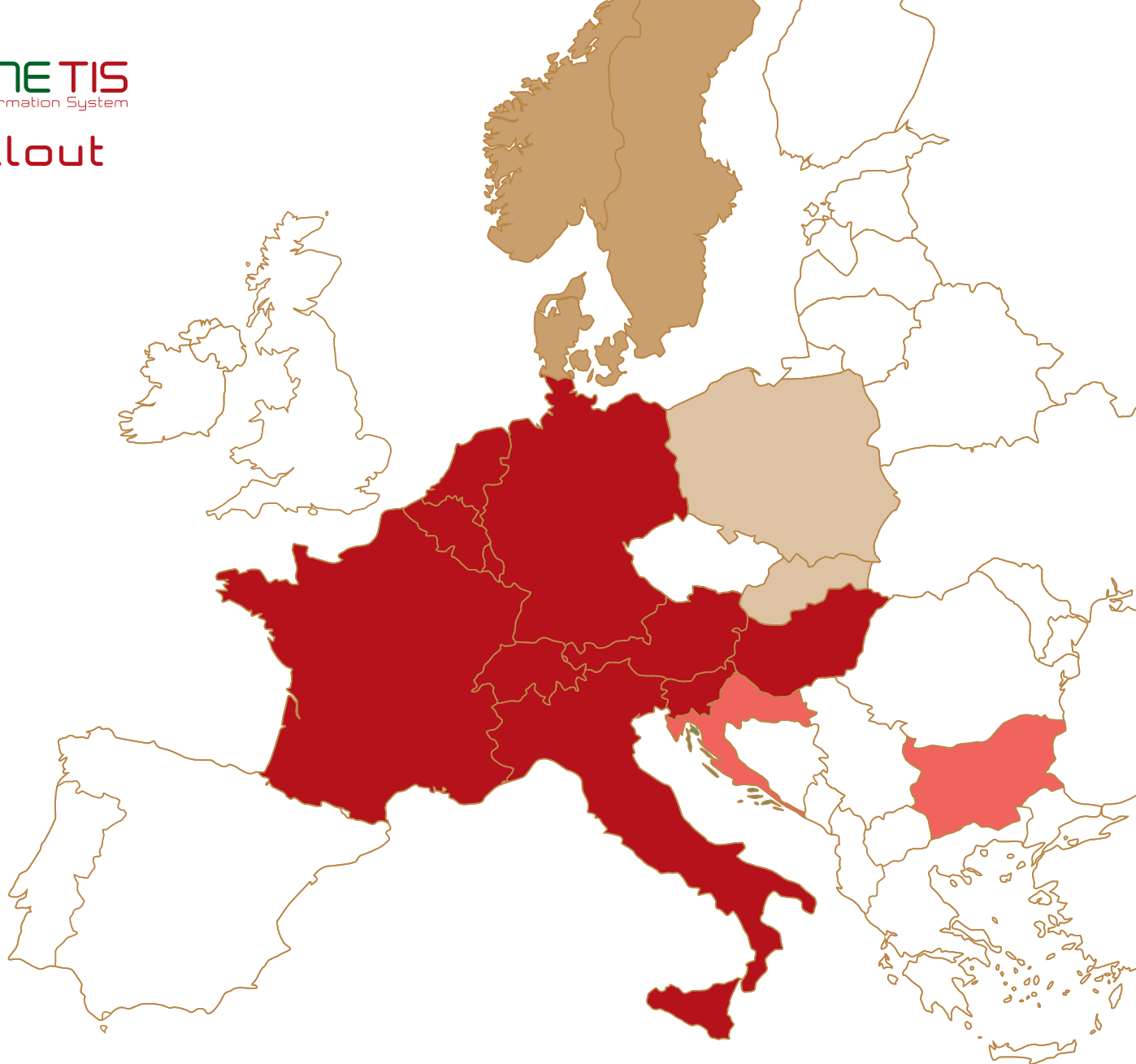


# Rollout



## Current participants

AT, BE, CH, DE, FR,  
HU, IT, LU, NL, SI

## South-East Cluster 2012

HR, BG

## Nordic Cluster 2012

DK, SE, NO

## Central Cluster 2012/13

SK, PL

## User Statements



*"TRACE is the backbone of the European Operations for presenting the IT-base of the European Train Information. TIS is the reliable IT source providing this system with the essential information on causes of delay and train running data of European freight trains."*

**Thomas Streicher – DB Schenker Rail Deutschland AG**



*"Thanks to the continuous development of TIS, we are now able to operate a performance management that allows us to detect weak spots and therefore improve quality. As the Corridor Manager of RNE Corridor 2 (future RFC 1) I now have a good tool at my disposal to fulfill one of my tasks."*

**Hansruedi Kaeser – SBB Infrastruktur AG**



*"Over the past two years, TIS has become an indispensable tool for our three Crossrail Traffic Centres. We not only dispatch our international trains throughout Europe, but can also follow up real time schedules of our various RU partners."*

**Pascal C. Jenni – Crossrail AG**

## How to become a TIS User

**Free user accounts** to interested Railway Undertakings are offered by RNE. The use of TIS is limited to RUs and IMs with international traffic.

Please provide the **TIS Service Desk** with the following information to become a TIS User:

- » Name, company and department
- » Contact details (phone, e-mail, postal address)

## TIS Service Desk

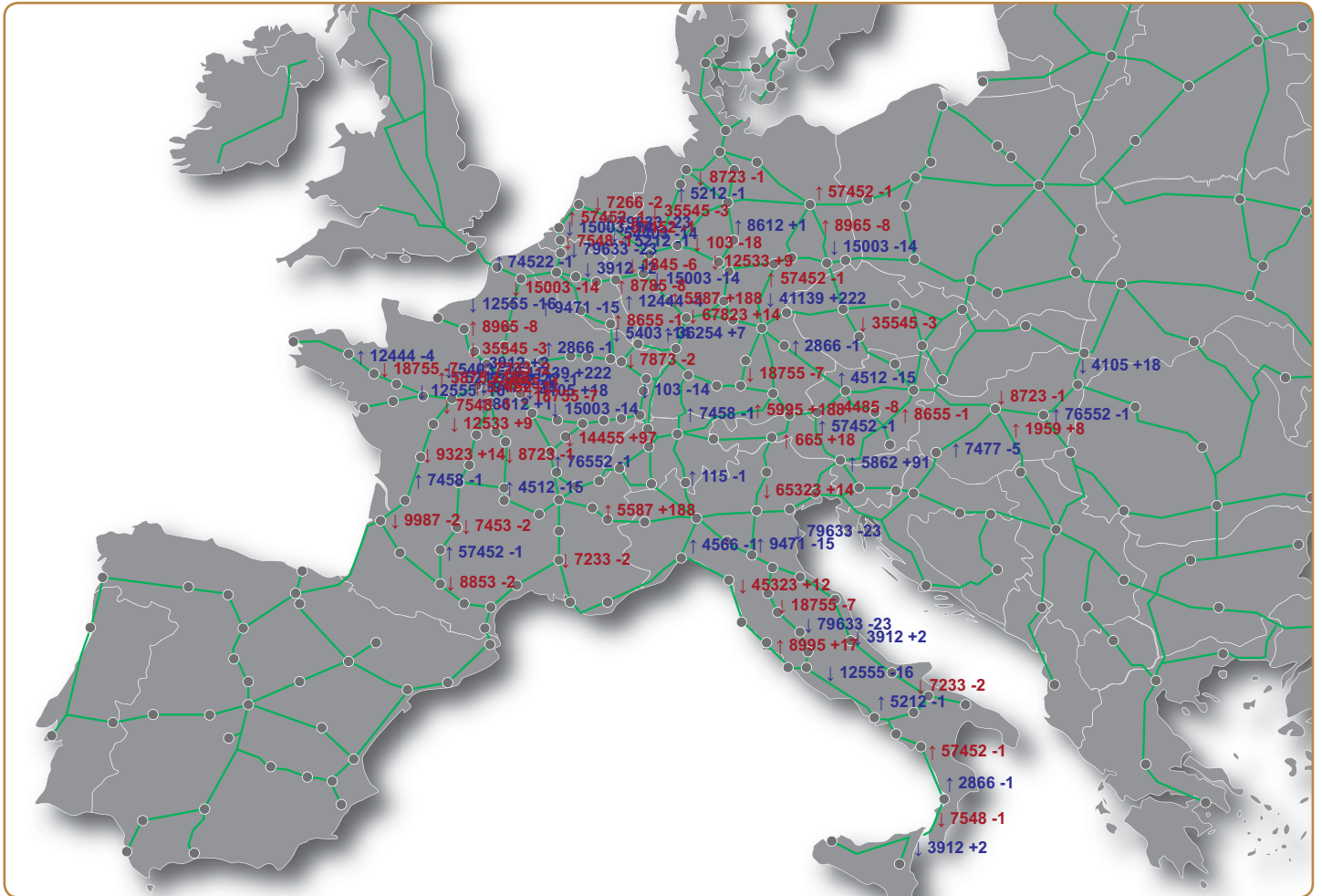
- » E-mail [support.tis@rne.eu](mailto:support.tis@rne.eu)  
for 24/7 support
- » Phone **+43 1 907 62 72 25**  
Mon –Thu from 09:00 –16:00  
Fri from 09:00 –15:00
- » Web <http://tis.rne.eu>

[tis.rne.eu](http://tis.rne.eu)

# RNE TIS

Train Information System

» International Train Monitoring » Reporting » Data Exchange

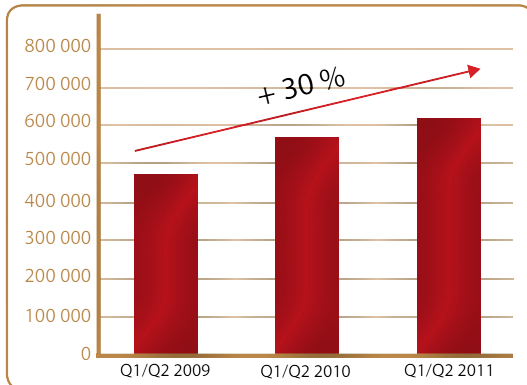


Network Overview of International Train Movements in the TIS Network

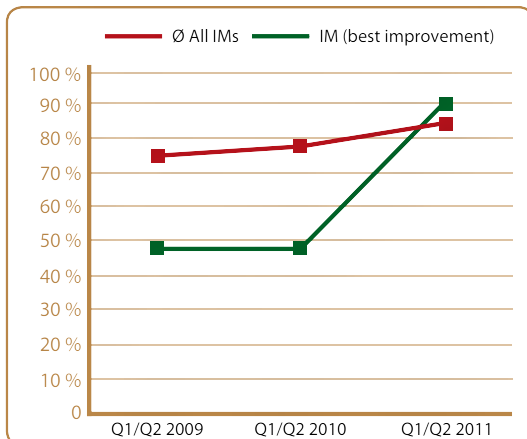
[tis.rne.eu](https://tis.rne.eu)

## What is the Train Information System (TIS)?

The Train Information System (TIS, formerly EUROPTIRAILS) is a **web-based application** that **supports international train management** by delivering real-time train data concerning international passenger and freight trains. The relevant data is processed directly from the Infrastructure Managers' systems.



Number of trains monitored



Improved Data Quality

## TIS Management

The application was developed by a consortium of 6 Infrastructure Managers (DB Netz, ÖBB, ProRail, RFF, RFI, SBB) and was co-financed by the European Commission. In **2007 RailNetEurope (RNE) took over the management of TIS** and since then has been developing and improving the application.

## TIS Achievements

- » **100 000** trains per month – **4 700** reporting points
- » **12 IMs** have joined TIS until autumn 2011
- » **Reporting function** for Train Performance Management (TPM) has been developed
- » **System performance** and data quality considerably improved
- » **Data quality** has been significantly enhanced
- » **New functions** for European Performance Management (EPR) were developed

## TIS Future Developments

- » Access for **terminal operators**
- » **E-mail notification** about delayed trains
- » Processing/distribution of **TAF TSI messages**
- » Improvement of **forecast calculation function (ETA)**
- » Further enhancement of **data quality**
- » Support of **corridor view**

## TIS Flash animation on [tis.rne.eu](http://tis.rne.eu)

Learn more about TIS with the Flash animation, which has been produced by RNE to **explain the functionalities of TIS**. The aim of the animation is to illustrate the standard processes in an easily-understood way.

The Train Information System (TIS) **monitors international trains from origin to destination** on the involved IMs' networks. It serves as information source for international performance reports and quality analysis and standardises the **exchange of data** between different players. TIS also allows the identification of problems due to different national processes (for international trains) and triggers appropriate corrective actions. The main goals of the Train Information System (TIS) is to help RUs with their own production system and to support IMs in the field of train running management.

RUs have unlimited access to their own trains and to those operated in cooperation with an existing data exchange agreement.

## Main TIS functions

445632	13:42	+6
445632	14:28	+2
445632	15:49	+/- 0
445632	16:37	-4
445632	17:21	+1

### TIS Real-Time Information function

- » **Real-time train traffic data** – e.g. contracted timetable, forecast, running advice, delays
- » Real-time information is visualised in the **TIS graphical interface**



### TIS Reporting function

- » **Predefined** reports and graphs (punctuality, delay causes, etc.)
- » **Customisable** reports and graphs
- » **Information source** for international Train Performance Management (TPM)



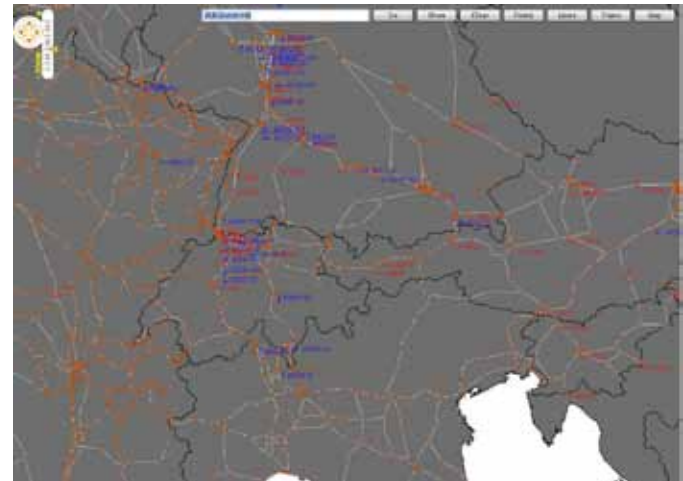
### TIS Data Exchange function

- » **Raw data exchange** based on UIC messages – and now **TAF TSI messages**
- » **Filtering function** to select the required information
- » **TAF TSI pilot** for the Common Interface (TAF TSI message exchange via Common Interface)

## Several existing projects depend on the Train Information System (TIS)

- » **Train Performance Management (TPM)** on RNE corridors – punctuality and data quality reports
- » **European Performance Regime (EPR)** – analysis of delays and their causes
- » **Traffic Control Centres Communication (TCCCom)** – monitoring incoming traffic and substituting the missing information exchange in real time
- » **International Rail Transport Committee (CIT)** – refunding of passenger tickets – information about delays of international passenger trains

Marker	Referer	Current Point	Delta	Running time	Contracted time
✓	43600	Freiburg (Breisgau)	2	26/09/11 08:37:56	26/09/11 08:35:30
✓	43604	Basel Bad Rbf	4	26/09/11 09:33:24	26/09/11 10:15:00
✓	43609	Liestal	114	26/09/11 09:54:20	26/09/11 08:00:38
✓	43612	Lochligut (Abzw)	40	26/09/11 09:41:23	26/09/11 09:01:22
✓	43618	St. German (Abzw)	3	26/09/11 09:44:19	26/09/11 09:41:13
✓	43624	VILLADOSSOLA	0	26/09/11 09:54:00	26/09/11 09:54:00
✓	43625				
✓	43627				
✓	43628				
✓	43644	Freiburg (Breisgau)	-4	26/09/11 07:01:26	26/09/11 07:05:42
✓	43677	DOMO II	3	26/09/11 07:52:58	26/09/11 14:10:00



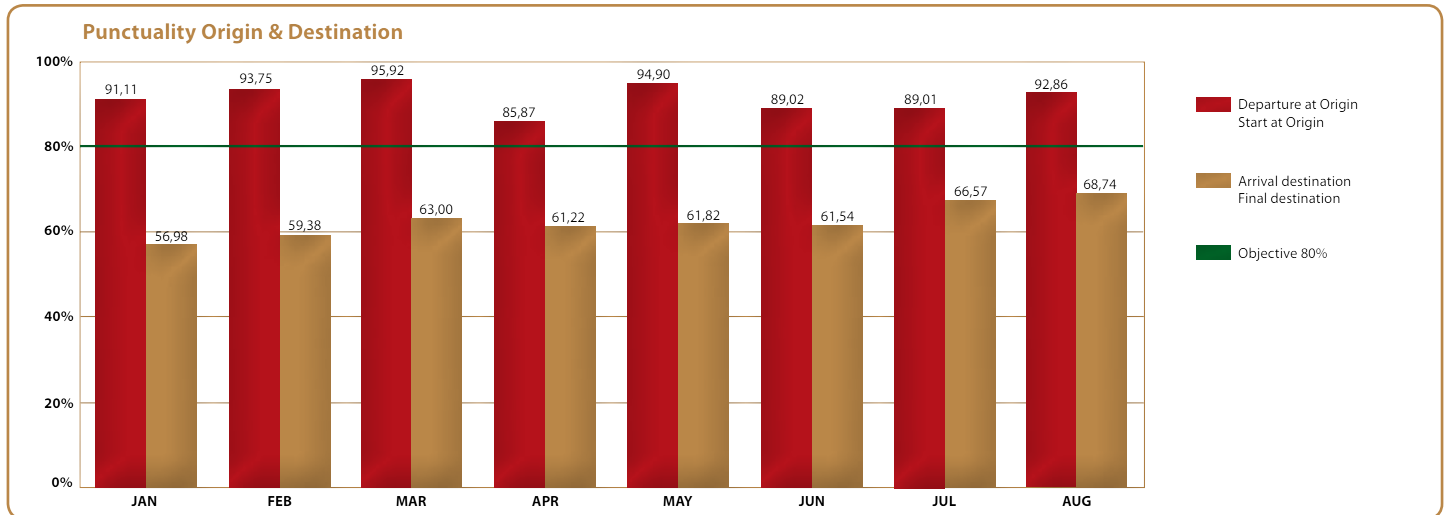
*TIS Real-Time Information function*

## TIS Real-Time Information function features

- » **Real-time train traffic data** via internet (contracted timetable, forecast, running advice, delays)
- » **Real-time train information** in the TIS graphical interface shows a real-time visualisation of International Trains (network overview, space-time diagrams, train run reports, etc.)
- » **Collection and exchange of railway traffic data** from/with European traffic management systems

## Benefits of the TIS graphical interface

- » Optimisation of **train disposition**
- » Optimisation of **ressource allocation** (time, financial means, rolling stock and staff)
- » Steering of the **logistical chain**
- » Strong **sales argument** towards RU's customers: "The RU knows the position of the train."



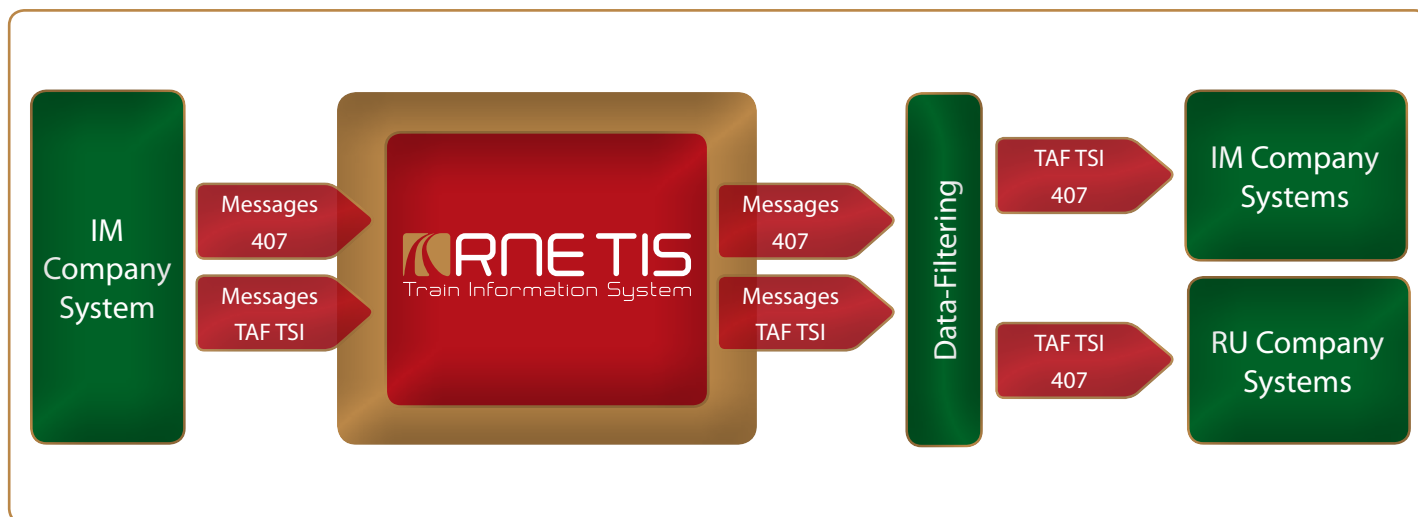
*TIS Reporting function (example)*

## TIS Reporting function features

- » Serves as a **source of information for international quality analysis** as European Performance Regime (EPR) and corridor-oriented Train Performance Management (TPM)
- » Provides both pre-defined and **customisable reports and graphs**
- » Enables **scheduling of reports and graphs execution**
- » **Accessible online** for defined users
- » Flexible and **user-friendly application** (based on Oracle Discoverer)

## Benefits of the TIS Reporting function

- » Analysis of the **performance**
- » Identification of **areas with bottlenecks** (capacity problems or technical problems on networks)
- » Identification of **appropriate corrective actions** and feedback on their effectiveness
- » Provision of **statistical information** about international traffic (for management decisions)



*TIS Data Exchange function*

## TIS Data Exchange function features

- » **Raw data exchange** based on **UIC messages**
  - Between IMs already in place
  - With RUs; planned for end 2011 (a first pilot has been carried out successfully)
- » **Raw data exchange** based on **TAF TSI\* messages** (= define data exchange between Infrastructure Managers (IMs) and Railway Undertakings (RUs))
- » **Filtering function** to select required information based on
  - company (IM, RU)
  - functional criteria (points, incoming trains, outgoing trains, delayed trains, etc.)
- » TAF TSI pilot for the **Common Interface** is ongoing

## Benefits of the TIS Data Exchange function

- » Use of **domestic applications** with online information
- » **Less maintenance of applications**
- » **Less effort for user training** (using the domestic application)
- » **Less technical equipment** (e.g. monitors)

*\* Technical Specification for Interoperability relating to Telematic Applications for Freight*