MARKET IMPACT EVALUATION

ERRAC was set up in 2001 and is the single European body with the competence and capability to help revitalise the European rail sector :

- **To make it more competitive**
- **To foster increased innovation**
- **To guide research efforts at the European level**

ERRAC Project Evaluation Working Group (EWG)

Objectives:

- **Determine the market impact of previous rail research to improve use of research funding**
- **Ensure a strategic approach to the prioritisation of rail research**

Project Evaluation

- **Individual projects are evaluated after they have been completed to ensure successful dissemination of project results**
- **To ensure that the results of previous rail research can be taken into account for future projects**
- **To avoid weak market uptake of results by learning the lessons of previous research**
- **The EWG will provide intelligence based on the project evaluations for input into future European Framework Programmes**

ERRAC Project Evaluation Group

HVB

EVALUATION FROM JANUARY 2008

Project acronym: HVB
FP: 4
Programme acronym: TRANSPORT: Specific RTD programme in the field of transport
Project Reference: G1RD-CT-2000-00467
Call identifier: The 3rd Call for Proposals
Total Cost: € 1,131,790
EU Contribution: € 599,255
Timescale: December 1997- December 1998
Project Coordinator: Marina FRACCHIA (UNIVERSITÀ DEGLI STUDI DI GENOVA)
Web references: http://cordis.europa.eu/transport/src/hvb.htm

- Presented by: C. Cheron
- Date evaluation: 24.01.08
- Market uptake: Medium
- Follow up projects: None
- Other related Projects: RAPSDRA, ERTMS

ERRAC Project Evaluation Group

HVB

High Voltage Booster

PROJECT NAME: High Voltage Booster

Objectives

To design and validate a booster equipment (HVB) for the railway supply systems using static VAR technology able to achieve the following goals:

- To improve electrification system voltage regulation
- To cater for permanent growth in traffic levels
- To allow for the evolution of new traction types
- To reduce capital and running costs

The aim of this device is to compensate for voltage regulation on the electrification system.

In a more practical way

- Technical: maintain overhead line voltage to constant level at the substation to avoid voltage drop at the end of the sector supplied
- Financial: decrease installation cost when possible

HVB: Background

Details

- Total Cost: 2 787 187 EU
- EU Contribution: 1 402 745 EU
- Period: 04/2000 to 12/2002
- Scientific Coordinator: Marina FRACCHIA (CRT)

Partners

- INSTITUT NATIONAL DE RECHERCHE SUR LES TRANSPORTS ET LEUR SECURITÉ (FR)
- LABORATOIRE ELECTROTECHNIQUE de GRENOBLE (FR)
- SOCIETE NATIONALE DES CHEMIN DE FER Français/RFF (FR)
- ASI ROBICON (IT)
- CENTRO RECERCA TRAPORTI (IT)
- ITALFERR (IT)
- RAILTRACK (GB)
- UNIVERSITE POLYTECHNIQUE DE MONS (B)
- RAILINFRABEHEER (NL)

HVB: Background

Links to other Projects:

- ... (to precise)

Follow-up Projects

- ... (to precise)

HVB – Tests

Villenoy tests site (France)

[Paris-Nancy railway line, near Meaux east of Paris]

Chathill test site (UK)

HVB: Results

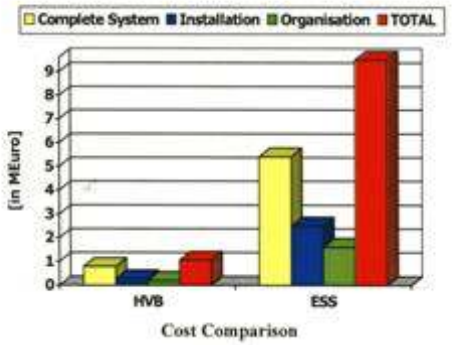
Project Conclusions :

- Operating use relevant
- Will be developed for other projects
- Solution to optimise infrastructure in certain conditions

Achievements

- Voltage gap compensated at the sub-station: 3kV
- Target Cost device achieved (around 1M€)

A comparison with the HVB cost and the installation of a new Electrical Substation is reported in the following diagram:



Economic analysis between HVB cost and the installation of a new electrical substation

HVB: Evaluation criteria

1. Were the results implemented in the design of the new products and services? Were these new products/services put into commercial operation –**yes**
2. Is new legislation and standardization based on findings from this research project – **No**
3. Are the results of the project implemented across Europe or only in a small number of Member States **– small number of Member States for the moment**
4. Are the results of the project implemented outside Europe before being accepted in Europe – **No, first in Europe (GB and F)**
5. Did the projects increase competitiveness of the European railway sector abroad with regard to products, services, standards and system design – **Yes: it can decrease the installation cost**
6. Did the project increase competitiveness of the railway transportation compared to other transport modes – **Yes: it can decrease the installation cost and it optimises the energy supplied**
7. Are the results of the project taken into consideration when preparing public tenders – **Yes**
8. Does the implementation of the project results help facilitate cross-border operations by problem-solving in the domain of interoperability –
9. Does the implementation of the project results help facilitate inter-modal operations by problem-solving in the domain of inter-modality –
10. Can benefits be assessed in financial terms – **Yes**
11. Applicability of results to future scenarios – **Already implemented in other site and proposed as an alternative in supply scheme**
12. Usefulness of research procedures for future projects (incl. modelling) –

HVB: Reasons for outcome

HVB: Lessons learnt