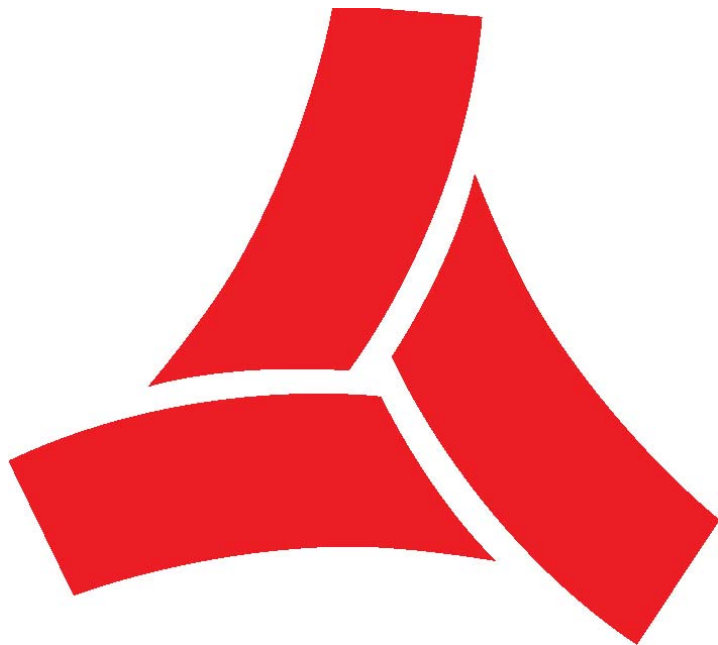


# Improving European Railways

## Logistic market requirements for new rail freight services

Gerwin Zomer  
Senior Consultant  
TNO Mobility and Logistics  
RETRACK WP 1 leader

September 03, Delft, THE NETHERLANDS



# *retrack*

*An Integrated EU-Project*

# Logistics networks

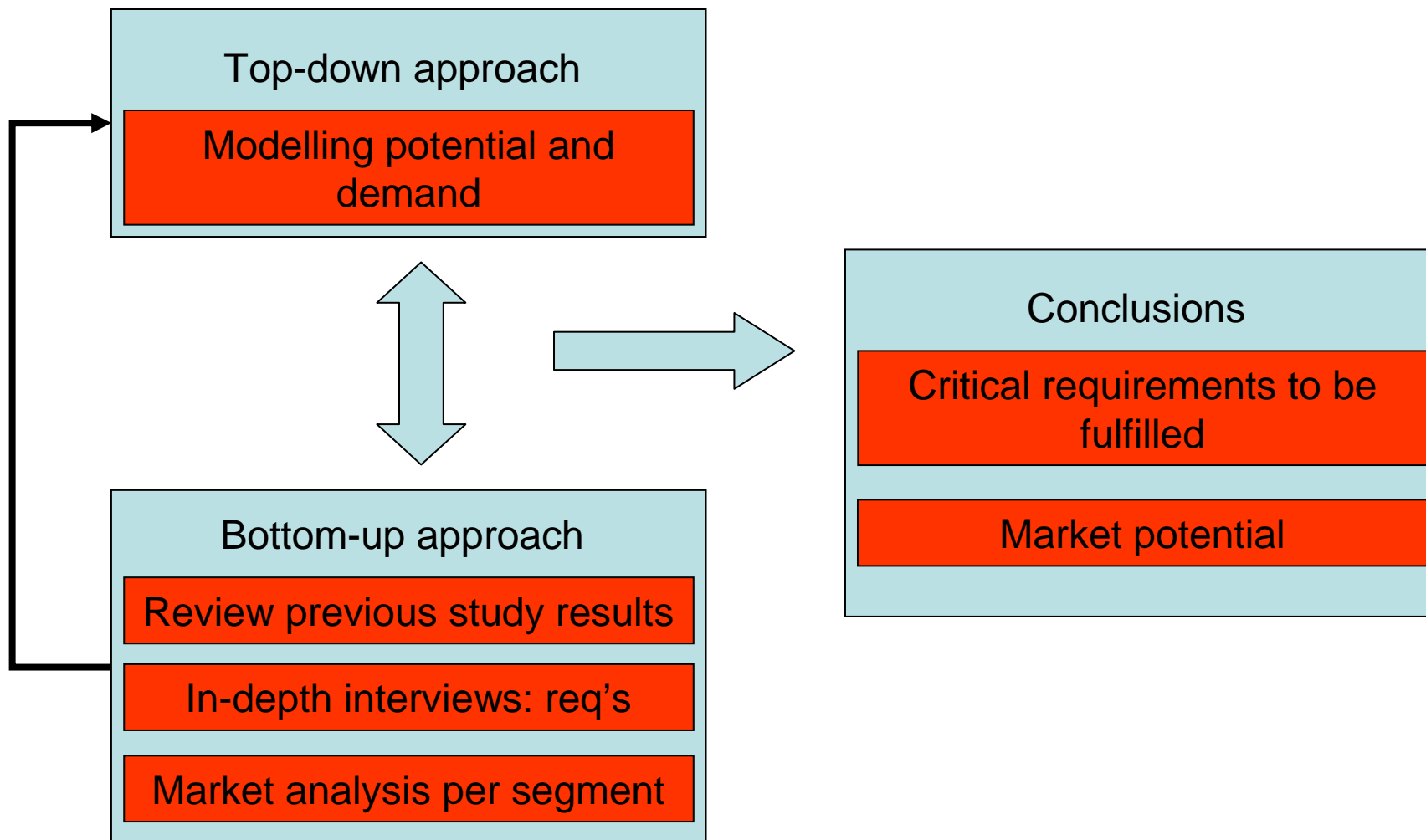
- Emerging logistics networks in Europe
  - SCM: reduce logistic cost and maximise the service to customer
  - Trends: Sustainability (carbon, noise), Congestion, Co-modality
  - Answer: From chain to network approaches
  - New rail freight services
  - Intermodal solutions
  - Integration of services



- Challenge
  - Efficiently manage the use of transport modes
  - Fulfilling user requirements: really demand driven



# Study approach RETRACK market req's and potential for rail freight



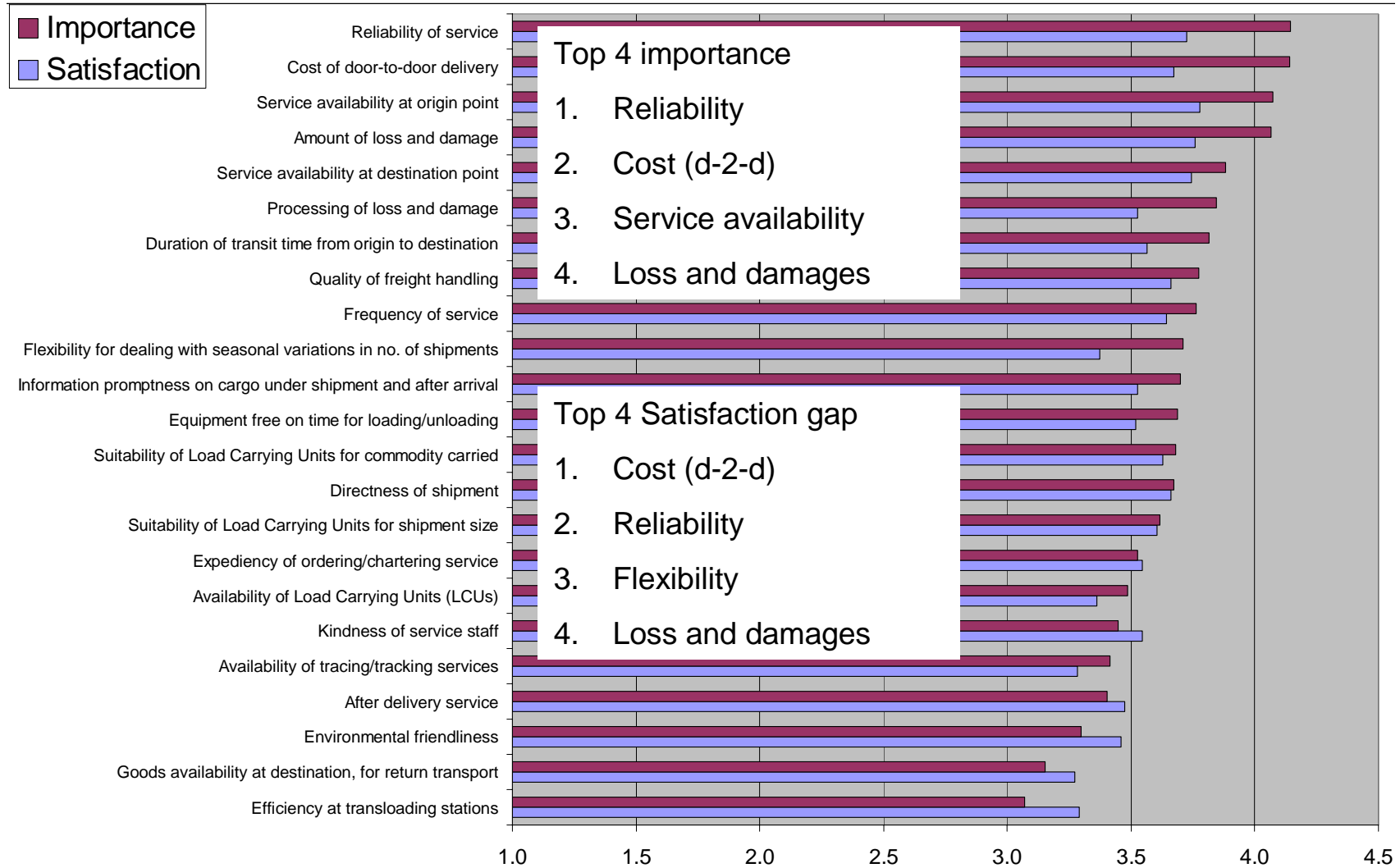
Improving European Railways

# Logistic requirements



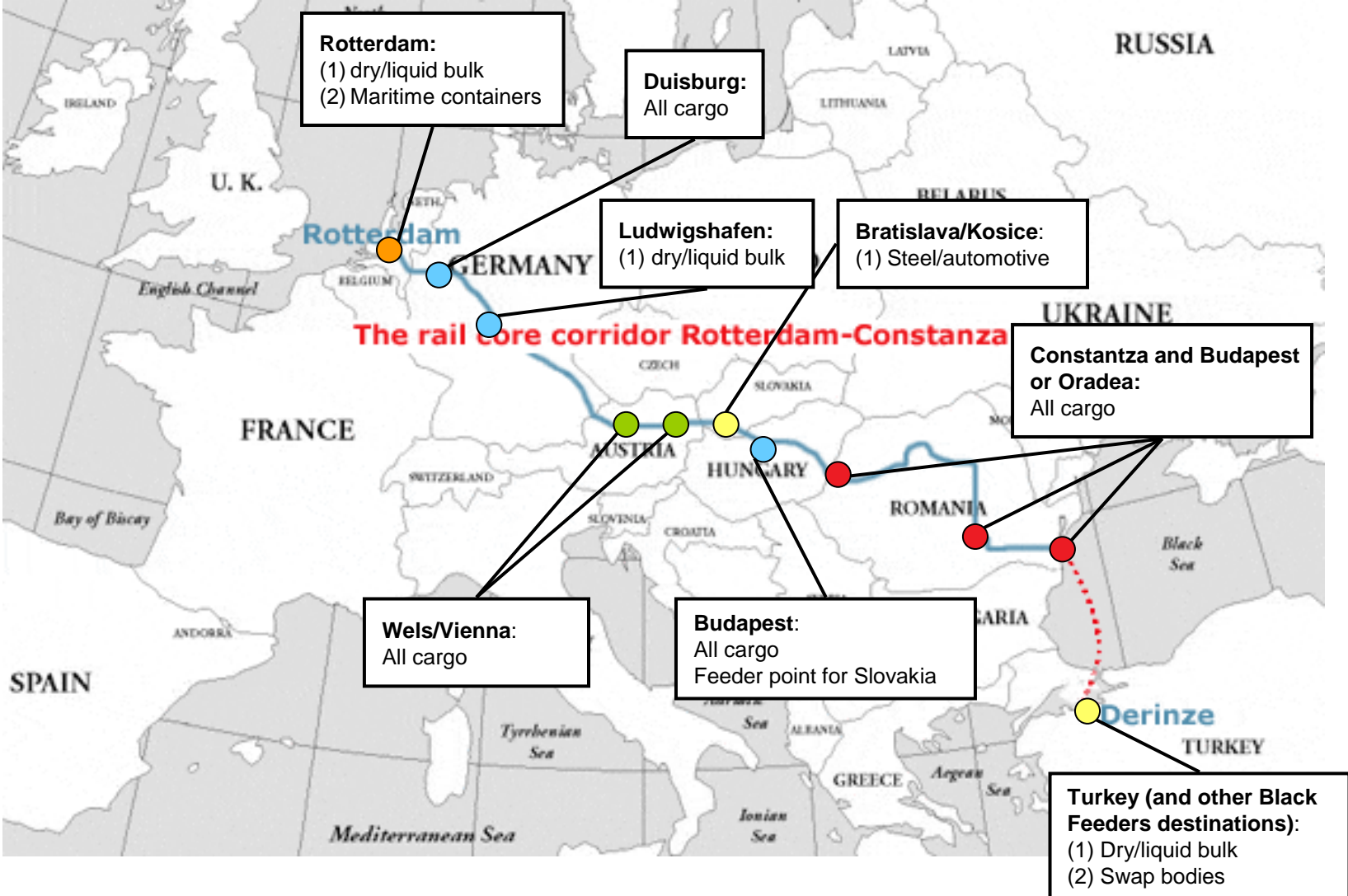
- ▲ Shippers' interest: transportation of their cargo when necessary from and to specified locations, in the right quantity according to an agreed schedule with minimum damages and losses and at minimum cost.
  
- ▲ Requirements (not prioritised)
  - ▲ Shipment compatibility (loading unit, volume, dangerous goods)
  - ▲ Price (door-to-door)
  - ▲ Average lead time
  - ▲ Reliability of lead time
  - ▲ Service frequency
  - ▲ Risk of loss and damage
  - ▲ Level of sustainability

# Survey among shippers (330)



Improving European Railways

# In-depth interviews (21)



Improving European Railways

# Top-10 suggested improvements



1. Reliability (on schedule)
2. Price d-2-d (10%–15% below road)
3. Safety and security
4. Frequency: preferably 3 times/week
5. Competitive transit times
6. Corrective actions when deviations from planning/delay (flexibility, reaction time, responsiveness, info provision)
7. Tracking and tracing needs (containers and swap bodies)
8. Paperwork and customs simplification
9. Flexibility regarding unpredictable demand (just in time)
10. Safety: Need of infrastructure repairs

# Market analysis per segments



- ▲ **Dry and liquid bulk** (Factories, bulk producers)
  - ▲ Low value, high volumes, block trains, rail historically a strong mode, substantial current use in corridor, competition in Rhine corridor from IWT
  - ▲ Main req's: Low cost, high frequency and *adequate safety/security*
  - ▲ RETRACK potential: Promising (Germany–Turkey and manufacturing sites in Balcan)
  
- ▲ **Oversized–special goods** (Automotive)
  - ▲ Mainly automotive and steel products, block trains, competition from road transport;
  - ▲ Main req's: Low cost, high frequency and *reliability*
  - ▲ RETRACK potential: Promising (Slovakia feeder link via Budapest)
  
- ▲ **Maritime containers**: sea/rail transshipment in major ports (shipping lines, LSP's, retail)
  - ▲ Palletised consumer products (palletwide containers), high (electronics) or average value products, shuttle services, strong growth, competition from road transport
  - ▲ Main req's: *Reliability*, low cost, transit time and high frequency
  - ▲ RETRACK potential: very promising (strong growth, interest from shortsea)
  
- ▲ **Continental loading units** (retailers, continental inbound)
  - ▲ from production facilities to DC's or customers, also inbound from suppliers to factories, mainly palletised products (palletwide containers), high (electronics) or average value products, shuttle services, strong growth, competition from road transport
  - ▲ Main req's: *Reliability*, low cost, high frequency, and transit time
  - ▲ RETRACK potential: promising (large retail groups like Tesco, Carrefour)



# Short summary of results



## Bottom up

- ▲ User requirements: RELIABILITY!
- ▲ Cost difference needed to overcome road flexibility
- ▲ Similar requirements per market segment, some differences in priorities
- ▲ RETRACK service promising for continental loading units (retail), maritime containers (feeder and shortsea) and automotive products

## Top down

- ▲ Current long distance rail transport: Target volume is 2.0 million tons
- ▲ Long distance road transport: Target volume is 4.7 million tons
- ▲ North Sea – Black Sea: Target volume is 2.6 million tons
- ▲ Import/Export from TRACECA countries & Turkey: Target volume is 15 million tons
- ▲ Imbalance in direction (W → E)
- ▲ Conservative estimate for RETRACK service: 212.000–824.000 tons (2–8 times a week)

## Dynamic concept development, Pragmatic approach

- ▲ Service offer is customer driven
- ▲ Anchor customers determine starting concept
- ▲ Stops at hubs to generate feeder volumes and at heavy gravity points (demand)
- ▲ Move towards shuttle service, increase frequency based on demand
- ▲ Stop strategy depending on customer demand and requirements

- Thank you for your attention!
- Any questions?

Gerwin Zomer  
Senior Consultant  
TNO Mobility and Logistics  
[gerwin.zomer@tno.nl](mailto:gerwin.zomer@tno.nl)  
T: +31 6 22 52 29 83

