

BEST PRACTICE FACT SHEET

(Nr. 1)

Improving corridor quality and efficiency with BRAVO



Main Achievements

- Drastic modal shift
- 90% punctuality for trains
- 99.9% reliability for documents transport

Main Innovations

- Coherent open corridor management scheme
- Interoperable rail traction
- Comprehensive quality management system including quality agreements
- Advanced monitoring and customer information system
- Extended & innovative intermodal services including time table tool
- New technology to capture conventional semitrailers

Motivation

- Improving intermodal capacity on a strongly used corridor
- Stabilising and improving quality and efficiency of intermodal transport to be more competitive against road
- Establishing the basis for long term growth of intermodal transport

Main companies involved

- KombiConsult and Hacon
- CEMAT, Ferriere Cattaneo, Hellas Transport, Intercontainer Austria, Interporto Bologna Lokomotion, ÖBB, Railion, Rail Cargo Austria, Rail Traction, Trenitalia, UIRR

Implementation date

- 2006/2007

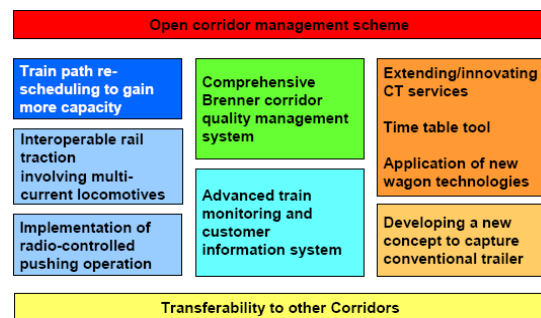
Transport/Geographical characteristics

- Transalpine Corridor via Brenner
- Intermodal rail on various distances

Starting Point

The Brenner Corridor is one of the mostly used European freight corridors both by road and rail, which is transiting the sensitive Alpine region. With an objective to raise the volume of environmental-friendly combined rail-road transport and increase rail's market share on the Brenner corridor, in 2002, all stakeholders of this industry from Austria, Germany and Italy committed themselves towards the Ministries of Transport of the countries to the "Action Plan Brenner 2005". This plan contains a set of measures required to organize and ensure the short- to medium-term upgrading of the level of service provided and improve competitiveness in combined transport on this corridor.

Solution



Coherent open corridor management scheme:

This open corridor management scheme includes (1) an improvement and intensification of cooperation between the railway undertakings and infrastructure managers, (2) an improvement of communication and data exchange to optimise the interfaces between parties involved, (3) an introduction of an overall quality system and a removal of operational bottlenecks.

Interoperable rail traction:

This interoperable rail traction involves multi-current locomotives including train path re-scheduling, simplification and harmonisation of locomotive approval procedures (certification).

Punctuality	90% (with max tolerance of 15 min)
Reliability	Max train delay of 180 min (related to 10% of non punctual trains)
Flexibility	Cancellation of regular trains up to 48 hours prior departure without extra charge Interim time-table modifications within three months after submittal of request
Customer information	Real time monitoring of every train Reporting of ETA Co-ordinated international reporting system
Rolling Stock	95% rate of employment of agreed wagon set
Documents	99,9% rate of reliability of transport of accompanying documents

Comprehensive quality management system:

This includes a standard quality agreement and a quality manual. Within the quality manual processes are described in a standardised way. The following quality indicators have been identified as relevant: punctuality, reliability, flexibility, customer information, rolling stock and documents. Quantitative goals have been defined.

Advanced monitoring and customer information system:

This system provides regular information of train position on the entire train journey, event-based information as irregularities and their impact (estimated time of arrival, estimated time of availability).

Scheme on extended & innovative intermodal services including time table tool:

This component included the analysis of the time table requirements and the implementation of an adapted and extended timetable.

New technology to capture conventional semitrailers for unaccompanied intermodal transport:

This includes adaptations at the wagons and simple construction of additional handling equipment without additional large scale infrastructure. The approach was an integration in existing terminal procedures.

Results and experiences

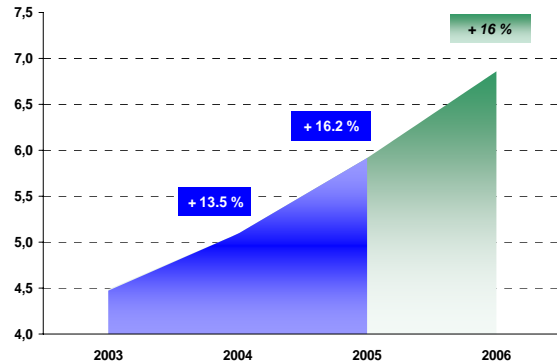
The experiences of the implemented measures are very positive: The following results could be achieved:

- Improvement of train path allocation process and increase of capacity for freight trains (also by development of Intermodal rail train schedules)
- Increase of efficiency by interoperable rail traction (but infrastructure investment are needed on some parts of the corridor), the advantages of interoperability are higher productivity, higher flexibility, reduction of travel time, reduction of shunting costs, higher service reliability and reduction of utilisation of border station.

- The quality management system has been implemented and a continuous monitoring and improvement is necessary. The quality has improved significantly on the Brenner Corridor.

The train monitoring system has been demonstrated. Such an application

- seems to be technical and operational feasible.
- The megatrailer pocket wagon 3000 are tested since May 2006. They seem to be technical and operational feasible. They can improve the flexibility and are fully compatible.
- During the BRAVO project a substantial increase in intermodal transport could be reached.



Main benefits

The BRAVO project had the following benefits:

- Quality improvements relating to reliability (maximum delay time 180 min. for trains, 90% punctuality)
- flexibility for time-table shifts
- 99.9% reliability for transport of documents
- Customer satisfaction increases through customer information system
- Increase on intermodal transport (Modal Shift: 5,92 to 6,86 million gross tonnes from 2005 to 2006)
- Benefits for environment and traffic on Brenner road

Main success factors

The success of the project followed from these points:

- corridor approach
- main operators of the corridor joined the project
- focus on quality and customer satisfaction

No rivalry but close cooperation in the corridor due to a bottle neck, which was unfamiliar and challenging for all.

More Information

Project Website www.bravo-project.com

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