PROJECT

CROSSRAIL

Integrating Local and Regional Rail Including Cross Border Aspects

Funding: European (5th RTD Framework Programme)
Duration: Jan 2000 - Apr 2001
Status: Complete with results

Background & policy context:

The CROSSRAIL project is funded by the European Commission under the 5th Framework Programme GROWTH, DG TREN, Sub-programme Area: 'Modal and intermodal transport management systems'.

In European cities there is a great potential for improving public transport in the urban areas by integrating tram/light rail systems with conventional rail. A vehicle suitable both for tram operation and for conventional rail has to be developed and the corresponding operation rules have to be set up. A successful solution is seen within national context, but only a European standard can secure a potential big market for the vehicles, resulting in substantially reduced unit cost. The industry will benefit from a larger market. In a few cases this also involves crossing the borders between two conventional railways, requiring a 3 systems solution. There is a potential for using such a vehicle to introduce new services in cross border rail.

CrossRail provides an analysis of the existing situation and a FRS accepted by the interested parties will be the result of the research.

Objectives:

The objectives of CrossRail are to:

- Give an overview over recent European developments
- Identify barriers to Tram-Train integration and recommended solutions
- Identify barriers to cross-border regional rail and recommend solutions
- Identify European Market for a 3-system vehicle (and potential 2-systems) and
- Establish a Functional Requirements Specification for a universal modular 3-system vehicle

The aim of the CrossRail project is to contribute to the reduction of the environmental impact of traffic by promoting more environmentally friendly transport in urban areas, the reduction of road-traffic congestion and the improvement of the quality of city centres.

CrossRail will contribute to the development and promotion of user-friendly public transport solutions by creating standards that can be used in cities in several countries.

Methodology:

The work on the CrossRail project is divided into 8 Work packages incl. project management:

- WP1.1 Analysis of existing Tram - Train integration,
- WP1.2 - Analysis of existing cross-border rail integration,
- WP1.3 - Identification of barriers and recommendations for cross-border rail,
- WP1.4 - User-benefit study,
- WP1.5 - Recommendations on Light Rail & Heavy Rail,
- WP2.1 - Rolling stock market study,
- WP2.2 - FRS 3-system,
- WP3.0 - Project management & dissemination.
The CrossRail project has three phases each of them covering 5-6 months of the total 16 months duration of the project from 01.01.2000 until 30.04.2001.

The approach of the Identification Phase with analyses of existing Heavy Rail/Light Rail integration, local and regional cross-border aspects and user benefits are based on data about technical, operational, organisational and market aspects. The data collection from 16 specific Tram-Train case studies in 11 European countries and from around 20 specific cross border railway lines are described in detail in the chapters about work packages plans and case studies in the Inception Report and Annex 1-3.

The analysis in the Identification Phase will be the base of the Recommendation Phase dealing with both measures to overcome national and cross-border barriers.

The Recommendation Phase will be based on considerable amount of research on the issue of integration in other EC projects, particular the MARIE project, and the participation of rolling stock suppliers and users in the CrossRail project. The participation is described both in the chapter about work packages plans and in the chapters about Case Studies/User Groups, Technical Advisory Group and Review Group. The Recommendation Phase will include a public seminar with participation of all interested parties to discuss the results achieved.

The last phase of the CrossRail project will analyse the potential market and develop functional requirement specifications for a European Tram-Train solution. This Specification Phase with work package plan, deadlines, actions and deliverables are also described in the Inception Report.

**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:**

Belgium:
TRANSURB CONSULT, Belgian Transport and Urban Infrastructure Consult

Denmark:
ScanRail Consult Consulting Engineers & Planners

France:
Sytra

Germany:
DE-Consult, Deutsche Eisenbahn Consulting GmbH; TransportTechnologie-Consult Karlsruhe GmbH (TTK)

Greece:
Trademco Consulting, Research and Development Ltd.

The Netherlands:
NEI Transport, (Netherlands Economic Institute)

United Kingdom:
Halcrow Transmark (Transportation Systems and Market Research Ltd.)

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**Key Results:**
Policy implications

- Principal barriers are lack of political and therefore, financial, support, rather than any technical issues.
- There is little difference between cross-border and domestic schemes, except that although problems ten to be the same in both, the magnitude is greater in the former.
- Market size for tramtrain vehicles is in the region of 7-60 vehicles per annum over the next 30 years, with a medium scenario of around 30 vehicles in average per year.
- Standardisation of design is currently hampered by need to produce rolling stock in short runs, adapted to specific infrastructural requirements; whilst the Functional Requirements Specification produced by the project should facilitate the placing of common orders by different operators (hence reducing production and purchase costs) – harmonisation of infrastructure standards in the future could further benefit development of new schemes and avoid the need for costly adaptations of rolling stock design.