagons) through new collaboration approaches
- Several route options to be compared in terms of transport parameters (e.g. feasible transit times, punctuality, axle load, transhipment facility

=> high level of complexity

Initiators: SNCF Fret (F), ITL Eisenbahngesellschaft mbH (DE)

Further Partners: ITL Polska (PL), PKP (PL), LISKI (UA)

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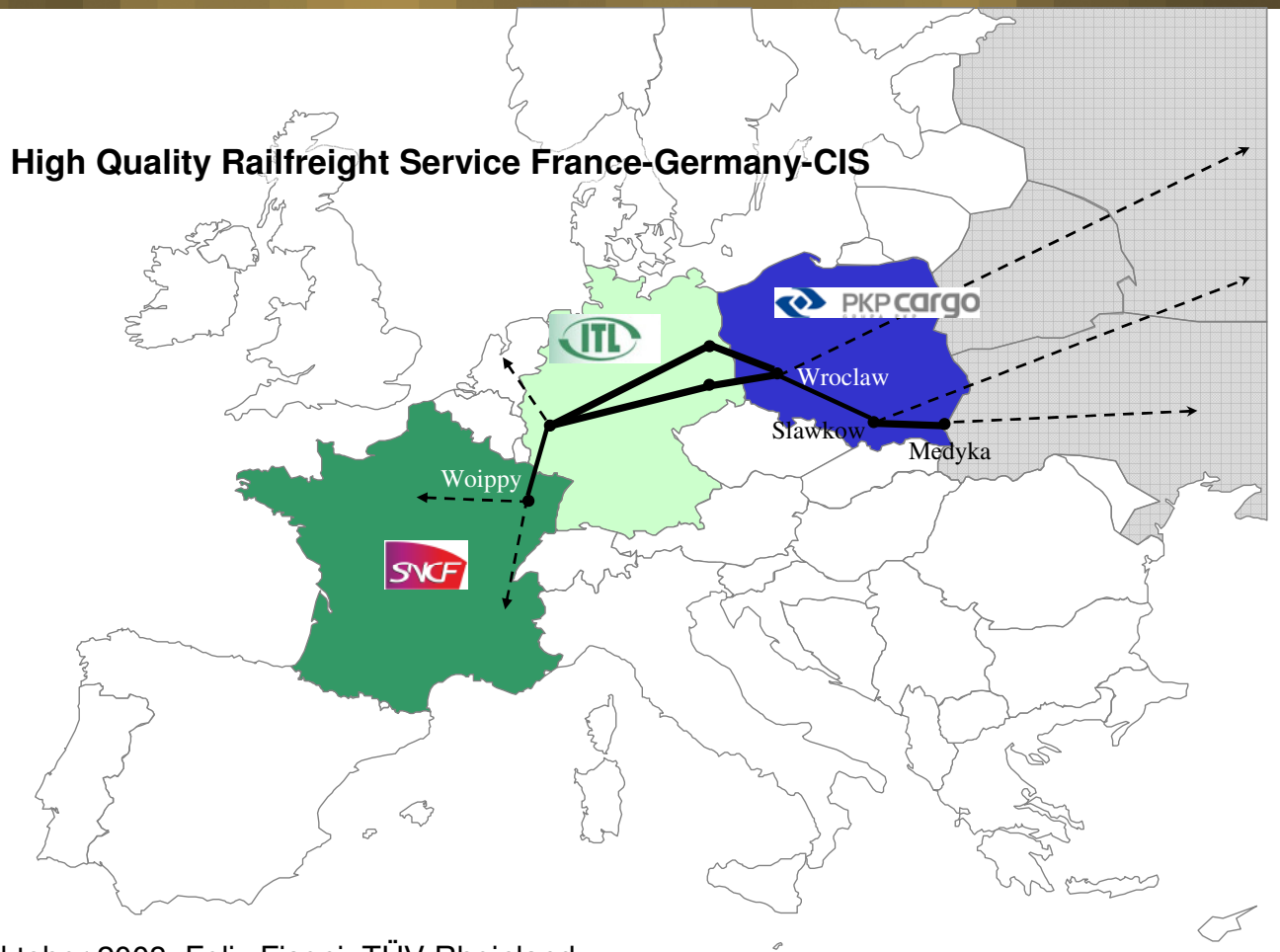

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A.3-5 Scandinavia-France-Express:

Objectives:

- Implementation of a direct train service between France and German Baltic sea port Rostock with consolidation points in Woippy (F) and Cologne (D)
- Intermodal and conventional wagonload
- One-Stop-Shop for users including provision of transport status information
- Quality management with focus on harmonised time tables between trains and Baltic Sea ferries
- Continuous transport data flow between participating rail operators including access for users

Challenges:

- Indication of significant market demand needs to be transferred in to commitment of potential users
- Strong competition with through road transport
- Implentation of balanced freight flows considering different requirements of commodities (e.g. paper and grocery) and resulting loading equipment
- Phasing concept: 1. starting with consolidation points, 2. block train Rostock - Woippy
- Partners: SNCF Fret (F), ITL (D), Scandlines Deutschland GmbH (D)

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