SAMNET

Safety management and interoperability Thematic Network

**Funding:** European (5th RTD Framework Programme)

**Duration:** Jan 2003 - Dec 2005

**Status:** Complete with results

**Background & policy context:**

The progressive establishment of a liberated European railway network requires efficient Community action in respect to the technical regulations applicable to railways while taking into account the technical and safety aspects. In order to facilitate this common railway market, Council Directive 91/440/EEC advocates a progressive ‘opening up of rights of access to the infrastructure to any licensed Community railway undertaking’.

The technical and operational fragmentation as well as the geographical differences between the railway systems of the Member States is a major hurdle for the development of a single European railway. Consequently, Council Interoperability Directives (96/48/EC and 2001/16/EC as amended by 2004/50/EC) have defined essential requirements and established a mechanism for explaining mandatory technical specifications for interoperability.


**Objectives:**

SAMNET is a thematic network launched by the European Commission in January 2003. It focuses on the SMART rail Single Market for Rail Transport services and deals with the approach to railway safety management. The primary objectives of the SAMNET thematic network are to accompany EU-harmonisation activity in the railway transport field and to share the usability of Trans-European safety requirements. SAMNET addresses the Safety Directives issues and should help in their development.

The activities within the SAMNET thematic network are based on the EU Directives for Interoperability (High Speed and Conventional Rail), Safety Directive and TSIs. It addressed the following five main objectives:

- To facilitate the dialogue between various parties in relation to operational safety and interoperability and regulation aspects;
- to co-ordinate the approaches to safety and certification activities including a link with the SAMRAIL project and a link to other relevant thematic networks relating to the safety;
- to support all strategic research and development related to safety management in the context of the ERRAC ‘Joint Strategy for European Rail Research – 2020: Towards a Single European Railway System’;
- to identify the most promising results of safety related research activities and recommend which steps should be taken in order to establish a new optimised safety approach; and
- to promote knowledge, experiences and good practice collected during the project to a wide variety of audience including Regulatory Authorities, Transport Authorities, Transport Operators, Managers of Infrastructure, Standardisation Bodies, Notified Bodies, Universities and Research Centres, Passenger Organisations, Manufacturers and Engineering Companies.
Methodology:

The main task of the SAMNET project was to investigate the implementation of safety directive and by means of large-scale involvement of European players in the work and by coordinating harmonised concepts and practices, to obtain agreement on given topics, such as safety targets, safety methods and safety indicators. The relationship between the two can be summarised as:

- Dissemination of SAMNET and SAMRAIL findings and seek opinions of other stakeholders, through:
  - easy-to-understand guidance notes on Safety Directive issues and SAMNET/SAMRAIL findings so as to create awareness among the policy makers, management and staff,
  - workshops on individual topics, seeking opinions from the experts and raising awareness,
  - case studies to check if the suggested approaches (SMS, CSM, CST, CSI and certification processes) are workable;
- planning and suggesting position papers on the technical issues identified in SAMRAIL;
- liaising with different trade and technical associations and organisations, such as AEIF, EIM, CER, ERRAC, ILGRI and identify their stances on the issues raised by SAMNET and SAMRAIL.

Related Projects:

SAMRAIL (Safety management in railways);
ACRUDA (FP4);
CASCADE (FP4);
HUSAR (FP4).

Parent Programmes:

FP5-GROWTH KA2 - Sustainable Mobility and Intermodality

Institute type: Public institution

Institute name: European Commission, Directorate-General for Energy and Transport (DG TREN)

Funding type: Public (EU)

Partners:

- IFSTTAR (FR);
- UIC - Union Internationale des chemins de fer (FR).

Research institutes and universities:

- DTF – Danish Transport research institute (DK);
- TUBSIFRA/IFEV - Technical University of Braunschweig (DE);
- TU Dresden – Technical University of Dresden DE);
- TU Delft – Technical University of Delft (NL).

Manufacturers:

- ALSTOM (FR);
- SECTOR (FR);
- SIEMENS – Siemens Transportation Systems (DE);
- ANSALDO – Ansaldo Breda (IT);
- BOMBARDIER – Bombardier transportation (BE);
- ATKINS – WS Atkins Rail Ltd. (UK);
- TÜV-TIT – TÜV Intertraffic GmbH (DE);
- TÜV-TIS – TÜV Industrie-Service GmbH (DE);
- CERTIFER – Agence de certification Ferroviaire (FR);
- EBC – Notified Body Interoperability (DE);
- IVW – Railway Safety Authority (NL).

Railway operators / infrastructure managers:

- DB – Deutshe Bahn AG (DE);
- RATP – Régie Autonome des Transports Parisiens (FR);
- Prorail (NL);
- TIFSA/RENFE – Red Nacional de los Ferrocarriles Espanoles (ES);
- SNCF – Société Nationale des Chemins de fer Français (FR);
- RFI – Divisione Infrastruttura, Direzione Tecnica (IT).

Railway associations:
The following stakeholders joined the SAMNET consortium in 2004 and 2005:

- RFF (FR),
- CP (PT),
- CNTK (PL),
- NSR (NL),
- DLR (DE),
- MAV (HU),
- AFER (RO),
- Network Rail (UK),
- Eurotunnel (FR/UK),
- RSSB (UK).

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**Key Results:**

The SAMNET thematic network has:

- Identified the implementation issues from the Railway Safety Directive and proposed solutions through organising working groups, workshops on individual topics and for individual railways seeking opinions from experts, and case studies to check if the suggested approaches (common safety targets, safety management system, cross acceptance, etc.) are workable;
- Built consensus on issues where opinions differ by organising debates and formal discussions on these issues, and by proposing common position & identify needs for further actions;
- Investigated the relationship and dependencies between Interoperability and Safety Directives; and set up four working groups comprised of all relevant stakeholders from industry, assessors and notified bodies, infrastructure operators, and railway associations.

**Policy implications**

SAMRAIL has identified the main areas of further research as part of a strategy plan to implement the Railway Safety Directive:

- Railway risk control (cost-benefit analysis);
- Cross acceptance;
- Human factors in risk assessment and safety cases;
- Common contents and formats of accident and incident statistics and investigations;
- Audit and review: performance indicators for the Safety Management System (SMS);
- Elaboration of a comprehensive and consistent safety database;
- Risk tolerability criteria;
- Risk measurement unit; and
- Operational aspects of interoperability.

**Documents:**

- SAMNET_Final_Report.pdf (Final report)

**STRIA Roadmaps:** Network and traffic management systems

**Transport mode:** Multimodal transport

**Transport sectors:** Freight transport

**Transport policies:** Safety/Security

**Geo-spatial type:** Network corridors