DaGoB Meeting
Helsinki

Telematics Solutions for the Finnish Railways

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VR Ltd Finnish Railways, VR Cargo

14.8.2007

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Presentation contents

General Presentation

VR Cargo e-Business solutions

RailCom co-operation

RailCust project

RailTrace service

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VR and rail authorities

VR Group
- Rail services
- Track construction and maintenance
- Road services
- Catering and restaurant services
- Telecommunications services

## Ministry of Transport and Communications
- Railway legislation and licensing
- Commissioning of passenger services

Finnish Rail Administration
- Administration of the rail network and responsibility for line maintenance and development
- Rail network safety
- Administration of track capacity and traffic control

Finnish Rail Agency
- Safety regulations and monitoring
- Interoperability of railway systems
- Drawing up standards for the sector

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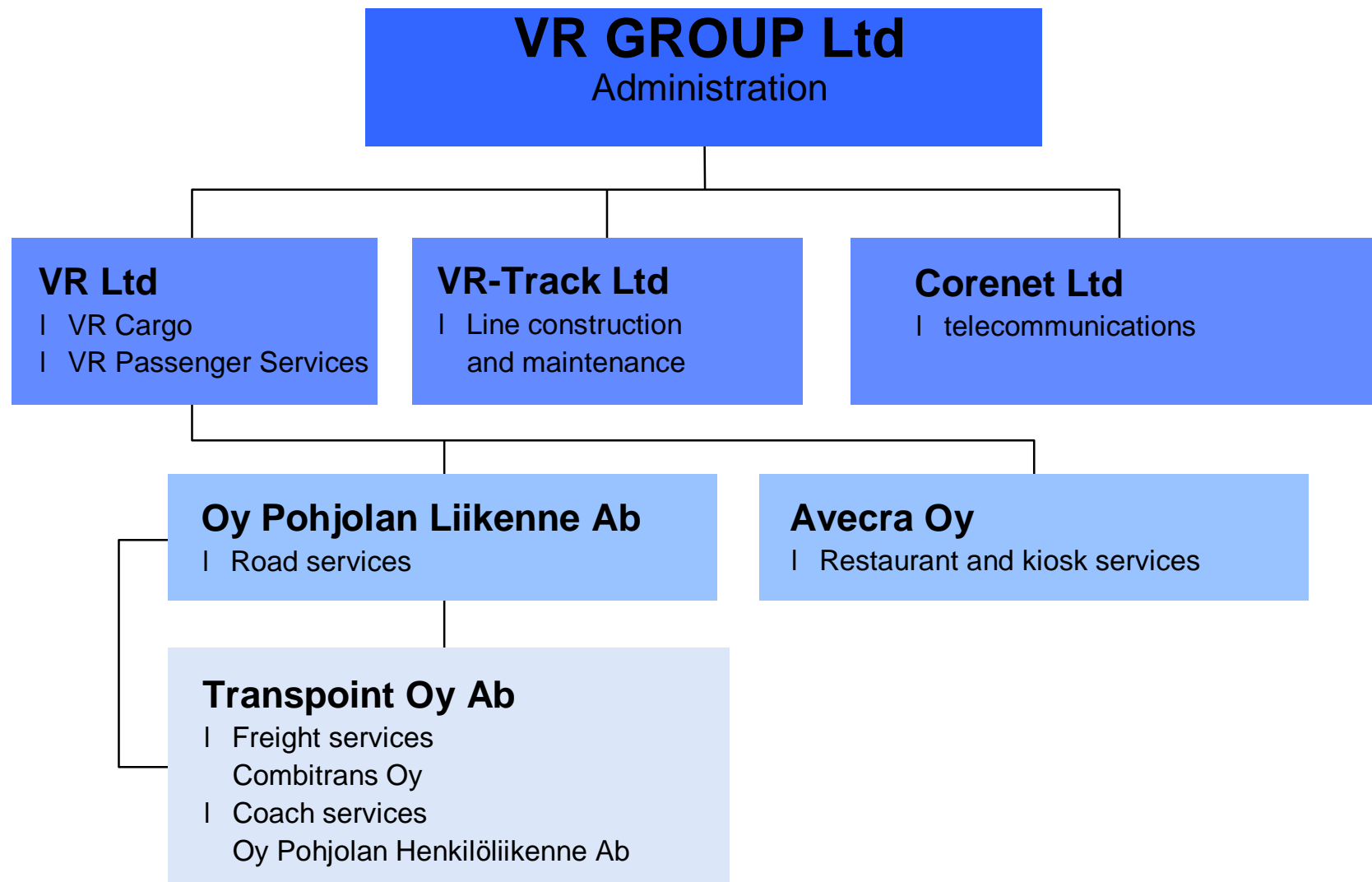
VR in figures

Net turnover EUR **1.2 billion**

65 million rail passengers

11 million bus and coach passengers

44 million tonnes of rail freight

10 million tonnes of road freight

Personnel **12,500**

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A quarter of all freight travels by rail

About **500** freight trains are in service every day in Finland

Almost **44** million tonnes of freight are transported a year

More than **60%** of the carryings are the raw materials and products of the forest industry
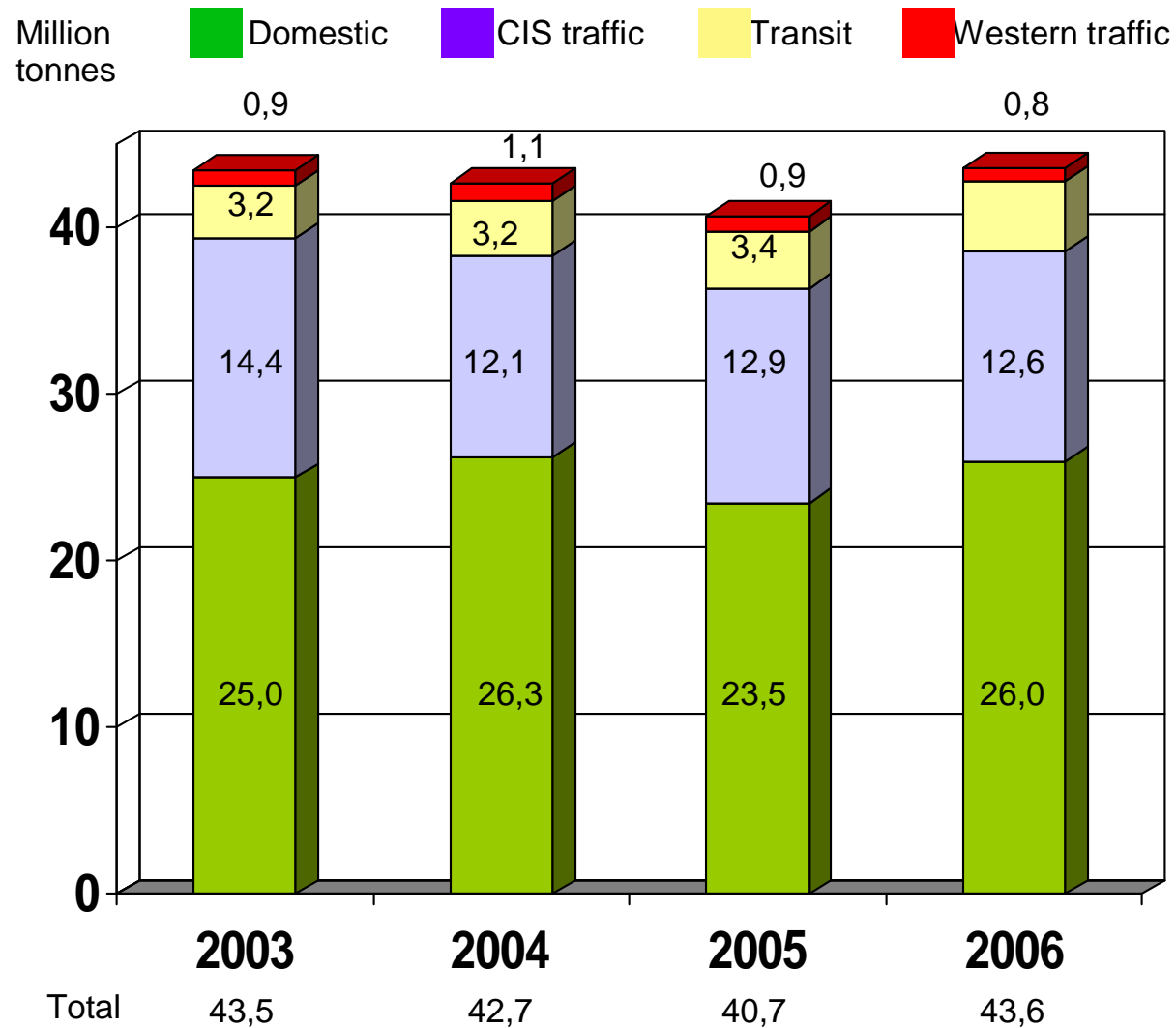
40% of the carryings are services to and from Russia

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VR Cargo provides smooth freight services

VR Cargo is the main carrier for Finland's forest, metal and chemical industries in domestic and international freight transportation.

- The total service also includes road transport, storage and forwarding
- The service network comprises all of Finland and international routes
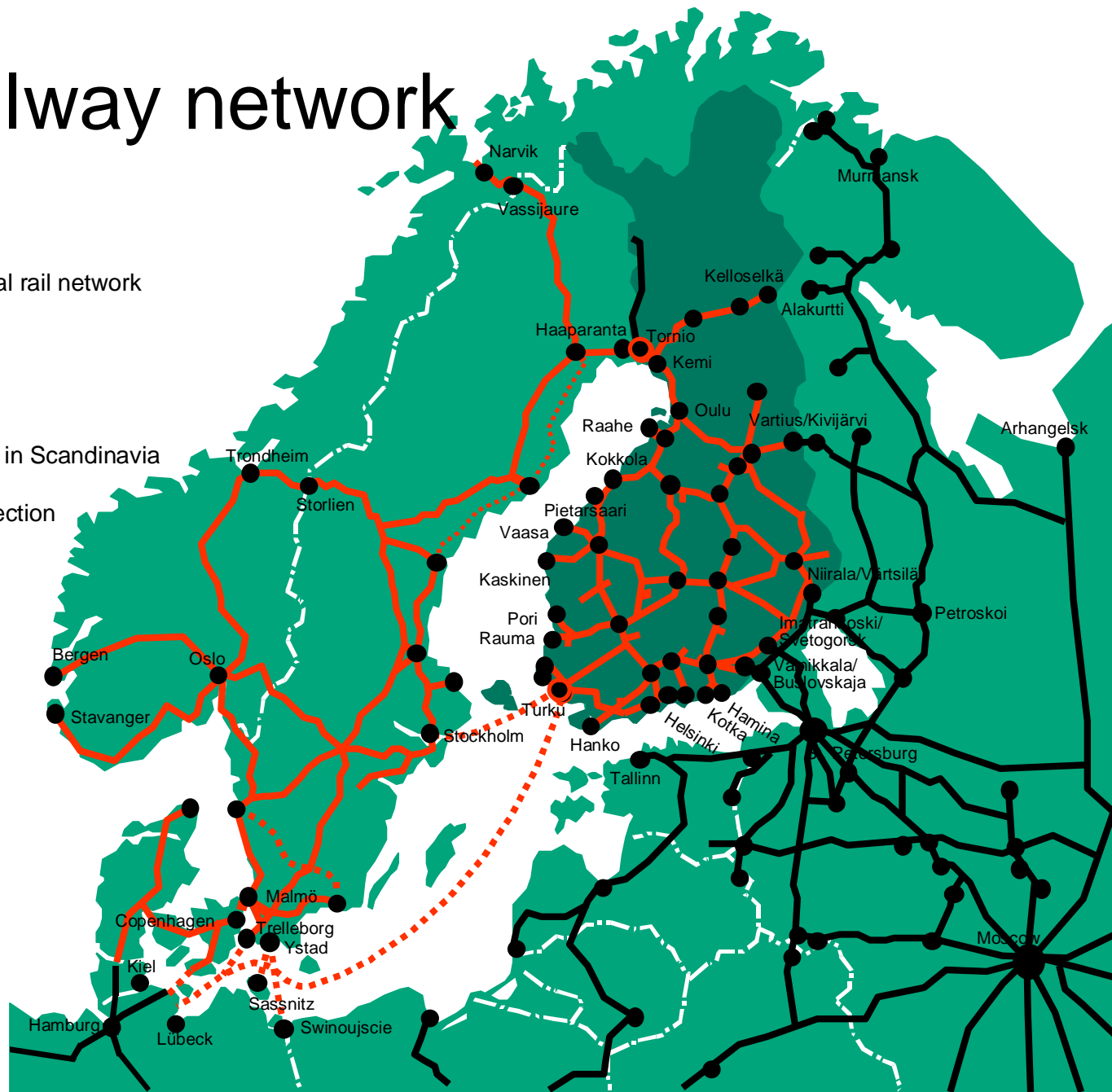- Long-standing relations with Russian railways are

  a strong point

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Development in wagon loads 2003-2006

Million tonnes — Domestic, CIS traffic, Transit, Western traffic

	2003	2004	2005	2006
Western traffic	0,9	1,1	0,9	0,8
Transit	3,2	3,2	3,4	
CIS traffic	14,4	12,1	12,9	12,6
Domestic	25,0	26,3	23,5	26,0
Total	43,5	42,7	40,7	43,6

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Nordic railway network

Legend:
- Nordic international rail network
- Other rail network
- Train ferry
- Future connection in Scandinavia
- Other future connection
- Bogie change

Map labels: Narvik, Vassijaure, Murmansk, Kelloselkä, Alakurtti, Haaparanta, Tornio, Kemi, Arhangelsk, Oulu, Vartius/Kivijärvi, Raahe, Kokkola, Trondheim, Storlien, Pietarsaari, Vaasa, Kaskinen, Niirala/Värtsilä, Petroskoi, Pori, Rauma, Imatrankoski/Svetogorsk, Bergen, Oslo, Vainikkala/Buslovskaja, Stavanger, Turku, Stockholm, Hanko, Helsinki, Kotka, Hamina, Petersburg, Tallinn, Malmö, Copenhagen, Trelleborg, Ystad, Moscow, Kiel, Sassnitz, Hamburg, Lübeck, Swinoujscie

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Infrastructure

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Data Jungle

World Wide Web
- internet
- extranet
- intranet

E-mail
- channel for ads
- internal communication
- external communication

Telephone
- conventional
- mobile

PC
- conventional
- portable

Telefax

Documents
- personal archive
- department archive
- company archive
- catalogues
- newspapers
- magazines

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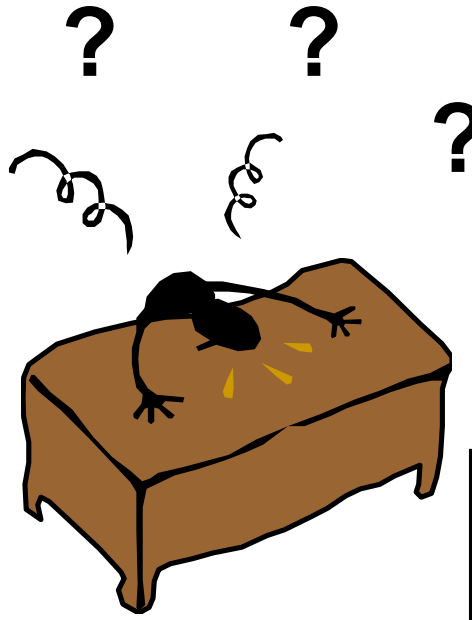
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Common process at the Customer and VR

Customer process

PRE-PLANNING

Common process

DATA-EXCHANGE

VR Cargo process

Customer process

RELIABILITY

Common process

SPEED
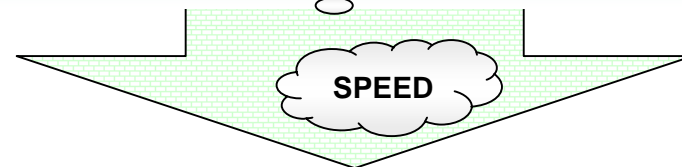
VR Cargo process

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e-Cargo services

Service concepts developed in co-operation with the customers

- EDI (Electronic Data Interchange)
- Railnetti portal
  - Information open for all – instructions, maps etc.
  - Operative services online
    - Document archive
    - Booking
    - Consignment notes - western, eastern, domestic
    - Tracking and tracing (RailTrace)

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Customised e-Cargo services

Service concept - all information in one server

Service concept is based on common processes - information flows and information needs, e.g.

- Incoming consignments and transports
- Outgoing consignments and transports
- Tracking and tracing
- Consignment notes with accompanying documents
- Shunting plans
- Informative unity

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RailCom co-operation

The co-operation started in 1992

The objectives and results

- Waybill information exchange between Russian and Finnish Railways by using EDIFACT standard à in production since 2003

- Shared border crossing procedures to speed up Finnish - Russian border processes à fast and reliable transports

- Railway wagon and consignment tracking and tracing support

    à RailTrace -service

- Electronic information transmission to border crossing places and destination locations, to customs and other authorities

    à exchanged electronic information in production on border crossing stations both in Russia and Finland

    à no transmission to customs nor other authorities, yet

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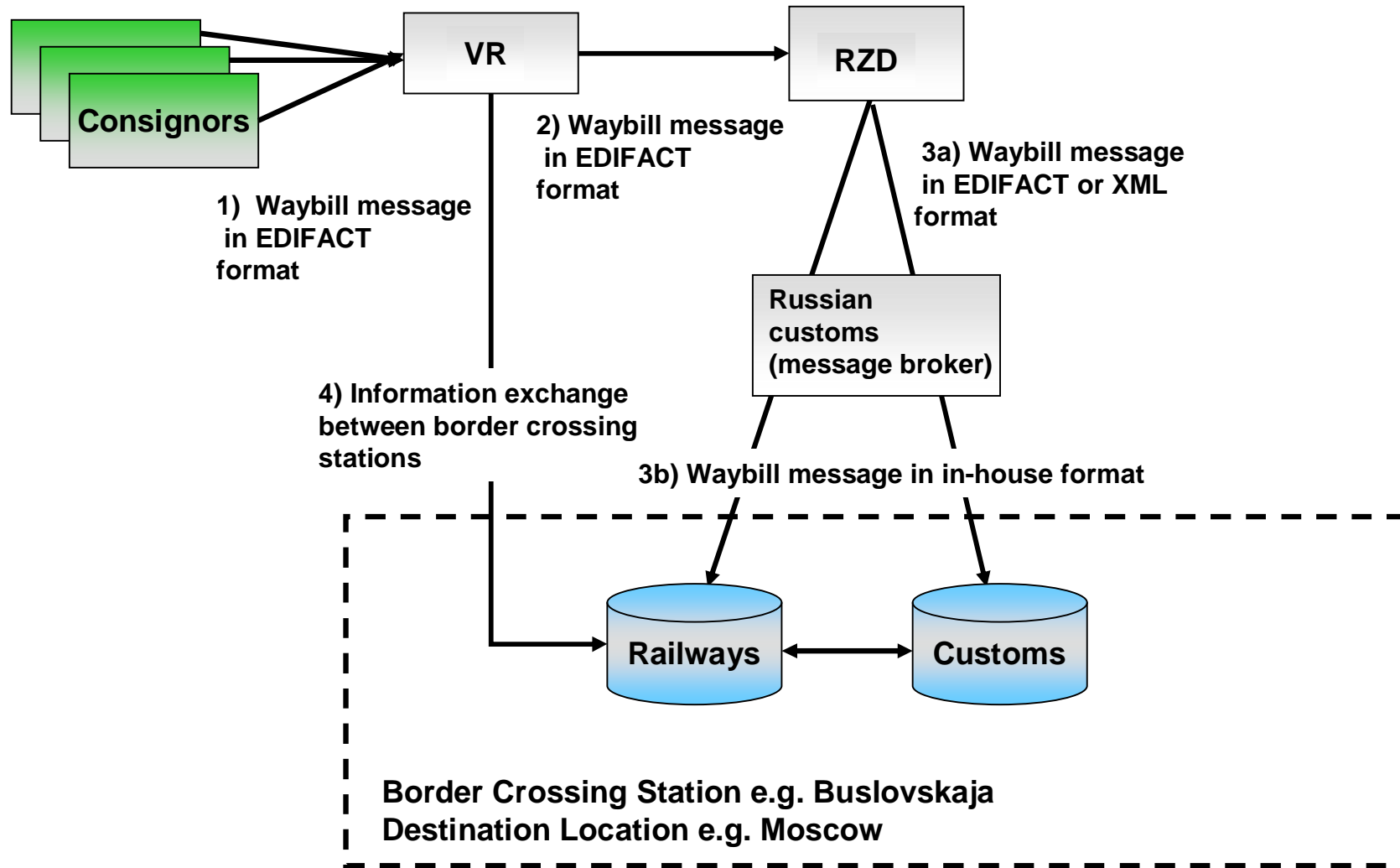
RailCust project

Objectives and results

- Confidential co-operation between railways and customs in Russia and Finland
  - à agreement between RZD and Russian Customs
  - à agreement between VR and Finnish Customs
- Expansion of RailCom and RailTrace projects to facilitate customs procedures
  - à better control over the goods and information flows
- Preparation of border crossing processes before the physical arrival of the goods
  - à document translation, customs procedures, other authorities procedures (e.g. veterinary and phytosanitary authorities)
- Faster train handling at the border
  - à less trains to be returned due to lack of information or incorrect information

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RailCust project

Further actions:

- Processes between stakeholders on the border crossing stations described

- Further development actions recognized

- Operational functions between railways and border crossing authorities agreed

- Message standards, structure and content as well as telecommunication way defined

- Implementation timetable for testing and full use agreed

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RailCust - basic concept

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RZD

Consignors

2) Waybill message in EDIFACT format

3a) Waybill message in EDIFACT or XML format

1) Waybill message in EDIFACT format

Russian customs (message broker)

4) Information exchange between border crossing stations

3b) Waybill message in in-house format

Railways

Customs

Border Crossing Station e.g. Buslovskaja
Destination Location e.g. Moscow

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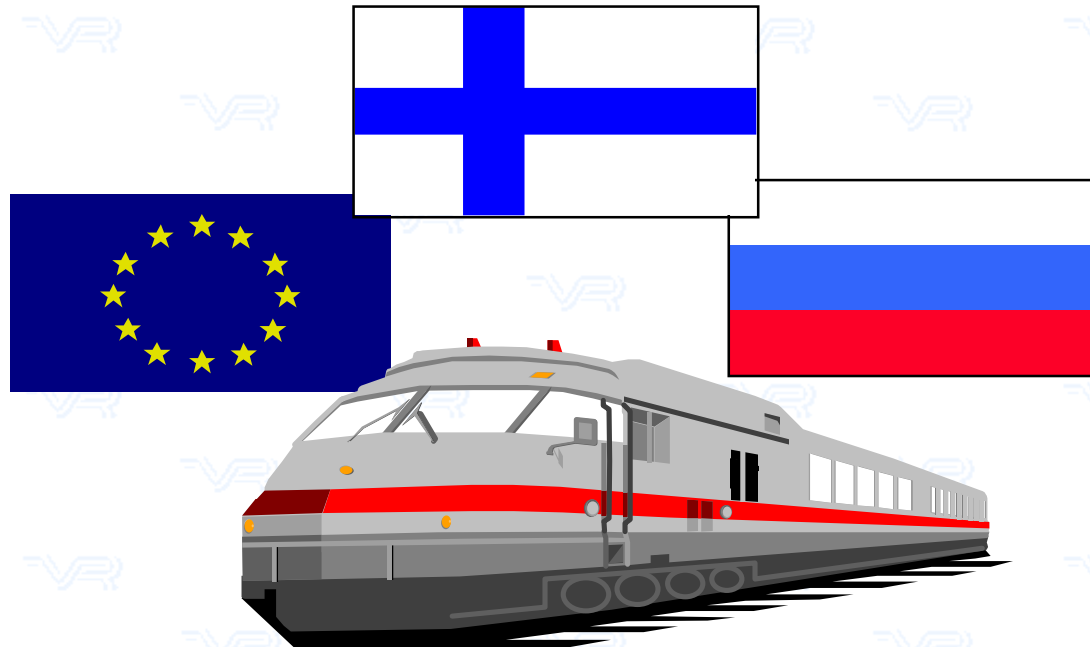
RailTrace service

Where did it all begin?

RailTrace service

As background a business study for Finnlines in 1997

- what is the current status of services and functions
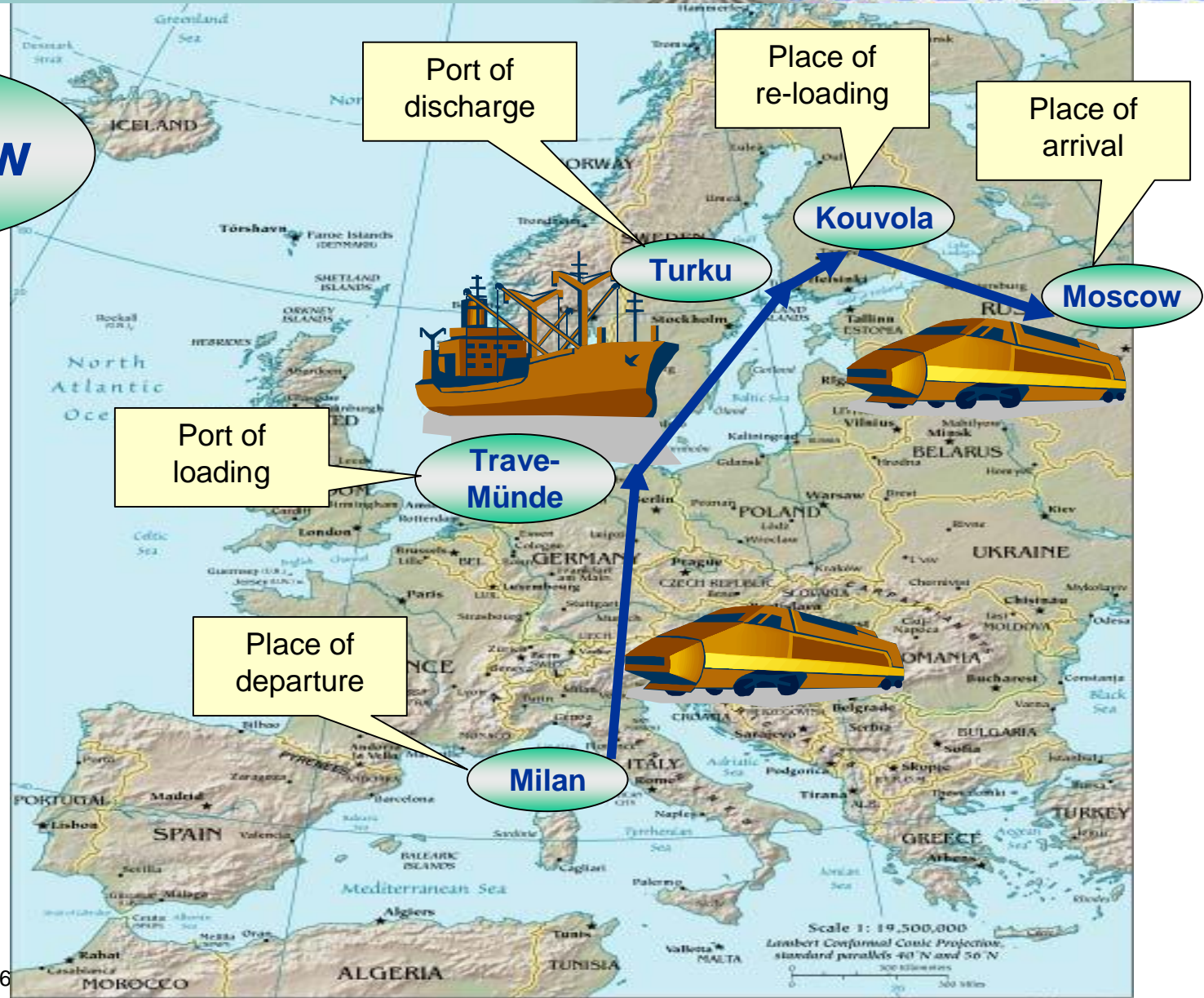- what is needed in order to improve customer satisfaction

Result:

- Biggest problem was LACK OF INFORMATION
  - **needs for better customer service**
  - **needs for better control over the goods flow**
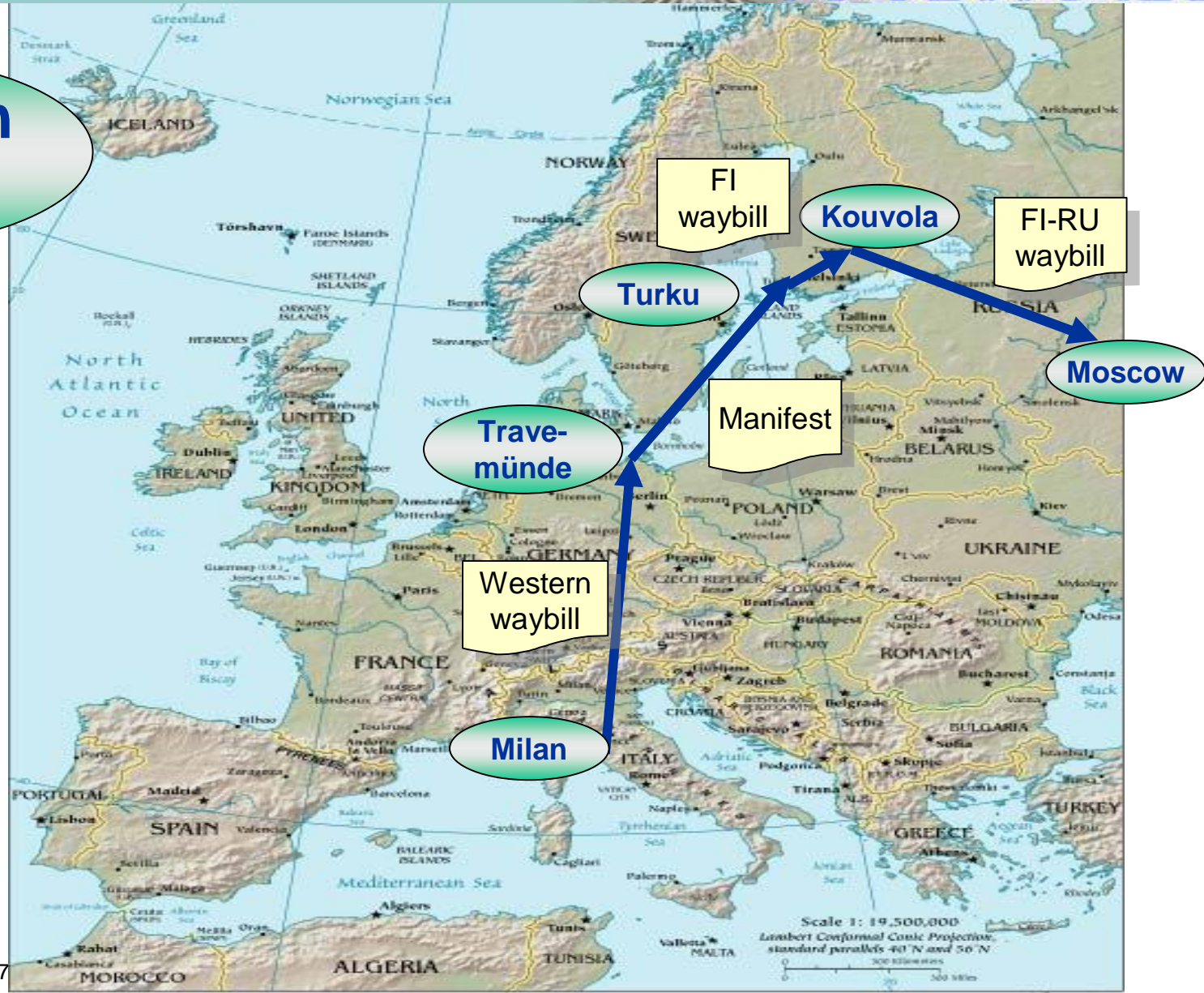 - **needs for better information flow**

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Why RailTrace service?

Where is the beef?

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Material flow

Port of
discharge

Place of
re-loading

Place of
arrival

Turku

Kouvola

Moscow

Port of
loading

Trave-Münde

Place of
departure

Milan

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Information flow

FI waybill

Kouvola

FI-RU waybill

Turku

Moscow

Trave-münde

Manifest

Western waybill

Milan

RailTrace service

Primary objectives:

- To give European customers access to international wagon and consignment tracking and tracing covering both Europe and Russia

- To integrate consignment and wagon information

- To calculate ETA

- To report on-line exceptions – delays, lost from the planned transport route

- To have a tool for Finnish Customs to monitor undeclared consignments

- To improve railway's competitiveness

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RailTrace - core system

Logistics service companies

European Railways RU and IM

Russian and CIS Railways

RailTrace database

Internet

Authorities

Infrastructure Managers

Railway Undertakings

End Customers

Service Integrators

Wagon keepers
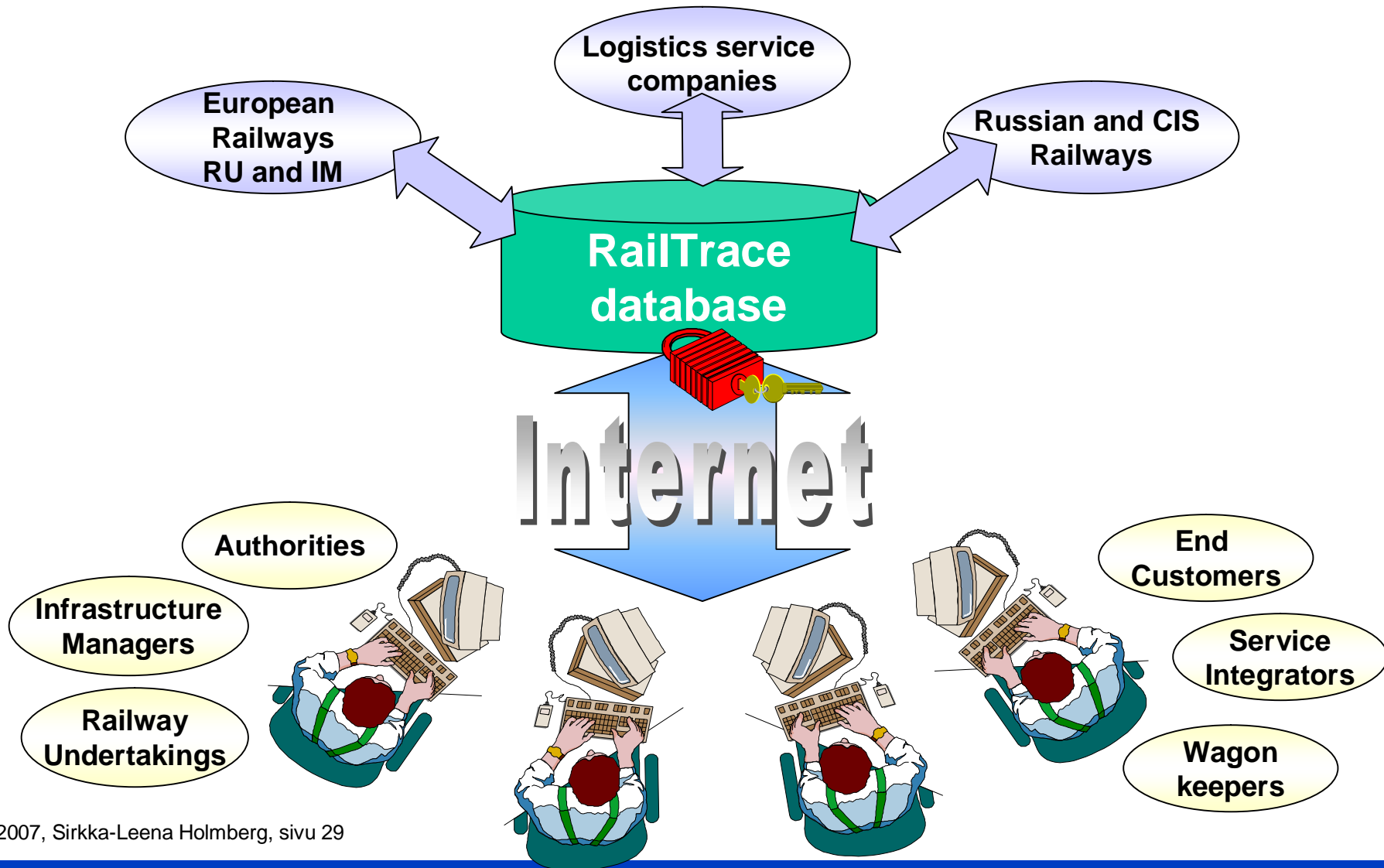
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RailTrace - Virtual Service network
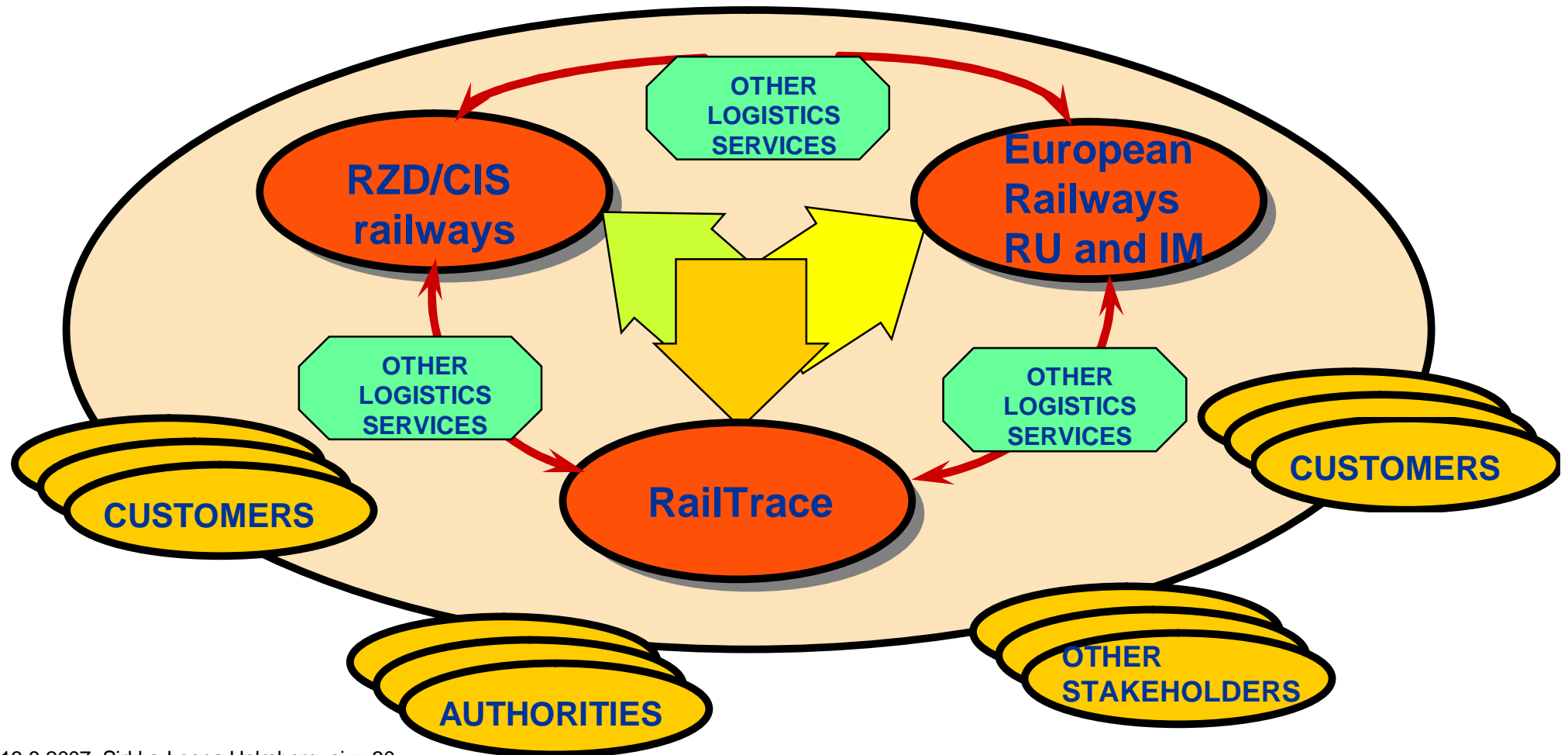
RailTrace - service

Status

- Coverage – Finland and Russia since June 2007

- Event messages from departure, border crossing, arrival and major marshalling yards in Russia

- Departure, border crossing and arrival events in Finland

Future actions

- Exception reporting from RZD covering the whole transportation chain

- Expansion of status message exchange to other CIS countries and Far East

- Expansion to European countries à latest with the implementation of the TAF TSI regulation

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www.railtrace.com

SUMMARY

The objective is to satisfy customer and stakeholder needs and to reach a flexible co-operation.

Tools are commonly agreed operation models and standards.

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Thank you
for your attention!

Questions?