Bundesministerium
für Umwelt, Naturschutz
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VIII. Tagung der Alpenkonferenz
16 November 2004, Garmisch-Partenkirchen

TOP 7

Verkehr

Anlage 1
Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

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Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

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Bericht der Arbeitsgruppe Verkehr am 6. und 7. September 2004 in Chambéry gebilligt

Die Arbeitsgruppe Verkehr, die am 15. September 2003 gebildet wurde, trat am 16. Februar 2004 und am 6. und 7. September zu einer Sitzung zusammen.

I - Definition des Arbeitsprogramms

Das Mandat der Arbeitsgruppe Verkehr wurde von der VII. Alpenkonferenz im November 2002 in Meran festgelegt. Der italienische Vorsitz hatte im Oktober 2002, auf der Basis von Beiträgen aller Vertragsstaaten, eine zusammenfassendes Dokument vorgelegt, in dem je Mitgliedstaat eine Bestandsaufnahme und die die verschiedenen Artikel des Verkehrsprotokolls betreffenden Projekte dargelegt sind, und das eine erste Antwort auf die zwei letzten Punkte des Mandats darstellt (Zusammenstellung der auf die Umsetzung des Verkehrsprotokolls und auf die Förderung einer nachhaltigen Verkehrspolitik abzielenden Initiativen und Maßnahmen).

Auf der 25. Sitzung in Benediktbeuern vom 26. bis 28. März 2003 hatte der Ständige Ausschuss der Alpenkonferenz des Weiteren den Vorschlag des deutschen Vorsitzes gebilligt, die Vorbereitung von Maßnahmen (wie der „Brenner Aktionsplan 2005") für die modale Verlagerung auf den großen Korridoren in das Mandat aufzunehmen, und er hatte betont, dass es wichtig ist, zu den Interreg III Programmen Beiträge zu leisten.

Bestimmte Maßnahmen, die von den Vertragsstaaten der Alpenkonvention im Rahmen anderer Instanzen (Gruppe der Erklärung von Zürich, Abkommen EU/ Schweiz, Memorandum Niederlande/ Deutschland/ Schweiz / Italien) durchgeführt werden, streben ähnliche Ziele an und produzieren Daten, die für die Umsetzung des Verkehrsprotokolls nützlich sind (z.B. die Arbeitsgruppe für Verkehrsprognosen).

Ausgehend von dieser Basis hat die Arbeitsgruppe Verkehr die verschiedenen Punkte ihres Mandats überprüft, ihr Arbeitsprogramm festgelegt und dabei eine beschränke Anzahl von besonders bedeutsamen Themen für das Verkehrsprotokoll ausgewählt.

Der 26. Ständige Ausschuss der Alpenkonvention, der vom 29. September bis 1. Oktober 2003 in Bad Reichenhall zusammentrat, billigte die Schlussfolgerungen der Arbeitsgruppe Verkehr, und vor allen Dingen die Arbeitsorientierungen zur Umsetzung des in Meran übertragenen Mandats. Er beantragte einen Bericht über den Stand der Entwicklung, der auf der VIII. Ministerkonferenz vorgelegt werden soll, so wie eine Erklärung zum Verkehr in den Alpen.

I-1 Plattform der Informationserfassung und der für die gemeinsame Nutzung bestimmten Verbreitung aller Daten, die für die Umsetzung des Protokolls und die Unterrichtung der Öffentlichkeit notwendig sind (Punkt 1 des Mandats):

Dieser Punkt wurde zur weiteren Klärung an ABIS weiter geleitet, das für den gesamten Raum der Alpenkonvention die Bündelung der verschiedenen bereits bestehenden Informationsquellen übernehmen sollte.

I-2 Sammlung und Bekanntmachung von Daten und Informationen über Verkehrsprognosen auf lange Sicht und deren wahrscheinliche Folgen im Sinne der Nachhaltigkeit (Punkt 2 des Mandats):

Die Gruppe beurteilte es als nicht sinnvoll, weitere Recherchen anzustellen. Sie machte es sich zur Aufgabe, eine Bilanz von den bisherigen Recherchen und den wichtigsten Schlussfolgerungen aufzustellen. Mit der Erarbeitung der Zusammenfassung wurde die französische Delegation beauftragt.

I-3 Das globale Funktionieren des Verkehrssystems in den Alpen (Punkt 2b des Mandats):

1) – Zum Thema Verkehrsüberlastung und riskante Übergänge, vor allen Dingen im Sinne der Förderung der modalen Verlagerung auf die Schiene, beschloss die Gruppe die Bildung einer Nebengruppe unter der Leitung der österreichischen Delegation, die eine Bestandsaufnahme der alpinen Erfahrungen mit Schienenautobahnen in Bezug auf die betriebliche Funktionsfähigkeit und die Finanzierung.

2°) Zum Thema Unzulänglichkeiten der öffentlichen Verkehrsunternehmen, beschloss die Gruppe zwei Aspekte aufzugreifen: die Verkehrsanbindung der alpinen Touristikstationen und das Funktionieren der inneralpinen Verbindungen. Da es sich weitgehend um dezentrale Kompetenzen handelt, beauftragte die Gruppe ihr Sekretariat, mit den betreffenden Körperschaften Kontakte anzubahnen, dies in Zusammenarbeit mit dem europäischen Verband der gewählten Volksvertreter der Bergregionen, um möglichst vorbildliche Beispiele zu finden.

I-4 Einzelstaatliche Initiativen für die Umsetzung des Protokolls und Maßnahmen zur Förderung einer nachhaltigen Verkehrspolitik (Punkt 2c und 2d des Mandats:

Das vom italienischen Vorsitz im Oktober 2002 vorgelegte Dokument **s**oll regelmäßig vor jeder neuen Alpenkonferenz aktualisiert werden. Diese Arbeit wird vom französischen Sekretariat koordiniert.

I-5 Evaluierungsindikatoren:

In dem Mandat wird die Gruppe Verkehr beauftragt, bei der Erstellung einer Liste von Indikatoren mitzuwirken, die für die Bewertung der Effizienz der beschlossenen Maßnahmen zur Förderung einer nachhaltigen Verkehrspolitik notwendig sind. Die Gruppe wünscht zur Erfüllung dieses Zwecks eine Annäherung mit der Arbeitsgruppe für „Umweltqualitätsziele" und die Erstellung einer Expertise der für den Bereich Verkehr vorgeschlagenen Indikatoren. Mit der Koordinierung dieser Aufgabe wurde die französische Delegation beauftragt.

I-6 Die Gruppe erörterte zwei zusätzliche Themen:

1°) **Die Verbesserung der großen alpenquerenden Eisenbahnkorridore**, ein Thema, das vom 25. Ständigen Ausschuss der Alpenkonvention auf Vorschlag der deutschen Präsidentschaft festgehalten wurde. Es wurde beschlossen eine von Deutschland geleitete Nebengruppe zu bilden, um die gegenwärtigen Erfahrungen (Brenner Aktionsplan 2005 und Nord-Sud-Korridor IQ-C) zu verfolgen und die Möglichkeit zu prüfen, eine ähnliche Initiative auf der Achse Benelux-Frankreich-Italien in die Wege zu leiten.

2°) **Die Verkehrskosten in den Alpen:** Es wurde eine Nebengruppe unter italienischer Leitung gebildet. In einem ersten Abschnitt soll die Nebengruppe ein Pflichtenheft für ihren Aufgabenkreis erstellen, namentlich für Posten, Indikatoren und Maßnahmen, die die effektiven, vom Verkehr in den Alpen generierten Kosten betreffen.

II- Stand und Fortschritte

II-1 Sammlung und Verbreitung von Informationen über Verkehrsprognosen auf lange Sicht

Die französische Delegation präsentierte auf der Sitzung der Gruppe Verkehr am 16. Februar 2004 eine erste Bestandsaufnahme der bestehenden Daten des alpenquerenden Verkehrs, der für Folgendes bestimmt ist:
- eventuelle Lücken der bestehenden Kenntnisse aufzudecken,
- die Verfügbarkeit der Daten zu sichern.

Die Arbeit erstreckt sich auf Verkehrsrecherchen der letzten zehn Jahre. Es wurde eine Einstufung nach Verkehrsmittel und Datenherkunft gebilligt: Es erstreckt sich auf die wichtigsten Mittel (Straße, Schiene, Meer, Fluss), die Natur der Datenquellen (Zählung, Umfragen), deren Häufigkeit, die Verfügbarkeit der Ergebnisse und den Typ der gesammelten Daten (Strom in Tonnen oder Tonnen-Kilometern oder wertmäßig, durchlaufende Entfernungen, Typ der Waren, usw.)

Die Abfassung des Dokuments, auf der Basis der von den verschiedenen Delegationen vorgelegten Zusätze, befindet sich im abschließenden Stadium.

II-2 Nebengruppen „Schienenautobahnen und kombinierter Verkehr" – „wichtige Schienenkorridore"

Auf Vorschlag der Vorsitzenden der beiden Nebengruppen, die feststellten, dass sich bestimmte Themen überschneiden, beschloss die Gruppe Verkehr auf ihrer Sitzung am 16. Februar 2004, dass die beiden Nebengruppen zuerst gemeinsam die Bestandsaufnahme (Operatoren, Verkehrsdienste, Verkehrsaufkommen) erstellen, die der erste Arbeitsabschnitt ist. Die folgende Arbeit wird dann auf dieser Basis, gemäß Vorschlägen, die zum geeigneten Zeitpunkt vorgelegt werden, weitergeführt.

Die beiden Nebengruppen traten am 18. Juni 2004 zu einer Sitzung zusammen und definierten den Inhalt des gemeinsamen Berichts: (vgl. Anhang)
- präzise Darlegung der Ergebnisse, ergänzt durch Anhänge für jeden Mitgliedstaat;
- in Bezug auf die Frage „Können die Maßnahmen oder Verfahren des Aktionsplans Brenner 2005 auf andere Korridore angewandt werden, um den modalen Anteil der Schiene zu erhöhen?": Eine Beschreibung von Funktion und Bedeutung, die jeder der 8 geprüften Korridore hat; Angabe der Modalanteile, sowohl relativ wie auch in absoluten Werten, wobei ggf. der über die Schienenautobahn abgewickelte Verkehr gesondert behandelt wird; die Liste der Demarchen des Brenner Aktionsplans 2005, die auf andere Korridore angewandt werden können;
- eine Evaluierung der Schienenautobahndienste in einem gesonderten Teil des Berichts;
- die Beschreibungen müssen das Wettbewerbsumfeld und/oder die Zusammenarbeit zwischen den verschiedenen Benutzern der Infrastruktur einbeziehen.

Die zwei Nebengruppen schlagen vor, dass die VIII. Alpenkonferenz die Erarbeitung ähnlicher Maßnahmen wie im Aktionsplan Brenner 2005 anregt, die auf die Schaffung eines hochrangigen Serviceangebots auf allen alpenquerenden Schienenkorridoren abzielen.

Diese Orientierungen wurden von der Arbeitsgruppe Verkehr am 6. September 2004 insgesamt bestätigt.

II-3 Indikatoren der Überwachung der Alpenkonvention

Auf der Basis der von der französischen Delegation vorbereiteten Arbeiten hat die Gruppe Verkehr auf ihrer Sitzung 16. Februar 2004 folgenden Standpunkt vertreten:

- Es muss eine beschränkte Anzahl von Indikatoren festgehalten werden, die sich auf einige wenige Prioritäten konzentrieren und sich auf bestehende Daten stützen. Im Bereich Verkehr müssten diese Prioritäten folgenden drei Zielsetzungen der Alpenkonvention entsprechen: Förderung der modalen Verlagerung auf umweltverträglichere Verkehrsträger; Gewährleistung effizienter Verbindungen unter den verschiedenen Gebieten bei Bevorzugung der öffentlichen Verkehrsunternehmen; Reduktion der Belästigungen.

- Das erste Ziel betrifft hauptsächlich die alpenquerenden Hauptverkehrsachsen. Es wird vorgeschlagen, ein Referenz-Straßen- und Schienennetz festzuhalten, auf dem mehrere Indikatoren verfolgt werden: die Eigenschaften des Netzes und seiner Bewirtschaftung, Entwicklung des Personen- und Güterverkehrs, Maut und Besteuerung der verschiedenen Verkehrskategorien.
- Das zweite Ziel legt die Betonung auf das Angebot der lokalen öffentlichen Verkehrsunternehmen, für die unbedingt zuerst eine Datenharmonisierung erarbeitet werden muss.

- Das dritte Ziel betrifft die Erfassung der Auswirkungen von Luftverunreinigung, Lärm und Verkehrsunfällen, wobei objektive, aus den Maßnahmen abgeleitete Daten festgehalten werden müssen.

Die Stellungnahme wurde der Arbeitsgruppe „Umweltqualitätsziele" zugeleitet und auf der 3. Sitzung dieser Gruppe am 24. bis 26. März 2004 in München präsentiert. Auf Ersuchen des Vorsitzenden der Gruppe „Umweltqualitätsziele" erläuterte die Gruppe Verkehr ihre Vorschläge mit einer Darlegung in der Form von Indikatoren, die am 14. Mai 2004 übermittelt wurden.

II-4 Die Kosten des Alpenverkehrs

Die Nebengruppe debattierte auf ihren ersten Sitzungen das Arbeitsprogramm auf der Basis eines von der italienischen Delegation vorgelegten Vorschlags. Es wurde beschlossen:
- die wichtigsten Parameter zu identifizieren, die die realen Kosten des Güterverkehrs in den Alpen beeinflussen, um sachdienliche Kriterien und Indikatoren für eine adaptierte und (von allen) geteilte Tarifpolitik zu erreichen, in der die von diesem Verkehr generierten externen Kosten berücksichtig werden;
- eine schriftliche Stellungnahme über die Auswirkungen der europäischen Richtlinieprojekte in Verbindung mit dem Verkehrsprotokoll, namentlich mit Artikel 14, für die Alpen zu formalisieren.

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Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 1

Report by the « Corridors and « Rolling road » Subgroups of the Transport Working Group of the Alpine Convention

(VIII/7/1/1)

Report by the "Corridors" and "Rolling Road" Subgroups of the Transport Working Group of the Alpine Convention

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September 2004

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Report by the "Corridors" and "Rolling Road" Subgroups
of the Transport Working Group of the Alpine Convention

1. Preliminary remarks

At its 25th meeting, the Standing Committee of the Alpine Conference requested the "Transport" Working Group to examine whether, and if so to what extent, measures for shifting long-distance road haulage traffic to the railways similar to those in the "Brenner 2005" Action Plan (annex) could be applied to other transport corridors in the Alpine Arc. The Standing Committee instructed the Working Group to present a report on this subject at the 28th meeting of the Standing Committee.

To this end, the "Transport" Working Group established a "Corridors" subgroup.

A second subgroup was to address the subject of the "rolling road". Because the two issues are so closely related, the two subgroups agreed to initially conduct joint activities and to prepare a joint draft report, which is hereby submitted.

2. Current situation

The transfer of freight traffic from the roads to the railways figures prominently in the field of trans-Alpine freight transport, especially against the background of the Transport Protocol to the Alpine Convention. The overarching objective for all stakeholders is to "freeze" road haulage traffic at the current level or even, if possible, to reduce it to the level of the late 1990s. In this context, it should be borne in mind that trans-Alpine freight traffic in Switzerland and Austria consists primarily of genuine transit traffic. On the Brenner route, for instance, it accounts for around 90 % of all traffic. In contrast, most of the traffic on the French alpine crossings is cross-border traffic with Italy rather than transit traffic with third countries.

Because of the prevailing conditions, the Brenner plays a dominant role, especially in HGV transit traffic, and has also experienced the highest rate of growth in the past. In the future, too, there is likely to be sizeable growth in the volume of trans-Alpine freight traffic (+ 70 % for the period from 2000 to 2015).

Against this background, the Austrian, Italian and German ministers of transport had decided to study the options for short- and medium term measures to increase the level of trans-Alpine rail freight via the Brenner.

The measures were summarized in the so-called "Brenner 2005" Action Plan. This action plan is designed to create the conditions for increasing the volume of combined transport on the Brenner route by at least 50 % over 2001 levels by 2005. This would make it possible to shift almost all the expected growth in freight traffic to the railways and "freeze" road haulage traffic at the current level.

The "Brenner 2005" Action Plan thus has a crucial and pioneering role to play in trans-Alpine freight transport.

The terms of reference and objective for the subgroup that has been set up are thus to examine whether the "Brenner 2005 Action Plan" can be applied to other alpine corridors as an example of good practice.

The Action Plan also involves appraising the prospects of the range of services offered in accompanied combined transport (rolling road) and reviewing and assessing the capacity utilization and operational management of all current rolling road terminals along the Brenner route. As far as the basic appraisal of the rolling road is concerned, differences of opinion between the countries involved cannot be overlooked (cf. Chapter 6).

3. **Data on trans-Alpine freight transport**

- **Total traffic**

  In 1994, the volume of freight transported through the Alps (**Alpine Arc C**: Ventimiglia – Vienna) was 50.5 million tonnes by rail and 82.2 million tonnes by road. By 2002, these figures had risen to 61.7 million tonnes (rail) and 113.5 million tonnes (road). This is equivalent to an **increase of 22.2 % in rail freight** and **38.1 % in road haulage**.

  Alpine Arcs A (Mt. Cenis/Fréjus – Brenner) and **B** (Ventimiglia – Tarvisio) account for over 60 and 70 % respectively of the volume of rail freight and around 60 and 80 % respectively of the volume of road haulage traffic.
  The rate of growth in **rail freight** is highest in Austria at 37.9 % (from 24.0 to 33.1 million tonnes), whereas the rates of growth in France at 9.2 % (from 8.7 to 9.5 million tonnes) and Switzerland at 7.3 % (from 17.8 to 19.1 million tonnes) are lower.

  The highest rates of growth in **road haulage** are in Switzerland at 71.0 % (6.2 to 10.6 million tonnes) and Austria at 54.9 % (40.1 to 62.1 million tonnes). In France, the increase over this period was 13.3 % (36.0 to 40.8 million tonnes).
  In 2002, the **Alpine crossings** with the highest volumes of **rail freight traffic** were Gotthard (14.2 million tonnes per annum), Brenner (10.1), Semmering (9.5), Mt. Cenis/Fréjus (8.6) and Tauern (8.0).

  At the top of the league table of **Alpine crossings** with the highest volumes of **road haulage traffic** in 2002 are Brenner (25.8 million tonnes per annum). Mt. Cenis/Fréjus (24.1), Tarvisio (17.3) Ventimiglia (14.6) and Tauern (11.1).

- **Transit traffic**

  Depending on the Alpine arc and mode of transport being considered and the year under review, **transit traffic accounts for between 46.4 and 73.1 % of total traffic**.

  In **Alpine Arc C**, 28.1 million tonnes were transported by rail an 38.1 million tonnes were transported by road in 1994. By 2002, these figures had risen to 30.8 million tonnes (rail) and 55.9 million tonnes (road). This is equivalent to an **increase of 9.6 % in rail freight** and **46.7 % in road haulage**.

  The shares accounted for by **Alpine Arcs A** and **B** are over 86 and over 93 % respectively of the total rail freight volume and around 70 and over 96 % respectively of the total road haulage volume.

The rates of growth in **rail freight** are highest in Switzerland and Austria at around 12 % (from 14.1 to 15.8 million tonnes in Switzerland and from 11.0 to 12.3 million tonnes in Austria), whereas in France there was a drop of 10 % from 3.0 to 2.7 million tonnes.

The rates of growth in **road haulage** are over 70 % in Austria and Switzerland (from 18.8 to 33.6 million tonnes in Austria and from 2.9 to 5.0 million tonnes in Switzerland), compared with an increase of 5.5 % in France (from 16.4 to 17.3 million tonnes).

In 2002, the **Alpine crossings** with the highest volumes of **rail freight traffic** were Gotthard (11.8 million tonnes per annum), Brenner (8.2) and Simplon (4.1). In **road haulage**, the order is as follows: Brenner (24.0 million tonnes per annum), Ventimiglia (8.9), Mt. Cenis/Fréjus (7.7), Tarvisio (6.5), Tauern (5.1) and Gotthard (4.6).

- **Catchment areas of the Alpine passes in transit traffic (rail)**

  The **Gotthard** links primarily the Benelux countries plus Western and Southwestern Germany to Italy (with the focus on Northwestern Italy).

  The **Brenner** links primarily Northern/Eastern and Southern Germany plus Scandinavia to Northeastern Italy (with the focus on Verona).

  Mt. Cenis/Fréjus links primarily Southern France and Italy (*this is not transit in the strict sense of the term!*). The catchment area also covers Spain and the Benelux countries plus the countries of Eastern Europe and the Balkans.

- **Structure of rail freight traffic**

  59 % of the total volume is transported by **wagonload services**, unaccompanied combined transport accounts for 30 % and the rolling road for 11 %. The proportion of **combined transport** (unaccompanied combined transport + rolling road) is highest on the Brenner route at 68 %, followed by Gotthard (59 %), Mt. Cenis/Fréjus (48 %) and Simplon (42 %).

  The highest proportion of **rolling road operations** is to be found on the Brenner (33 %), Tauern (22 %) and Simplon (15 %) routes. The only other route with such links is the Gotthard.

- **Freight transport summary**

  ⇨ The highest volume is through Austria (total volume by rail and road plus volume of transit traffic by road). Switzerland has the highest volume of rail transit traffic.

  ⇨ The alpine crossing with highest volume of traffic is the Brenner. In terms of total traffic (rail + road), it is followed by Mt. Cenis/Fréjus, Tarvisio and Gotthard. In terms of transit traffic (rail + road), it is followed by Gotthard, Mt. Cenis/Fréjus and Ventimiglia.

- ⇨ The fact that transit traffic accounts for a significantly higher proportion of total traffic in Alpine Arcs A and B illustrates that the alpine crossings east of the Brenner are of much less importance for transit traffic.

- ⇨ The alpine crossings with the highest proportion of transit traffic are Simplon, Gotthard and Brenner (> 80 %) in rail freight and Brenner (> 90 %), Gotthard and Ventimiglia (> 60 %) in road haulage.

4. The "Brenner 2005" Action Plan

The action plan was drawn up jointly by all the parties involved in transport across the Brenner, i.e. by representatives from the appropriate transport ministries, railway undertakings, railway infrastructure companies, combined transport operators and terminal operators. In the field of railway undertakings, not only the incumbent undertakings (DB Cargo, Rail Cargo Austria and Trenitalia Cargo) were represented, but also new economic operators in this sector (Lokomotion/Rail Traction Company). The incumbent undertakings had already formed the "Brenner Rail Cargo Alliance" and agreed to cooperate closely in the future on this route.

The measures were summarized in a catalogue supported by all the parties involved. The action necessary to achieve each of these measures was derived from this catalogue and responsibility for implementation was determined, together with the corresponding implementation periods.

The inclusion and participation of all stakeholders meant that when the action plan was adopted, all the stakeholders committed themselves to adopting a coordinated approach and to improving the competitiveness of trans-Alpine rail freight.

In addition, provision was made for the transport ministers to monitor implementation of the measures contained in the action plan, with a report to be submitted annually.

The first interim report, presented at the end of 2003, reveals that significant progress has already been made in implementing all the measures.

5. Approach

The study to determine whether elements of the "Brenner 2005" Action Plan can be applied to other alpine corridors is not designed to simply to provide a "yes or no" answer to the question, but should also consider the specific situation on each of the corridors compared with the Brenner. Here, it should be borne in mind that the action plan concentrated almost exclusively on combined transport as the engine of growth in rail freight in this corridor. In other corridors (e.g. Semmering, Tarvisio, Tauern), conventional rail freight (wagonload services) also plays a major or even a dominant role.

The following corridors/crossings were considered:

Brenner:	Munich	↔ Verona
Lötschberg-Simplon/Gotthard:	Basle	↔ Milan
Southern corridor (Semmering/Wechsel):	Brno	↔ Udine
Mt. Cenis/Fréjus:	Lyon	↔ Turin
Tauern:	Salzburg	↔ Ljubljana
Pyhrn (Schober Pass):	Budějovice	↔ Maribor
Ventimiglia:	Marseille	↔ Genoa

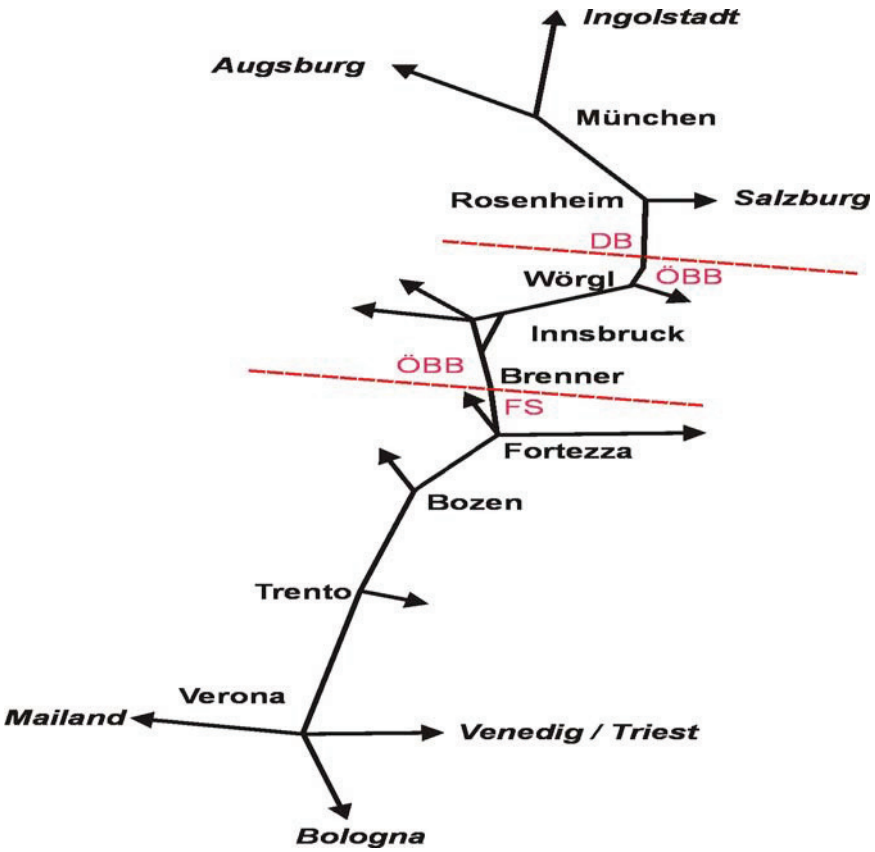
For these corridors/crossings, initial approaches from the Brenner Action Plan that could be applied to them, or the existence of similar measures, was documented.

The description of the corridors on the following pages is structured as follows:

- outline sketch
- function and significance
- modal split in 1994 and 2002
- major elements of the Brenner Action Plan (for the Brenner)/approaches from the Brenner Action Plan that can be applied to other corridors or similar measures already taken (for the other crossings/corridors)

Brenner: Munich ↔ Verona (450 km)

Outline sketch



Function and significance:

The Brenner route is of outstanding significance in north-south and south-north trans-Alpine traffic. First and foremost, it links Germany and Italy. Major feeder lines in the north come from the Ruhr and the North Sea ports – but also from further afield (e.g. from Denmark). In the south, the lines from Verona to Milan and Venice and to Bologna, continuing to Florence and Rome, are of significance.

Modal split in 1994 and 2002

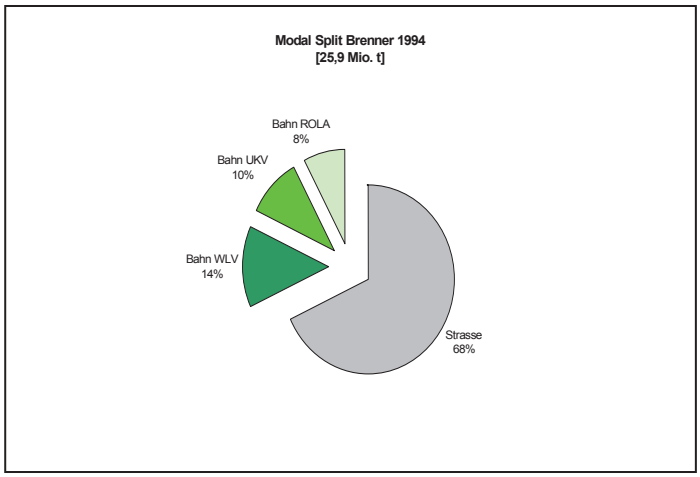
Modal split, Brenner, 1994
[25.9 million tonnes]

Rail, rolling road
8 %

Rail, unaccompanied combined transport
10 %

Rail, wagonload services
14 %

Road
68 %



Modal split, Brenner, 2002
[35.9 million tonnes]

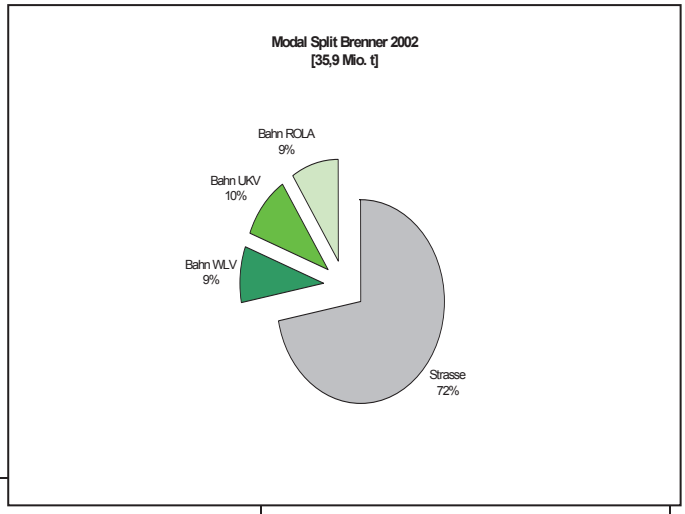
Rail, rolling road
9 %

Rail, unaccompanied combined transport
10 %

Rail, wagonload services
9 %

Road
72 %

Increase: (total volume) 39 %



CT market shares	**(Former) state railways**	**“Third parties”**
	80 %	**20 %**
	Railion, RCA, Trenitalia	**Lokomotion, RTC, et al**

Major elements of the Brenner Action Plan

Package of measures I (start of implementation: 2002)

- Improve and intensify the cooperation that has already begun between railway undertakings, including infrastructure managers
- Improve communications and the exchange of data to optimize the interfaces between the stakeholders and to optimize resource control and customer information
- Introduce an overall quality management system
- Remove bottlenecks in operations (rail, terminal)

Package of measures II (to be implemented by autumn 2004)

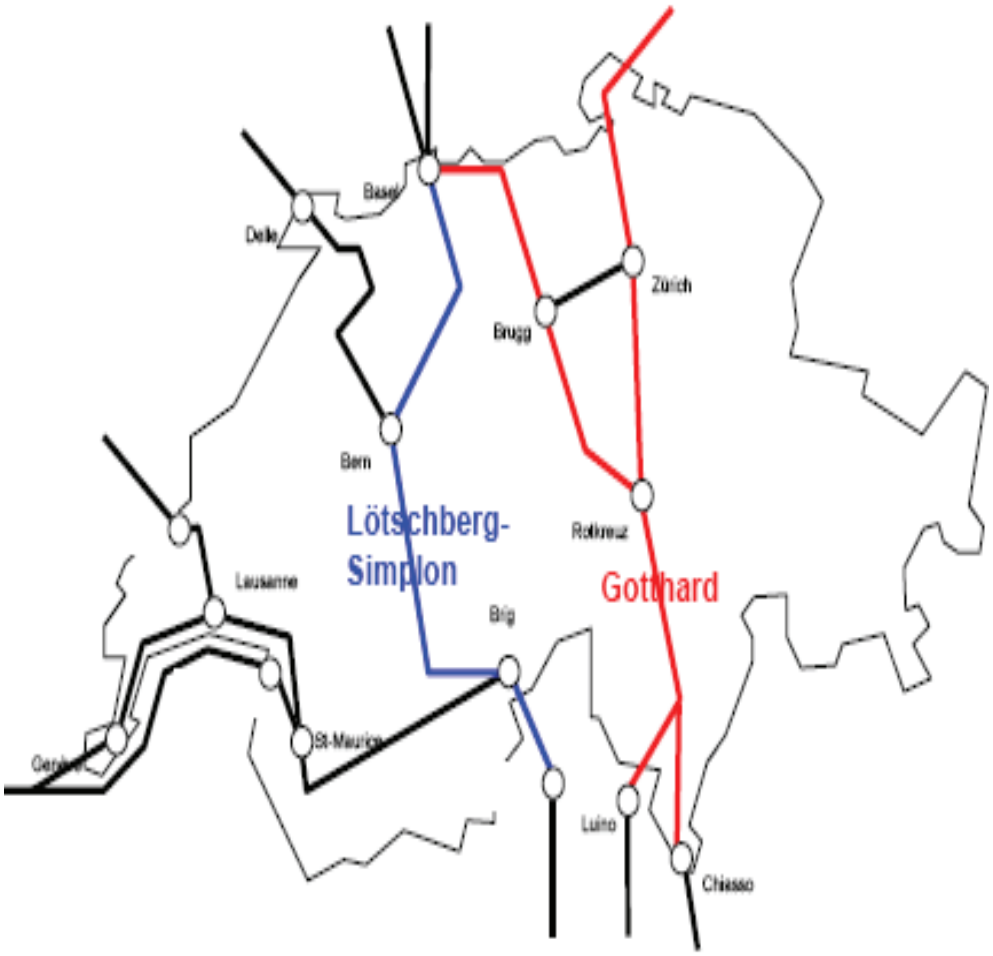
- Develop and implement a seamless route-related traction concept (interoperability)
- Expand the range of services in unaccompanied combined transport and continue to adapt the quality features to the requirements of the market
- Appraise jointly the prospects for the range of services offered in accompanied combined transport (rolling road) and coordinate the short- to medium-term provision of a wider range of services
-

Package of measures III (to be implemented after 2004)

- Coordinate and appraise the actual availability of paths on all relevant sections of the network and at all the relevant junctions for further increases in traffic
- Upgrade and modernize the railway infrastructure (lines, junctions)
- Improve rail links to and from combined transport terminals in Italy and Germany and enhance the transhipment capacity of these terminals

Lötschberg-Simplon/Gotthard: Basle ↔ Milan (370 km)

Outline sketch



Function and significance:

The primary function of both routes is to link the ARA ports, the Rhine-Ruhr region and the Rhine-Main region to the Milan/Piedmont area and the Ligurian ports, plus the region beyond this extending right down to the ports and economic areas of Southern Italy.

Modal split in 1994 and 2002

Modal split, Switzerland, 1994
[23,9 million tonnes]

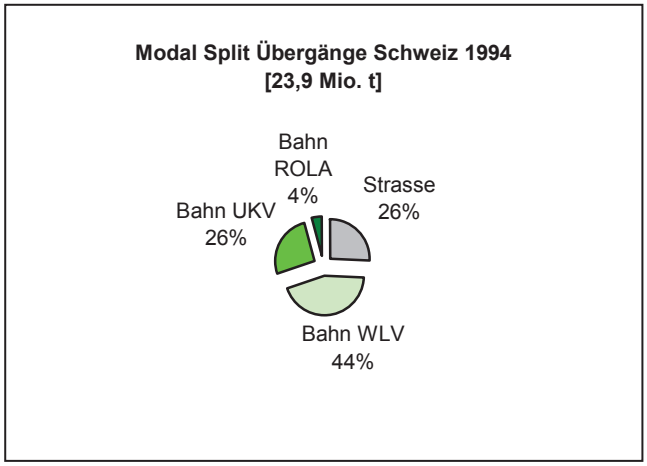
Rail, rolling road

4 %

Rail, unaccompanied combined transport
26 %

Road
26 %

Rail, wagonload services
44 %



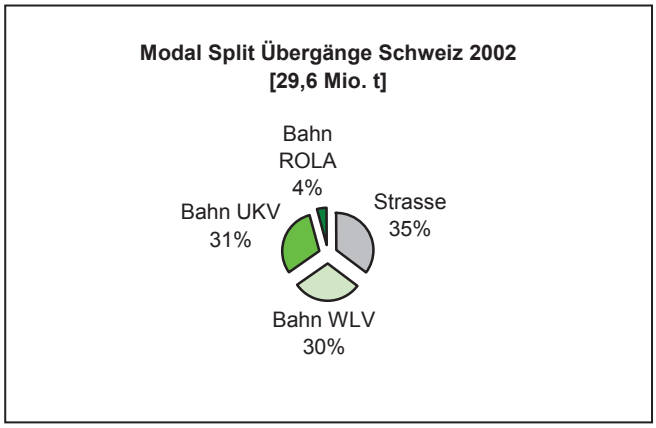
Modal split, Switzerland, 2002
[29,6 million tonnes]

Rail, rolling road
4 %

Rail, unaccompanied combined transport
31 %

Rail, wagonload services
30 %

Road
35 %



CT market shares (Gotthard and Simplon)	**(Former) state railways**	**“Third parties”**
	96 %	**4 %**
	SBB Cargo, BLS Cargo	**RM/Crossrail TX Logistic**

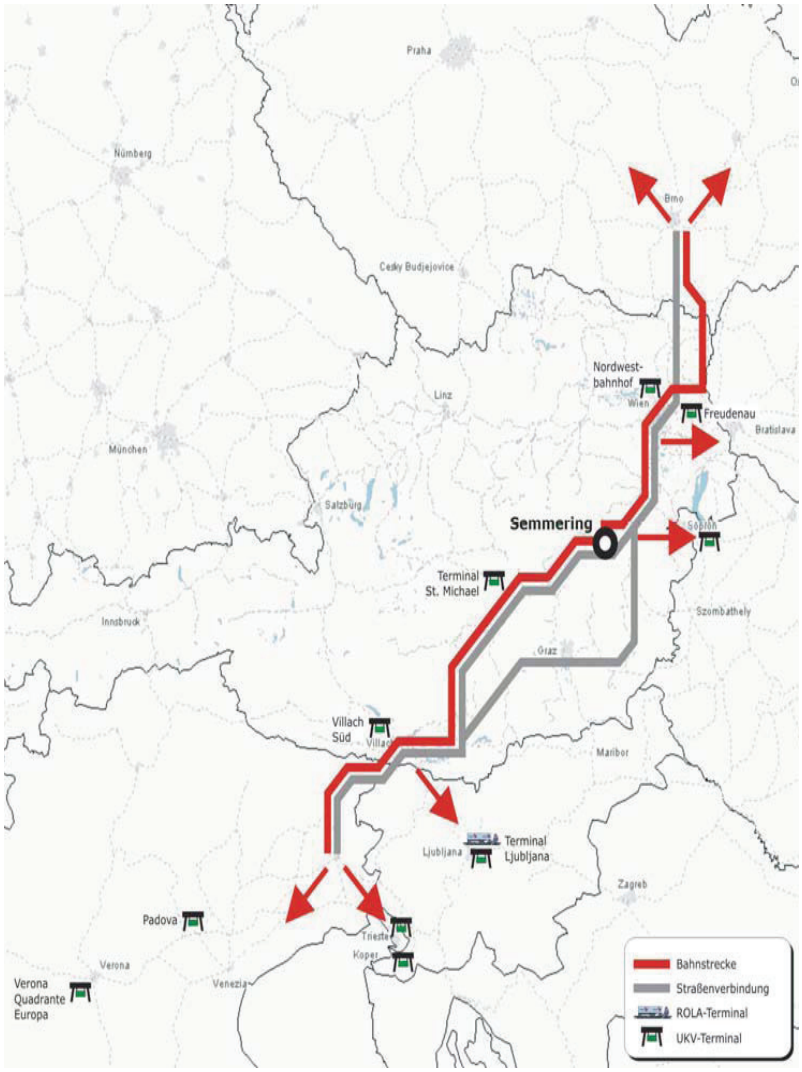
Approaches from the Brenner Action Plan that can be applied to these routes

Various individual measures are already being implemented on the Swiss crossings in a manner similar to the approach on the Brenner route. The following points should be highlighted:

- Quality management and optimization of operations (especially at the interfaces between the various national infrastructures) as a permanent task of the players involved
- Continuous expansion of the range of services offered in combined transport as part of Swiss modal shift policy
- Development of route-related traction concepts (competition between different traction concepts on the corridor)
- Establishment of infrastructure operations that are integrated along the corridor (corridor operations control centre, one-stop shop, integrated timetabling)
- Interoperability issues

Southern corridor: Brno ↔ Udine (540 km)

Outline sketch

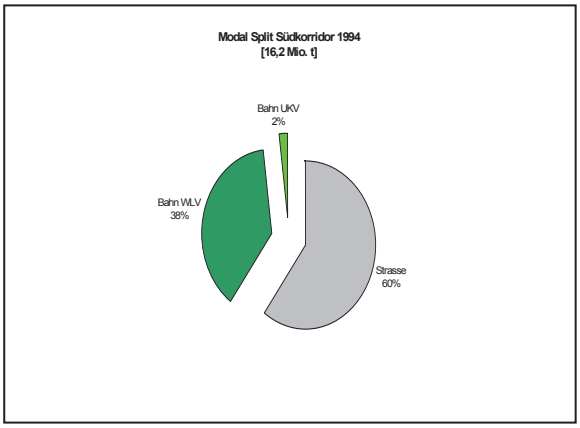


Function and significance:

The southern corridor constitutes the main link between the industrial regional of Northeastern Italy plus the ports of Trieste and Koper and the eastern region of Austria plus Slovakia, the Czech Republic and Poland. Against the background of these countries' accession to the EU, these services have a great potential.

Modal split in 1994 and 2002 (Wechsel)

Modal split, southern corridor, 1994 [16.2 million tonnes]

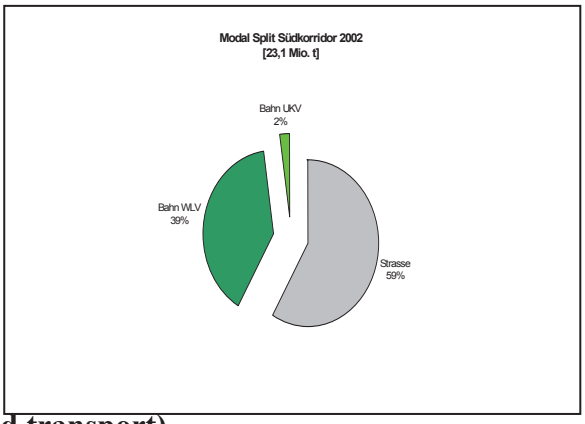


Rail, unaccompanied combined transport
2 %

Rail, wagonload services
38 %

Road
60 %

Modal split, southern corridor, 2002 [23.1 million tonnes]



Rail, unaccompanied combined transport
2 %

Rail, wagonload services
39 %

Road
59 %

Increase: (total volume) 43 %

No market shares identified (only 2 % combined transport)

Approaches from the Brenner Action Plan that can be applied to this route

- Quality management and removal of bottlenecks in operations, especially on the Villach – Tarvisio – Udine – Trieste section

- Expansion of the range of services offered in unaccompanied combined transport, especially trainload services from Trieste container port to Vienna, Slovakia and the Czech Republic

- Development of a seamless route-related traction concept to accelerate the trainload services that are to be introduced

- Coordination and appraisal of the actual availability of paths on the southern corridor

- Improving the provision of rail links from the southern corridor towards Verona and Milan and enhancing the transhipment capacities in Northern Italy and Slovakia, the Czech Republic and Poland

Mt. Cenis/Fréjus:Lyon ↔ Turin (370 km)

Function:
The Maurienne corridor's main function is to enable trade traffic to flow between several French regions, the port of Le Havre, the United Kingdom and Belgian ports, but also the Iberian Peninsula and Italian ports and the main economic centres of that country.

Measures that can be applied from the "Brenner 2005" action plan:

- Strengthening co-operation between railway companies in order to speed up and increase the viability of the Modane border crossing
- Developing interoperability, notably for engines
- Setting up a co-ordinated transport plan between both countries
- Experimenting a rail highway service during gauge upgrading works (the experiment between Aiton – France and Orbassano – Italy started in November 2003, with a daily service of 4 return trips).
- Gauge upgrading works enabling to attain B1 size by 2007, which would authorise transport of most road goods vehicles

Modal traffic distribution (source: Alpinfo)

In 1994, total traffic = 34.2 million tons, including:

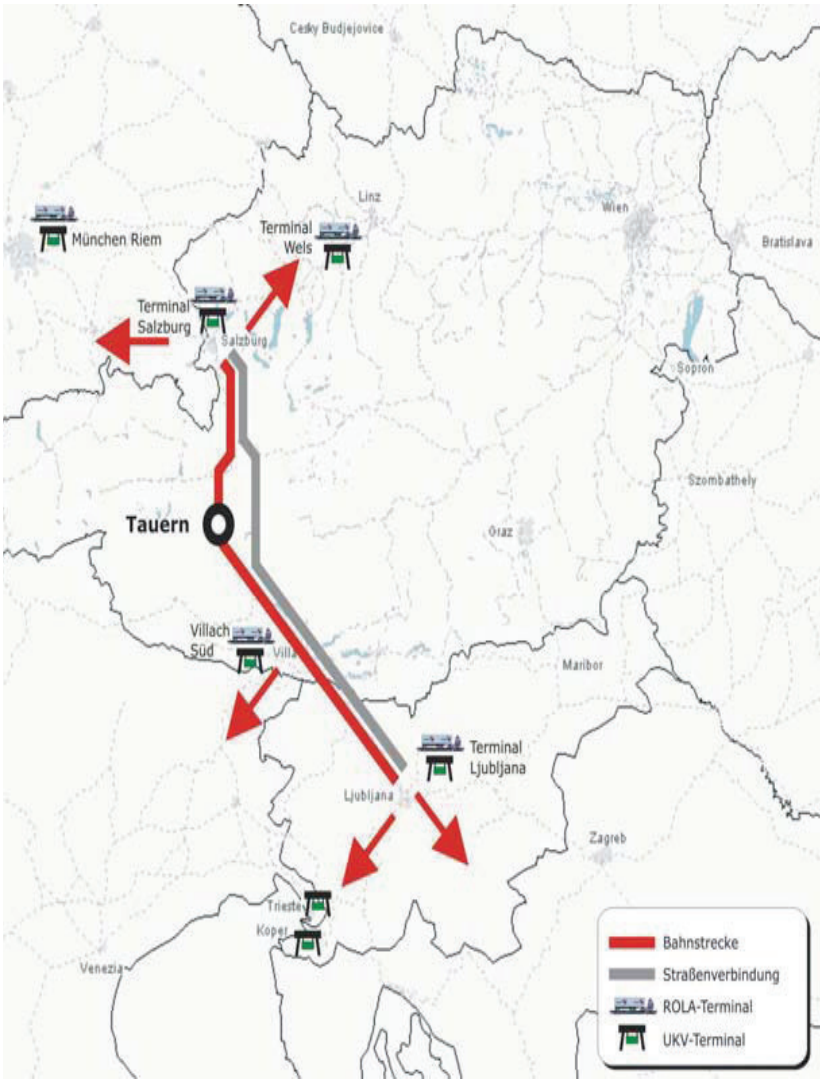
- Rail, full carriages = 13%
- Rail, unaccompanied combined transport = 10%
- Road (via Mont-Blanc and Fréjus tunnels) = 77%

In 2002, total traffic = 34 million tons, including:

- Rail, full carriages = 13%
- Rail, unaccompanied combined transport = 12%
- Road (via Mont-Blanc and Fréjus tunnels) = 75%

Tauern: Salzburg ↔ Ljubljana (290 km)

Outline sketch



Function and significance:

The principal function of the Tauern corridor today is to link the ports of Koper and Trieste to Southern Germany and the central region of Upper Austria. Since the volume of traffic on these routes exhibits a rising trend, rail freight via the Tauern corridor still has great potential.

Modal split in 1994 and 2002

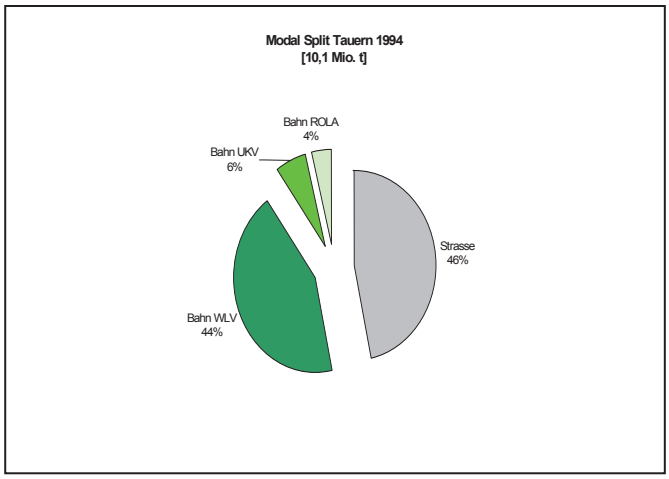
Modal split, Tauern, 1994
[10.1 million tonnes]

Rail, rolling road
4 %

Rail, unaccompanied combined transport
6 %

Rail, wagonload services
44 %

Road
46 %



Modal split, Tauern, 2002
[19.2 million tonnes]

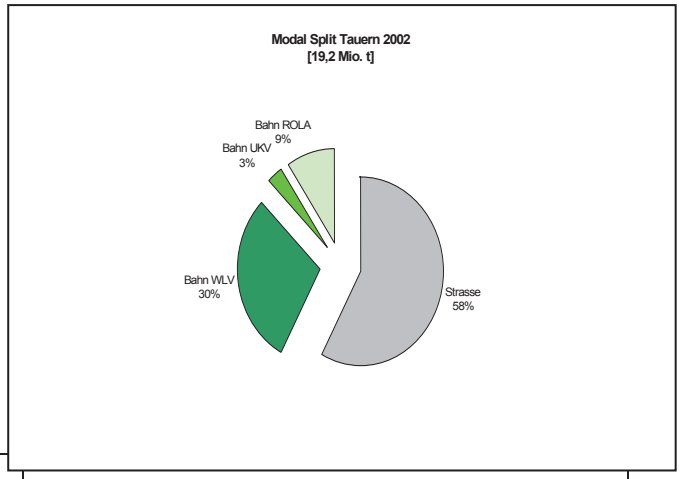
Rail, rolling road
9 %

Rail, unaccompanied combined transport
3 %

Rail, wagonload services
30 %

Road
58 %

Increase: (total volume) 90 %



CT train market shares	**(Former) state railways**
	100 %

Approaches from the Brenner Action Plan that can be applied to this route

- Quality management and removal of bottlenecks in operations, especially on the Villach – Tarvisio – Udine – Trieste section (see also southern corridor)

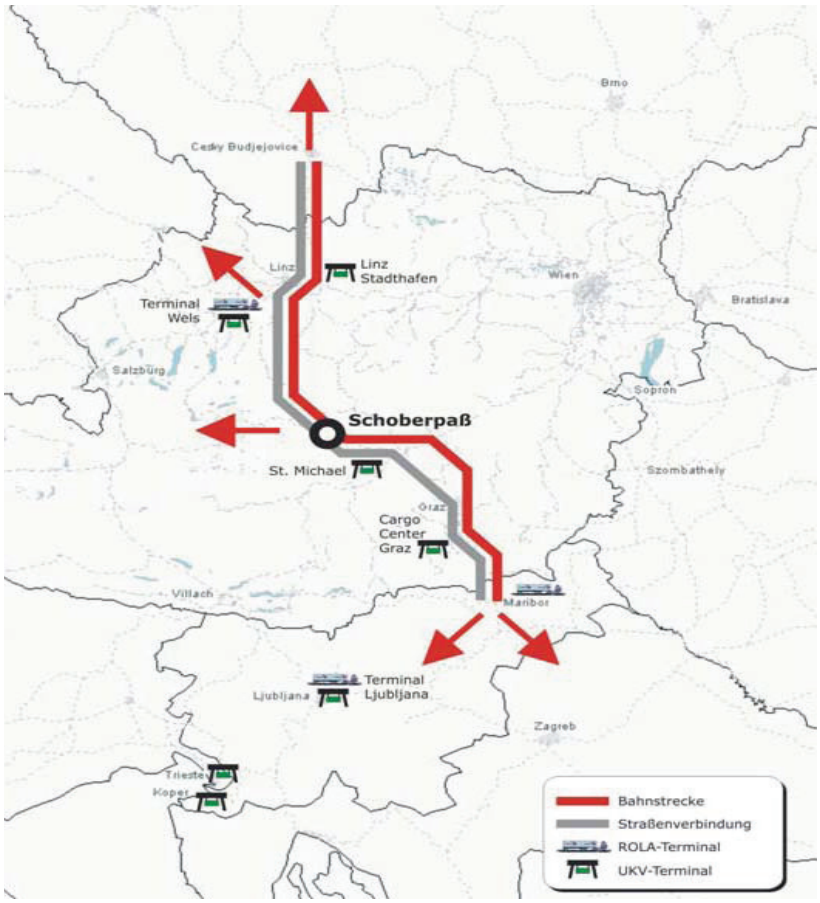
- Expansion of the range of services offered in unaccompanied combined transport, especially the establishment of trainload services from Trieste container port to Southern Germany and through services for ro-ro traffic from Turkey to Trieste and Koper with Germany as the destination

- Development of a seamless route-related traction concept to accelerate the trainload services that are to be introduced

- Multinational corridor management to upgrade the railway infrastructure between Salzburg, Villach, Ljubljana and Koper

Pyhrn: Budějovice ↔ Maribor (450 km)

Outline sketch



Function and significance:

Today, the Pyhrn corridor serves mainly as a link between Styria and Upper Austria plus Germany. Currently, international traffic between Germany and the Balkan countries is increasingly being routed via the Danube corridor and Hungary.

Modal split in 1994 and 2002

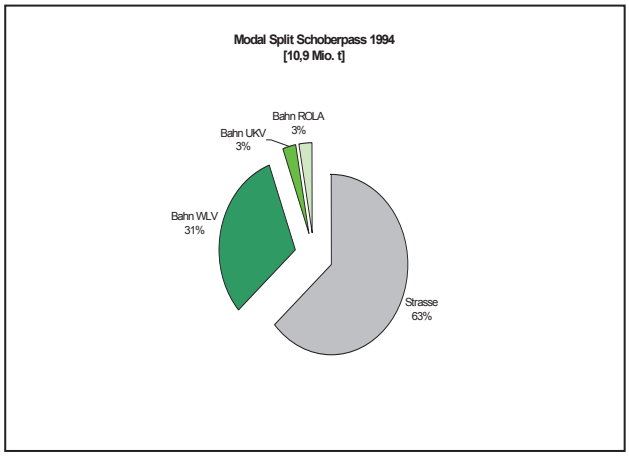
Modal split, Schober Pass, 1994
[10.9 million tonnes]

Rail, rolling road
3 %

Rail, unaccompanied combined transport
3 %

Rail, wagonload services
31 %

Road
63 %



Modal split, Schober Pass, 2002
[15.2 million tonnes]

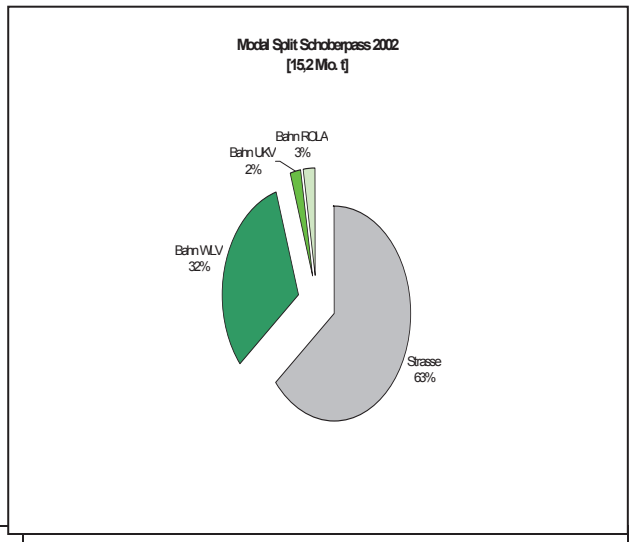
Rail, rolling road
3 %

Rail, unaccompanied combined transport
2 %

Rail, wagonload services
32 %

Road
63 %

Increase: (total volume) 39 %



CT train market shares	**"Third parties"**
	100 % **LTE**

Approaches from the Brenner Action Plan that can be applied to this route

- Improving cooperation between the railway undertakings at Summerau border-crossing point
- Expansion of the range of services offered in unaccompanied combined transport, especially the establishment of trainload services between Graz Cargo Center and Germany
- Widening the range of rolling road services between Wels and Maribor/Zagreb
- Multinational corridor management to upgrade the railway infrastructure between Graz and Maribor

Ventimiglia: Marseille ↔ Genoa (400 km)

Function:

This corridor's chief function is to link several French regions, but mainly the Provence-Alpes-Côte d'Azur Region, as well as Spain to Italy.

This corridor has very limited freight capacity because of high passenger traffic (major international and regional lines)

Measures that can be applied from the "Brenner 2005" action plan:

No measures in particular, because of the rather secondary character of this corridor.

Modal traffic distribution (source: Alpinfo)

In 1994, total traffic = 10.4 million tons, including:

- Rail, full carriages = 10%
- Rail, unaccompanied combined transport = 0
- Road = 90%

In 2002, total traffic = 15.5 million tons, including:

- Rail, full carriages = 6%
- Rail, unaccompanied combined transport = 0
- Road = 94%

6. Rolling road

Austrian position

Because of its special geographical and topographical situation, Austria regards the rolling road – alongside unaccompanied transport – as an extremely important transport policy tool for shifting road haulage traffic to the railways.

Even after expiry of the ecopoints system, there is still potential for expanding accompanied combined transport:

- HGV journeys from and to non-EU states (Turkey, Serbia and Montenegro, Macedonia, Bosnia-Herzegovina, Croatia, Romania, Bulgaria, Ukraine) will continue to be subject to quota arrangements. The increasing volume of traffic between these states and Western Europe (especially Germany) can be guided towards the railways by pursuing a restrictive quota policy. Given the current situation regarding infrastructure (lack of terminals for unaccompanied combined transport, lack of craneable equipment), the only options currently practicable are wagonload services and rolling road.

- Hauliers whose HGVs cover very long distances can only comply with social legislation by adopting complicated logistical processes (change of driver) or by having two-driver crews. Neither of these is an option for the large number of small and very small enterprises, which play a major role in road haulage in the new EU member states and Italy, or, if they were to introduce these changes, it would make them uncompetitive compared with other hauliers. Nor is a switch to unaccompanied combined transport an alternative for these companies.

From this, it can be deduced that the rolling road should constitute a major component of an overall strategy for trans-Alpine freight transport, which involves not only developing unaccompanied combined transport, but also expanding the range of services for consignments and companies that traditionally use the roads. One of the main objectives of this is to facilitate compliance with existing legislation and to enhance acceptance of further restrictive measures in the road haulage industry with its structure based on small enterprises.

This initial situation illustrates that the combined transport market is split into two markets. If checks are tightened and further restrictive measures for trans-Alpine road haulage are implemented, there is undoubtedly great potential for both combined transport systems.

German position

The rolling road appears attractive at first sight. The system can be produced relatively easily, because hauliers can immediately switch to combined transport without having to modify their vehicle fleet; all they have to do is to drive their vehicles onto the low-loader wagons. This is much easier than the complicated organization of the transport chain in unaccompanied combined transport.

A closer look, however, reveals weaknesses in the system of accompanied combined transport which, depending on the transport policy environment, hamper efficient operations or even prevent them to a large extent. These weaknesses are:

- the use of load-loader wagons required for transport, which are expensive to purchase, operate and maintain. The purchase price of a low-loader wagon is around € 145,000, whereas a flat car for container and swap body transport operations in unaccompanied combined transport only costs around € 52,000;

- the design of low-loader wagons (small wheels to achieve a low surface and high-performance disc brakes) makes them susceptible to a high level of wear;

- there is a poor ratio of cargo to gross weight because the powered vehicle also travels on the train.

On the German transport market, it has been apparent for a long time that, because of the higher transport costs, the rolling road is scarcely competitive and has not been accepted by the market. Rolling road services have since ceased to exist in intra-German transport. At best, the rolling road can perform the function of a shuttle to bridge specific bottlenecks. However, unless accompanying transport policy measures are taken, it can make only a very limited contribution to the transport policy objective of shifting freight traffic to the railways. Thus, if an HGV from Hamburg with Italy as its destination uses the motorway as far as Munich and then switches to the rolling road from Manching to Brennersee, the modal shift impact and the contribution to reducing congestion and relieving environmental pressure on German roads is minimal. For this reason, the Federal Ministry of Transport, Building and Housing prefers unaccompanied combined transport with containers, swap bodies and semi-trailers.

The drastic reduction in the volume of rolling road traffic on the Brenner route following the expiry of the ecopoints system illustrates just how much the rolling road depends on certain transport policy parameters.

Switzerland position

The different modes of railway transportation (Unaccompanied Combined Transport and Rolling Highways) should contribute to the modal shift taking into account their comparative advantages:

With Unaccompanied Combined Transport (UCT) goods are transported, which could be hauled on long distance by road as well as by railway. For the dispersion/distribution of goods (e.g. on one side of the transport chain) the transportation by road is necessary / urgent / unavoidable.

The Rolling Highway has to be classified from a logistic point of view as one form of road transportation. Therefore, the transported goods should be restricted to such products for which transportation by road is favourable with respect to lot quantity and the expected delivery time.

To enhance the modal shift, both, Rolling Highway and UCT are possible means. From the Swiss point of view, there is no supporting relation between the two measures concerning the aim of the modal shift but a kind of rivalry. Because of the relatively high subventions for the Rolling Highway relating to a single shipment shifted (see the listing of reasons for the higher cost in the German position), the modal shift for those product groups, which are especially suited for UCT is not promoted. Therefore the Rolling Highway as a kind of road haulage seems to be more attractive and with its practice the sole transportation by road remains an option for the carrier.

Furthermore, because the Rolling Highway is related to the road, the construction of a long-haul Rolling Highway or a Rolling Highway Net cannot be expected since the necessary resources (drawing vehicles and drivers) would be unemployed too long. The Rolling Highway is only installed where it is at least coequal to road transport concerning time and cost of transport (e.g on connections with high road user charges or considerable geographically given capacity constraints). As a rule, this precondition is given on short connections on which the Rolling Highway trains are used as shuttles. But this kind of isolated application is very difficult to implement in an international environment.

Taking the aim of promoting the modal shift into account, the UCT is therefore in all cases the more sustainable solution. UCT goes along with a consistent rearrangement of the whole transport chain by shippers and freight forwarders. The road as another transport option gets less relevant. The dependency on financial support or on a specific regulatory framework (road user charges, ‘Ökopunkte’) is much lower for UCT than for the Rolling Highway, since the rearrangement of the transport chain constitutes an alternative means of transport permanently. Therefore the Rolling Highway is only a supplement service from the Swiss perspective. The main focus lies on the promotion of the UCT.

7. Recommendation to the Alpine Conference

The findings available so far illustrate that the pragmatic approach of the 2005 Brenner Action Plan – especially regarding the integration of all parties involved in the provision of transport services and the very concrete definition of responsibilities – can also provide important suggestions for action on the other corridors.

The Alpine Conference could refer to the Brenner Action Plan and urge the member states to conclude identical or similar bi- or multilateral agreements.

Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

alpenkonvention • convention alpine
convenzione delle alpi • alpska konvencija

VIII. Tagung der Alpenkonferenz
16 November 2004, Garmisch-Partenkirchen

TOP 7

Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 1/1a
Situation review Austria
(VIII/7/1/1/1a)

Alpine Convention
- Working Group Transport -

Sub-Working Group
"High-Order Rail Corridors"

Sub-Working Group
"Rolling Road"

Situation Review Austria

compiled by: Dipl.-Ing. Erwin Kastberger, BMVIT, Dept. I/K 4
Dipl.-Ing. Julia Elsinger, BMVIT, Dept. I/K 7

Table of Contents

1 OVERVIEW OF HIGH-ORDER RAILWAY CORRIDORS IN AUSTRIA

The Austrian railway network comprises the following main corridors

Arlberg corridor: Switzerland – Feldkirch - Innsbruck
Brenner corridor: Germany – Innsbruck – Italy
Tauern corridor: Salzburg – Villach – Slovenia
Pyhrn corridor: Czech Republic – Linz – Graz – Slovenia
South corridor: Czech Republic – Vienna - Villach – Italy
Danube corridor: Germany - Salzburg/Passau – Linz – Vienna – Slovakia/Hungary

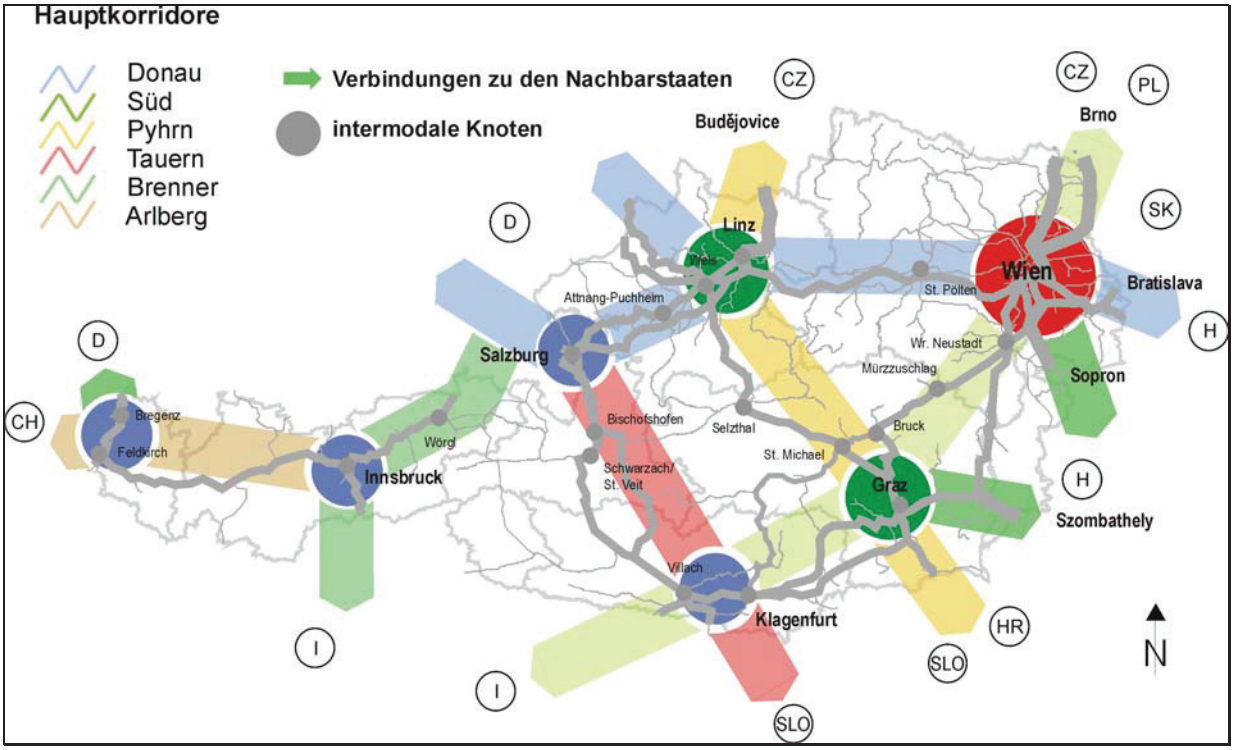


Fig. 1: Main corridors of the Austrian transport network
Source: Master Traffic Plan for Austria 2002

The inner alpine transverse arteries between the Tauern and Brenner corridors (from Schwarzach-St. Veit to Wörgl) and between the Tauern and Pyhrn corridors (from Bischofshofen to Selzthal) are also important for east-west traffic.

This study will focus on the trans-alpine Brenner, Tauern, Pyhrn and South corridors. The Danube corridor does not carry trans-alpine traffic and barely touches the area covered by the Alpine Convention. The Arlberg is also unimportant in terms of trans-alpine traffic.

2 BRENNER CORRIDOR

2.1 OVERVIEW

The Brenner corridor in the narrow sense extends from Munich in the north to Verona in the south. The total length is approximately 450 km. The corridor runs from Rosenheim to Innsbruck in the Inn Valley and then to the Austrian/Italian border on the 1,375 m high Brenner Pass. In Italy, the line runs as far as Bozen/Bolzano in the Eisack Valley, between Bolzano and Verona the corridor follows the river Etsch/Adige.

For most of the route, the railway line and the motorway run parallel to each other.

For most of the Alpine crossing there is no summit-level tunnel. Consequently, the Brenner is the only internationally significant crossing in the inner alpine arc (Ventimiglia to the Brenner) which has no summit-level tunnel.

At present, the main feeder lines to the Brenner corridor from the north are those from the Ruhrgebiet and from the North Sea ports. Once the Munich-Berlin link has been expanded, it too, will play an important role.

In the south, the Milan – Verona – Venice and Verona - Bologna railway lines to Florence and Rome are of significance.

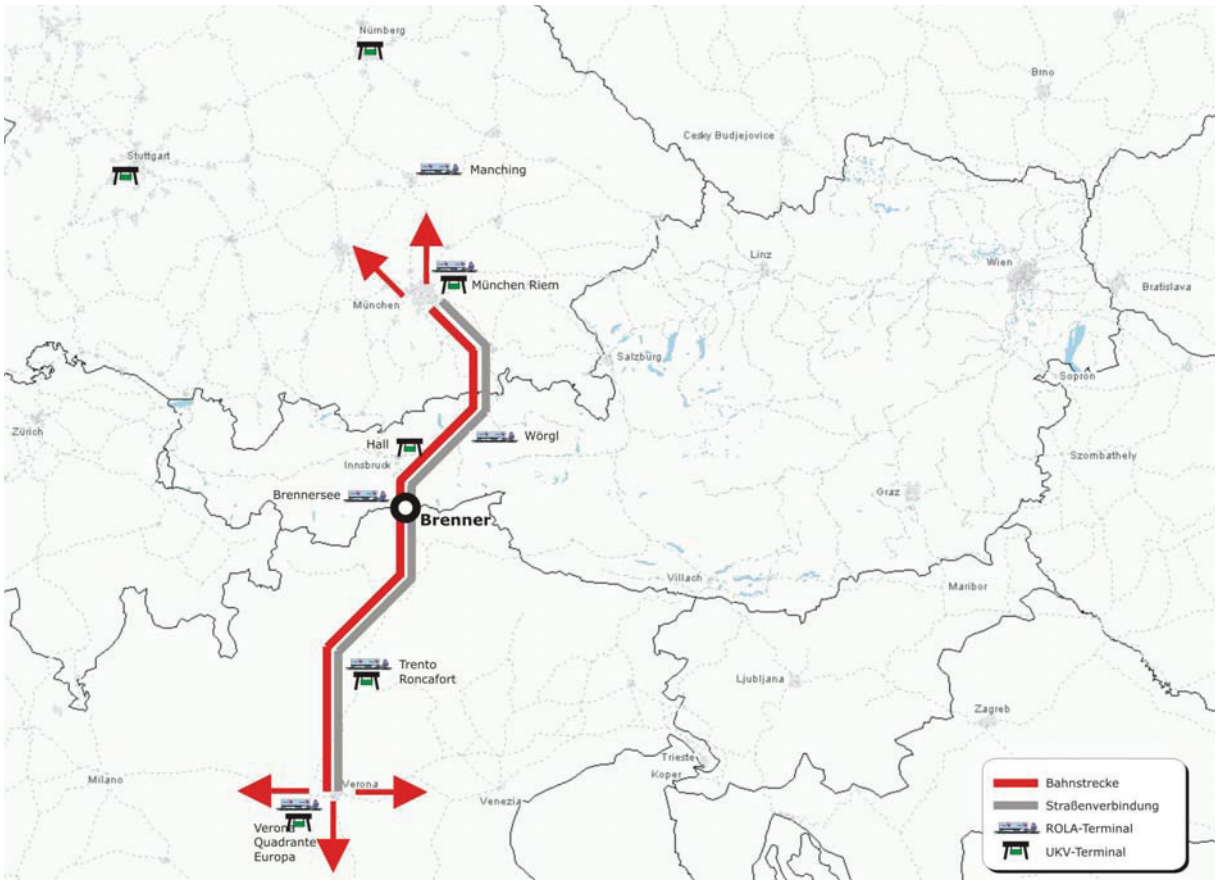


Fig. 2: Outline diagram of the Brenner corridor
Source: the authors

2.2 INFRASTRUCTURE

2.2.1 Rail Transport

Railway Line

Development Status

The line from Munich to Verona has at least double tracks along its entire length. Between Munich and Grafing and between Volders and Gärberbach (Innsbruck by-pass) there are four tracks.

Following the construction of a series of new tunnels in Italy, the line no longer has any profile restrictions and is suitable for all common forms of combined traffic, including the rolling road with HGVs with a corner height of 4 m.

The entire line is electrified, whereby between Munich and the system change station on the Brenner, the German and Austrian distribution system with 15 KV and 16.7 Hz alternating current is used. In Italy, the line is electrified with 3 KV direct current.

The signalling system on the northern section of the line between Munich and the Brenner is also harmonised to a large extent (Indusi or PZB 90).

Train control on the southern section of the line is currently carried out using track circuits. In Italy, an automatic signalling and section block system has not yet been installed along the entire line, for which reason the law requires two engine drivers for each locomotive. Train radiotelephony systems in Germany and Austria have also been standardised (Analogue train radiotelephony as per UIC 751-3). In Italy GSM technology is used.

The section of the line between Innsbruck and Bolzano has gradients of up to 26 %. Taking into account double traction and the addition of pusher locomotives, train weights of up to 1,560 t and train lengths of 600 m are possible on the existing line. *(Source: Brenner Base Tunnel Report 2002, Operations Simulation)*.

Austria is currently testing the remote radio control of pusher locomotives with the aim of rationalising operations.

Capacities

The existing infrastructure between Munich and Wörgl has a capacity of approximately 240 to 360 trains per day. The section of the line between Wörgl and Innsbruck could take approximately 340 trains per day. The existing mountain section between Innsbruck and Bolzano has a capacity of approximately 240 trains per day. On the southern section, capacity is currently 160 trains and following completion of the automatic train protection and control systems between Bolzano and Trient will amount to 235 trains per day, and between Trient and Verona 300 trains per day *(Source: Action Plan Brenner, Brenner Base Tunnel Report 2002, Operations Simulation)*.

According to the ÖBB Network division the entire axis still has a reserve capacity of approximately 40 trains per day. Following completion of the automatic train protection and control systems between Brennero and Verona the capacity limiting section of the line will be between Wörgl and Baumkirchen.

Infrastructure Usage Costs

To estimate the infrastructure usage charge for rail transport, it was assumed that the section of the line between Munich and Kufstein fell into DB-Network's F 3 line category with a capacity overload surcharge. In this category, the price per km for a standard goods train is € 2.74. Thus, the cost for one train journey on the 99 km long line amounts to € 271.26.

In Austria, the infrastructure usage cost for one train kilometre on the Brenner axis currently amounts to € 2.53 + € 0.001 * the number of gross tonnes of the train. For a goods train with 1,000 tonnes this produces a charge of € 395.36 (all figures excl. VAT) for the section Kufstein – Brenner (137 km) *(Source: www.oebb.at)*.

Planned Expansion Measures

The following expansions to railway infrastructure in the Brenner corridor have either been approved or are already under construction:

- Construction of the Truderinger loop for a direct connection to the terminal in Munich Riem
- Upgrading of the line Unterinntal Kundl – Baumkirchen to four-track operation (completion 2010)
- Completion of automatic line block and train control, monitoring and safety system Verona – Brenner (completion 2006)

The construction of a **Brenner Base Tunnel** between Innsbruck (direct connection to the Innsbruck loop) and Sterzing/Vipiteno is currently at the planning stage. In the event that this project is realised (2016 at the earliest), the following accompanying infrastructure measures are planned:

- Upgrading to four-track operations between Munich and Kufstein
- Upgraded line Munich - Mühldorf - Freilassing (further construction phases)
- Upgraded line Rosenheim - Mühldorf – Landshut (long-term option)
- Upgrading to four-track operations Kufstein - Wörgl
- Track realignment Franzensfeste - Waidbruck
- Loop Bolzano
- Four-track northern access to the Verona junction

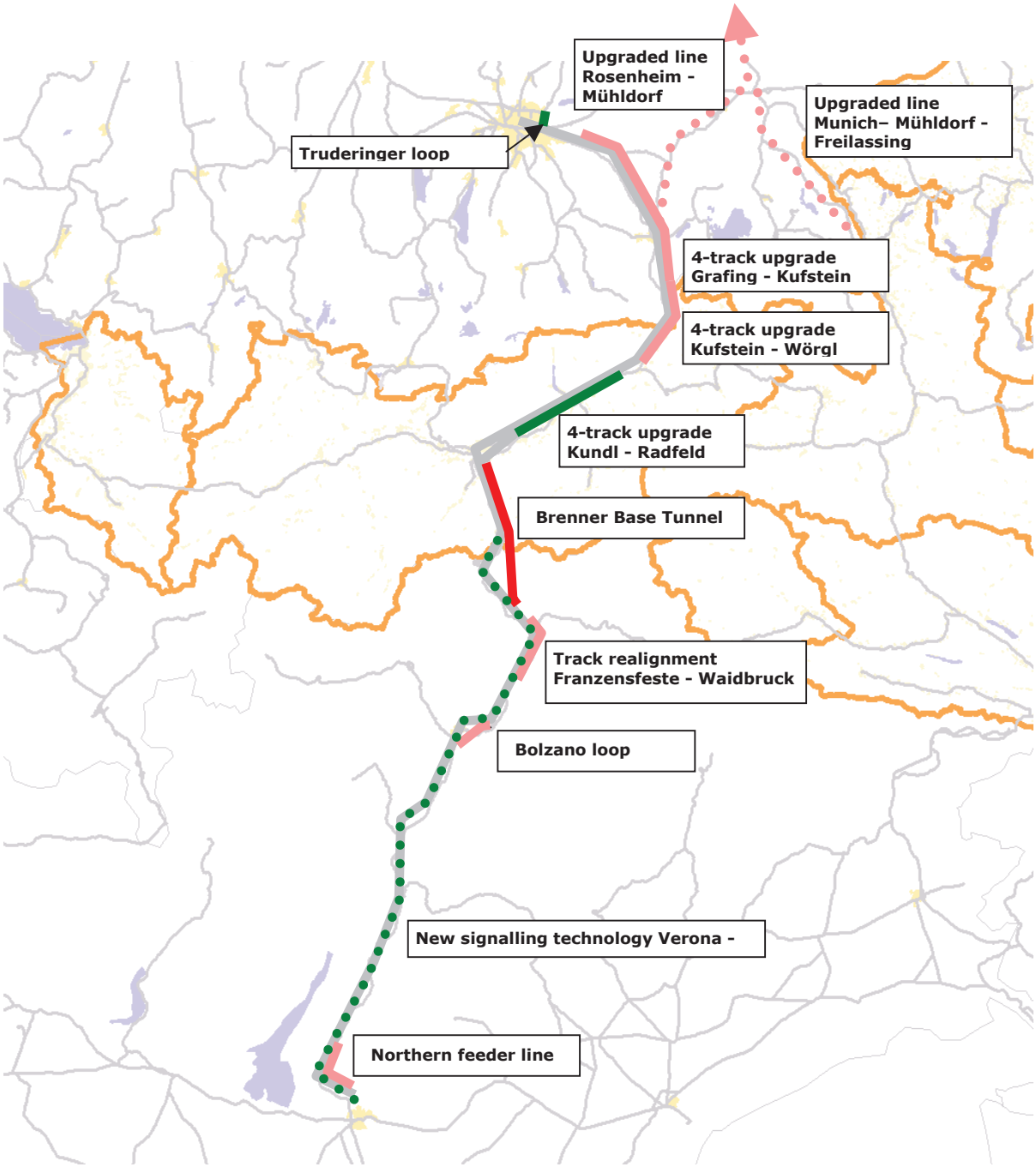


Fig. 2:Rail development measures in the Brenner corridor which are in the planning or construction phases
Source: Working Group Infrastructure Brenner Corridor

Terminals

Germany

A large number of terminals in Germany are of importance for the Brenner axis, as there are numerous block train connections between German terminals and the Verona Quadrante Europa terminal. The terminals are: Munich, Nuremberg, Ludwigshafen, Cologne, Hanover, Bremen, Hamburg and Rostock. Furthermore, the Taulov terminal in

Denmark is also served with a block train (a detailed description of all these terminals would go beyond the scope of this report).

The Action Plan Brenner 2005 pointed out that the terminals in western and southern Germany (Munich, Nuremberg, Ludwigshafen, Cologne) are already reaching the limits of their capacity. Measures to expand these terminals have been planned or are already under construction (Ludwigshafen, Nuremberg, Munich).

The sites in northern Germany and in the Stuttgart region have capacity reserves ranging from sufficient to considerable.

The terminals in Manching and Munich Riem are used as the departure and destination points for the rolling road.

Austria

The Unaccompanied Combined Traffic (UCT) terminal in Hall in Tyrol is of only minor importance for trans-alpine Brenner traffic. Only the ROLA terminals in Wörgl and Brennersee are of any significance for trans-alpine traffic.

Italy

Verona Quadrante Europa

The Verona Quadrante Europa terminal covers a surface area of approximately 160,000 m² and consists of 12 650-metre tracks and 4 large gantry cranes with a span of 32 metres. In addition, eight 40-t mobile cranes are also available.

At present, the terminal registers the following arrivals and departures:

- 10 train pairs per day via Brenner to Germany, the Benelux states, Denmark and Sweden
- 1 train pair per day from/to southern Italy
- 1 train pair per day from/to eastern Europe

Some 200,000 units are handled at this terminal each year.

Other terminals with direct connections via the Brenner are located in Trento and in Brescia. The terminal in Bologna is also important for connecting trans-alpine traffic with the national Italian combined traffic network. Direct connecting trains to Bologna are currently hindered by the single-track section between Verona and Bologna and by profile restrictions on this section.

2.2.2 Road Transport

Development Status

The road in the Brenner corridor is all constructed as a motorway with at least 2 lanes in each direction. At present, the main impairments to traffic flows due to capacity bottlenecks are found on the road between Munich and Rosenheim.

Infrastructure Usage Costs for Heavy Goods Vehicles

Due to the delay in the introduction of mileage-based toll fees for the use of the motorways by heavy goods vehicles no costs are incurred at present in Germany. Since the introduction of mileage-based toll fees in Austria on 1.1.2004 day-time toll fees for the section Kufstein – Brenner amount to € 69.80 for vehicles with more than 3 axles. Between 22:00 and 05:00 the charge is € 119.20 *(Source: Toll calculator at www.go-maut.at)*.

Toll fees in Italy from the Brenner to Verona amount to € 31.20 for this type of HGV *(Source: Toll calculator at www2.autostrade.it).*

This results in a total fee for the section Munich – Verona of € 101,-- during the day and € 150.40 during the night (all toll fees excluding VAT).

Legal Restrictions

Following the expiry of the eco-points system on 1.1.2004 the only legal restrictions concern a year-round ban on night driving between Kundl and Ampass (a neighbouring town to the east of Innsbruck), which applies to heavy goods traffic (over 7.5 tonnes) from 22:00 to 05:00 on working days and from 23:00 to 05.00 on Sundays and bank holidays.

2.3 TRAFFIC DEVELOPMENT – OPERATIONS

2.3.1 Catchment Areas

The Brenner is currently the most important alpine crossing. It is the most important traffic link between the economic regions in Germany and Italy.

The European importance of the Brenner corridor becomes clear if one analyses the catchment areas. Brenner traffic originates mainly in Germany and Italy. However, individual traffic flows also have their source or destination in the BeNeLux states, Scandinavia or in Greece.

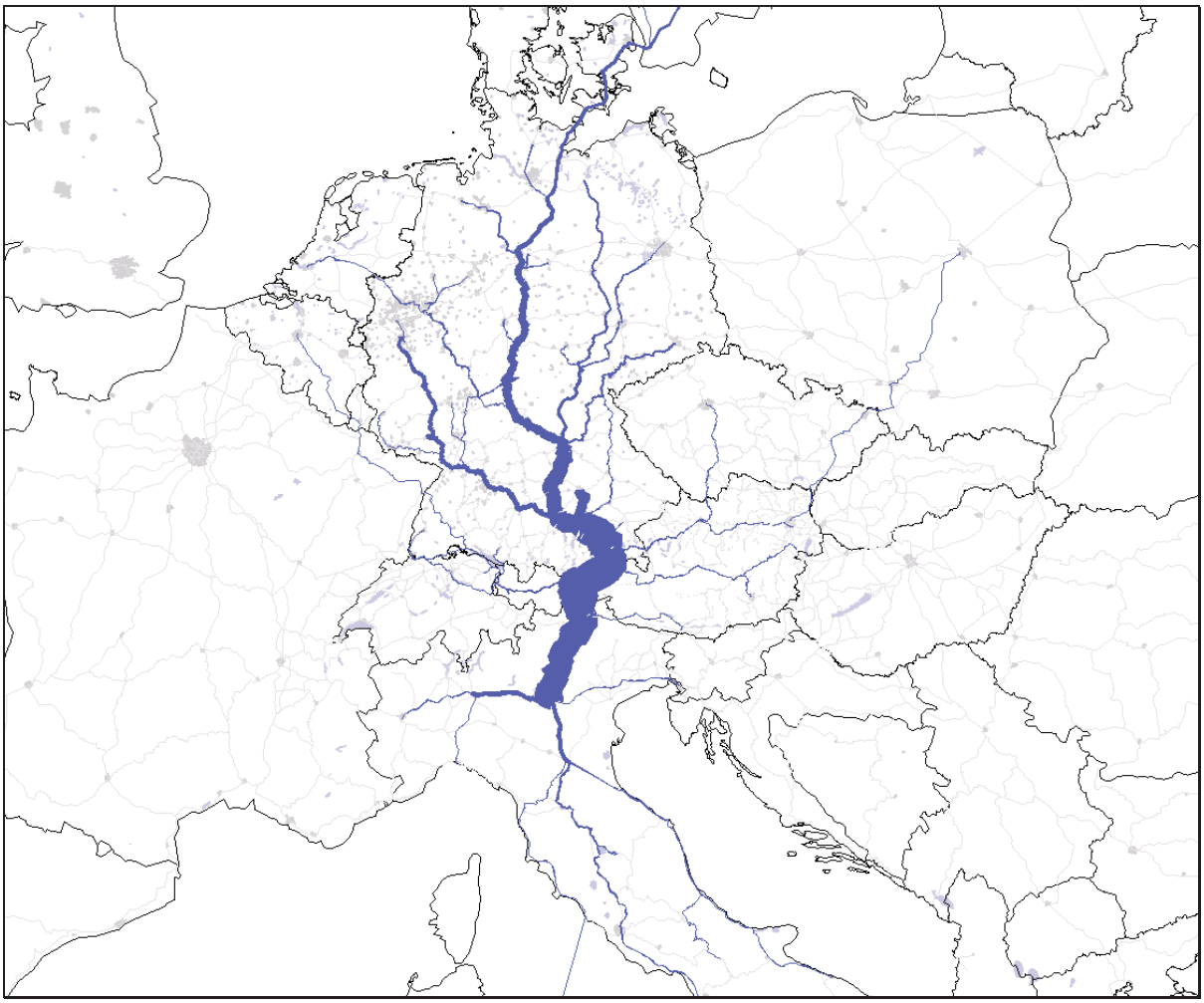


Fig. 3: Traffic Spider Brenner Rail Transport 1999
Source: Survey of Trans-Alpine Goods Traffic 1999

The catchment areas for road traffic should also be seen on a European scale. The average distance travelled by HGV transit traffic on the Brenner in 1999 was over 1,100 km. With a volume of 23.3 million tonnes this was also the dominant mode of transport in the corridor. (Source: Survey of Trans-Alpine Goods Traffic 1999).

2.3.2 Traffic Development and Forecast

The volume of traffic on the Brenner has undergone extremely rapid growth in the last 15 years. Overall, goods traffic over the Brenner rose by around 77% in the period between 1989 and 2002, an annual growth rate of approximately 4.5 %.

Although in terms of tonnage most of this growth took place on the roads (an increase of 10.4 million tonnes from 15.4 million to 25.8 million) rail traffic as a percentage of total traffic in this period also rose slightly (from 24 % to 28 %), as the volume of rail traffic more than doubled (from 4.9 million tonnes to 10.1 million tonnes of freight per year).

The increase in rail traffic was due solely to increases in combined traffic (unaccompanied combined traffic and the rolling road), which increased fourfold in this period. In this analysis the dead weights of combined traffic (e.g. container weights or the empty weight of lorries which are transported on the rolling road) have already been deducted from the rail traffic tonnage. Full-wagon load services largely stagnated in the observation period.

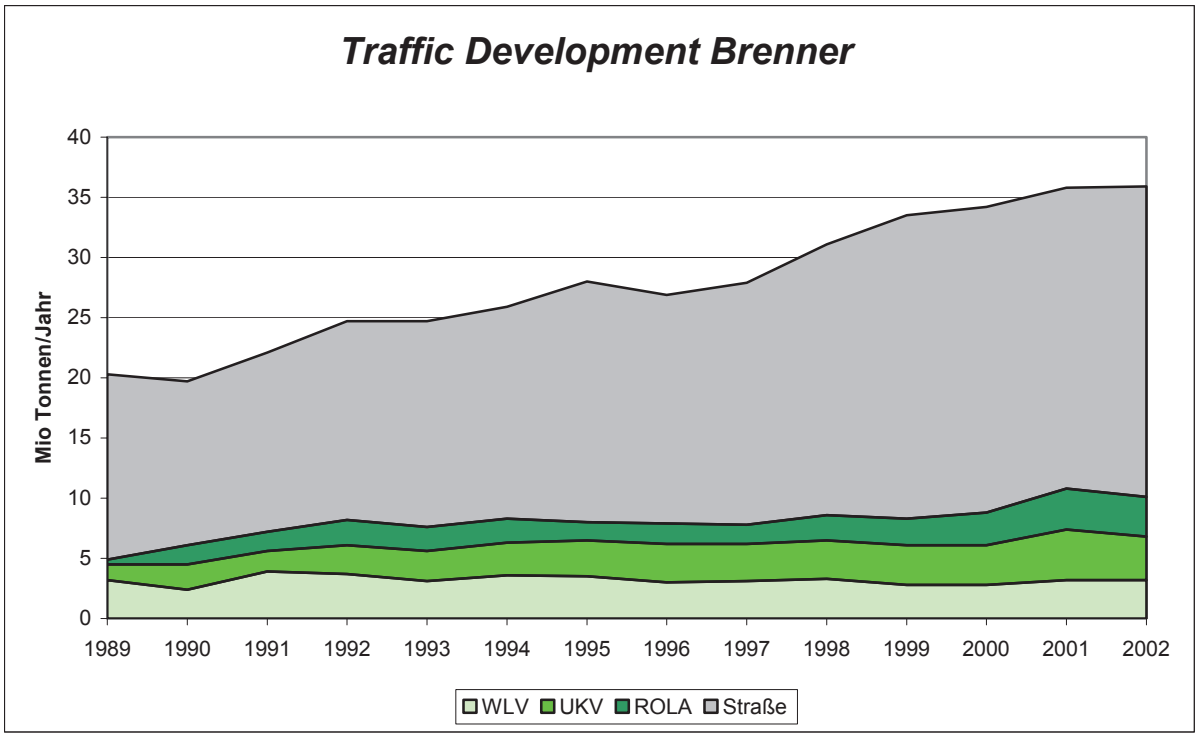
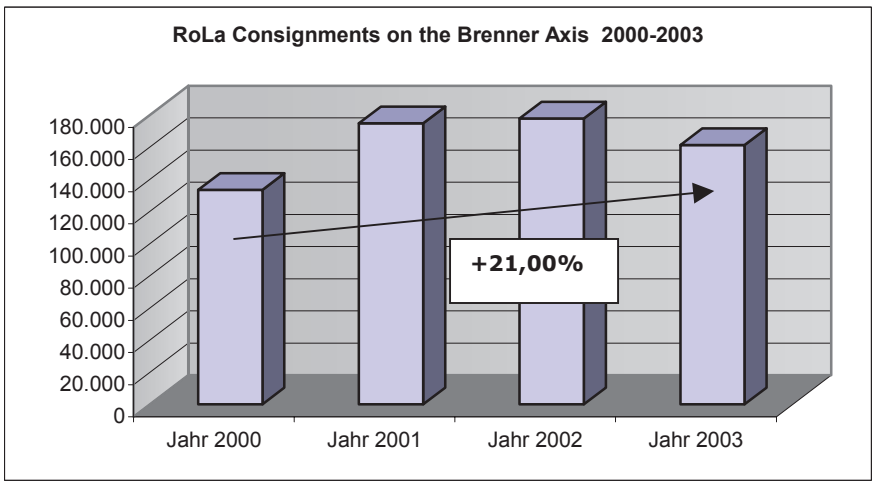


Fig. 4: Development of Traffic Volume on the Brenner 1989 – 2002
Source: AlpInfo, Transport Report Tyrol

Development of traffic on the rolling road 2000 to 2003

The Brenner axis has the highest volume of consignments of all Austrian rolling roads (RoLa axes). Thus in 2003 161,356 consignments, i.e. 41.42% of all consignments on all Austrian connections were transported on the Brenner axis. This is the equivalent of a growth rate of 21.00% compared to the year 2000.



Modal Split

The percentage of rail traffic on the Brenner in 2002 amounted to 28%. This percentage is divided almost equally between full-wagon load services, unaccompanied combined traffic and the rolling road.

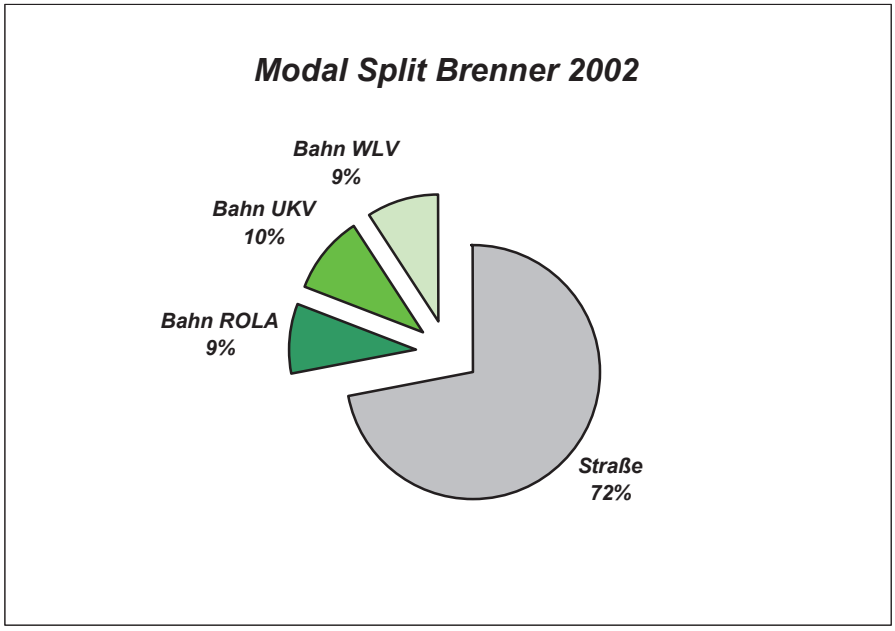


Fig. 5: Modal Split on the Brenner 2002
Source: AlpInfo

Traffic Forecast

The traffic forecasts used for the Master Traffic Plan for Austria assumed that rail and road freight traffic would register almost identical growth rates in the period 2000 to 2015. Road haulage over the Brenner is expected to rise by some 45 % to approximately 38 million tonnes annually, while the carriage of goods by rail is also expected to increase by approximately 45% to around 14.7 million tonnes.

This forecast is based on the assumption that railway freight transport will be deregulated and that the railway network will be opened up to all companies wishing to offer services. Other assumptions were the implementation of the agreed capacity expansions on the Brenner axis and the introduction of mileage-based toll fees for HGVs in Germany and Austria within the forecast period.

If this forecast is accurate, there will be virtually no change in the modal split between rail and road on the Brenner in this period.

2.3.3 Rail Transport Services/Intramodal Competition

The following table shows the current range of Unaccompanied Combined Transport (UCT) and rolling road connections (ROLA) over the Brenner:

Each week, a total of some 120 UCT-block trains and 180 ROLA-trains cross the Brenner. Per day this is the equivalent of up to 25 UCT block trains and approximately 35 ROLA trains.

Most UCT services are operated once a day. Only Munich and Nuremberg offer several services a day across the Brenner.

Terminals	Type	Operator	Departures	Shortest duration	Average travelling

			per week (total from both directions)	(UCT: end of loading to availability ROLA: Check-in until arrival)	speed
Bremen ⇦⇨ Verona	UCT	combined traffic	14	22 h 20 min	54.4 km/h
Hamburg ⇦⇨ Verona	UCT	combined traffic	10	23 h 15 min	53.4 km/h
Cologne ⇦⇨ Verona	UCT	combined traffic	16	22 h 15 min	50 km/h
Ludwigshafen ⇦⇨ Verona	UCT	combined traffic	12	18 h 15 min	45 km/h
Munich ⇦⇨ Verona	UCT	combined traffic	22	10 h	45 km/h
Munich ⇦⇨ Brescia	UCT	combined traffic	10	12 h 15 min	41 km/h
Nuremberg ⇦⇨ Verona	UCT	combined traffic	32	10 h 30 min	61.7 km/h
Rostock ⇦⇨ Verona	UCT	combined traffic	6	32 h	41.8 km/h
Rostock ⇦⇨ Verona	UCT	ICF	4	31h	43.2 km/h
Manching ⇦⇨ Brennersee	ROLA	combined traffic, Ökombi	146	approx. 6 h 30 min	approx. 45 km/h
Wörgl ⇦⇨ Verona	ROLA	Ökombi, CEMAT	34	approx. 7 h 20 min	approx. 45 km/h
Wörgl ⇦⇨ Trento	ROLA	Bertani	35	unavailable	
Bolzano ⇦⇨ Munich/Wörgl	ROLA	Bertani	2	unavailable	

Railway Companies which offer Services

Three consortia have established themselves on the Brenner transport market in recent years. The consortium consisting of the three former state-owned railway companies (Railion, Rail Cargo Austria, Trenitalia Divisione Cargo) had a market share of approximately 80% of total Brenner traffic in 2003.

The second most important supplier of railway transport services over the Brenner is the German company Lokomotion together with the Italian Rail Traction Company. The third supplier is the consortium consisting of TXLogistic and the Austrian company LTE and Trenitalia Divisione Cargo.

Both railway consortia offer combined traffic as well as block trains of conventional full-wagon load services.

2.3.4 Organisation of Traffic Handling

Status of Cross-Border Cooperation

Owing to a number of international agreements and regular meetings of the responsible players within the framework of the Network Working Group, cross-border cooperation between network operators in the Brenner corridor functions very well.

The three aforementioned consortia currently offering trans-alpine services across the Brenner also represent a very strong cross-border cooperation on the operating side. This

cooperation is likely to be intensified in the near future as the goals of the Action Plan Brenner 2005 are implemented.

2.3.5 Quality of Traffic Handling

The quality of traffic handling on the Brenner (measured in terms of punctuality of goods trains) has significantly improved in recent years. Thus, in the first quarter of 2002, the average percentage of trains arriving at the Brenner station from the south within 30 minutes amounted to approximately 40 %. By March 2003 this figure had doubled to around 80%.

The trains operated by Lokomotion/RTC even achieved punctuality rates of over 90 %. (Source: Monitoring Report Action Plan Brenner 2005)

The reasons for this are the completion of infrastructure measures throughout the entire Brenner corridor, improved cross-border cooperation between the railway companies, but most of all, the competitive pressure created by the establishment of three different consortia.

2.3.6 Recapitulatory Evaluation

This analysis, too, demonstrates the importance of the Brenner in the trans-alpine carriage of goods. The Brenner is the alpine crossing in Austria which not only has the greatest need, but also the greatest potential for shifting the transport of goods off the roads and onto rail.

This importance prompted the development of the "Action Plan Brenner 2005" designed to make combined traffic over the Brenner more attractive and thus expand it.

The following conclusions can therefore be drawn from this analysis and can subsequently be used as the basis for the further development of rail freight transport on the Brenner:

- The main factor limiting the expansion of rail freight transport over the Brenner in the short term is the availability of locomotives on the Brenner South Ramp. However, the delivery of multi-system locomotives to Railion, DB-AG and ÖBB should make it possible to eliminate this deficiency in the next few years.

- Another factor inherent in the existing structures which limits combined traffic are the terminal capacities in southern and western Germany and in northern Italy. However, a significant expansion of UCT does not appear feasible with the existing terminals, especially in Italy. Any expansion of infrastructure capacities must, therefore, go hand in hand with an increase in loading capacities. This could also be done by improving the link between the Brenner axis and the Italian combined traffic network.

Now that the eco-points system has expired, rail freight traffic over the Brenner has to be able to compete with road transport in terms of quality and price. This means that future measures to make the Brenner corridor more attractive must increasingly be judged in terms of their microeconomic efficiency. Otherwise, there will have to be a clear commitment to a macroeconomic view of the transport system – as is the case in

Switzerland – and this commitment would need to be implemented with the help of cross-financing from road to rail.

3 TAUERN CORRIDOR

3.1 OVERVIEW

The Tauern corridor extends from Salzburg in the north to Ljubljana in the south and has a total length of approximately 290 km. The corridor runs from Salzburg to Bischofshofen and Schwarzach in the Salzach Valley. The motorway runs through the Tauern Tunnel (road) in Lungau and then through the Katschberg Tunnel toward Spittal/Drau. The railway line runs through the Gastein Valley and the Tauern Tunnel (railway) and then also to Spittal/Drau. From Spittal/Drau the corridor passes through Villach and the Karawanken Tunnel to Jesenice and through the Sava Valley to Ljubljana.

In Villach the corridor meets the South corridor and individual traffic flows "turn off" toward Italy.

The most important feeder lines to the Tauern corridor in the north are those coming from Munich as well as those from Linz.

In the south, it is the lines from Ljubljana to the Adriatic port of Koper and then from Ljubljana to Zagreb and Belgrade which are of importance.

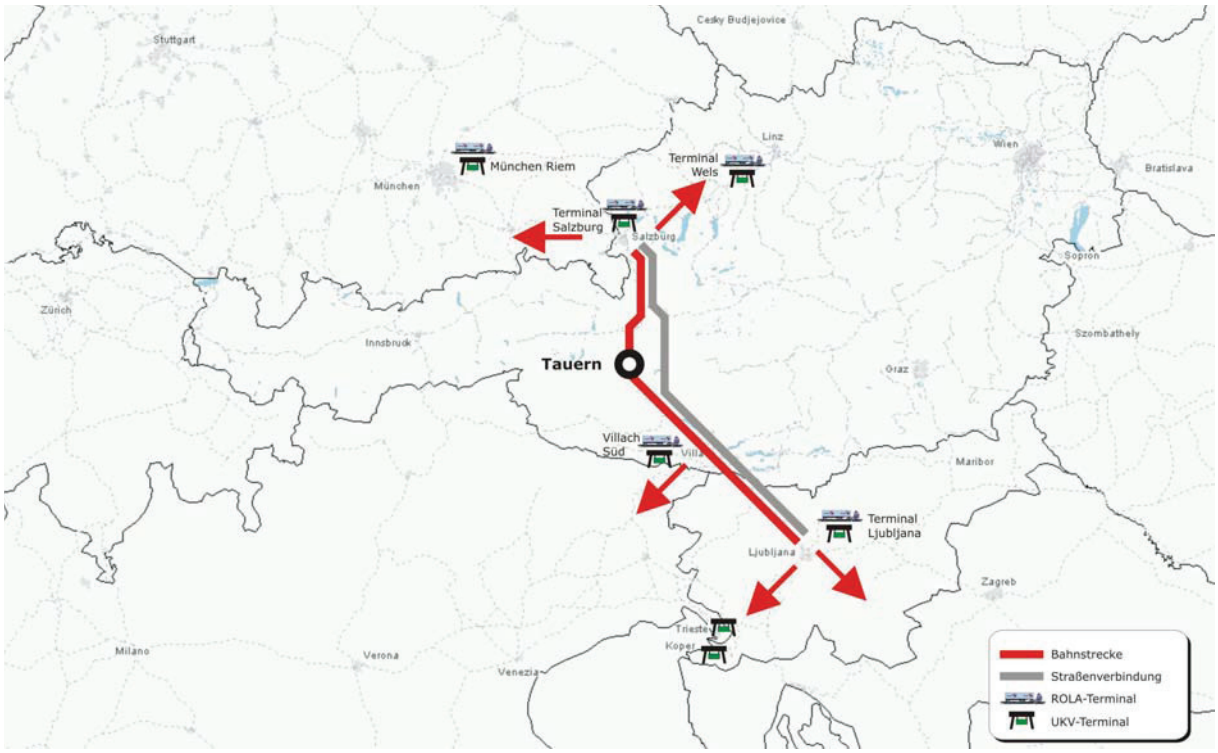


Fig. 2: Outline diagram of the Tauern corridor
Source: the authors

3.2 INFRASTRUCTURE

3.2.1 Rail Transport

Railway Line

Development Status

Although some sections of the railway line from Salzburg to Ljubljana are twin-track, there are still a number of single-track sections. The entire section from Salzburg to Schwarzach-St. Veit is twin-track. On the mountainous section which follows, the sections Brandstatt – Dorfgastein still only have single tracks, although the first section of this line is currently being upgraded to twin-track operations. Subsequently, only the sections Bad Hofgastein - Angertal and Bad Gastein – Böckstein still operate with single tracks. The section Bad Hofgastein - Angertal should be upgraded to twin-track operations in the next few years.

There is still a single-track section on the Tauern South Ramp between Kolbnitz and Pusarnitz, but work has already commenced on upgrading this to twin track operations.

Once the work which is in progress has been completed, 3 single-track sections will remain between Schwarzach-St. Veit and Villach.

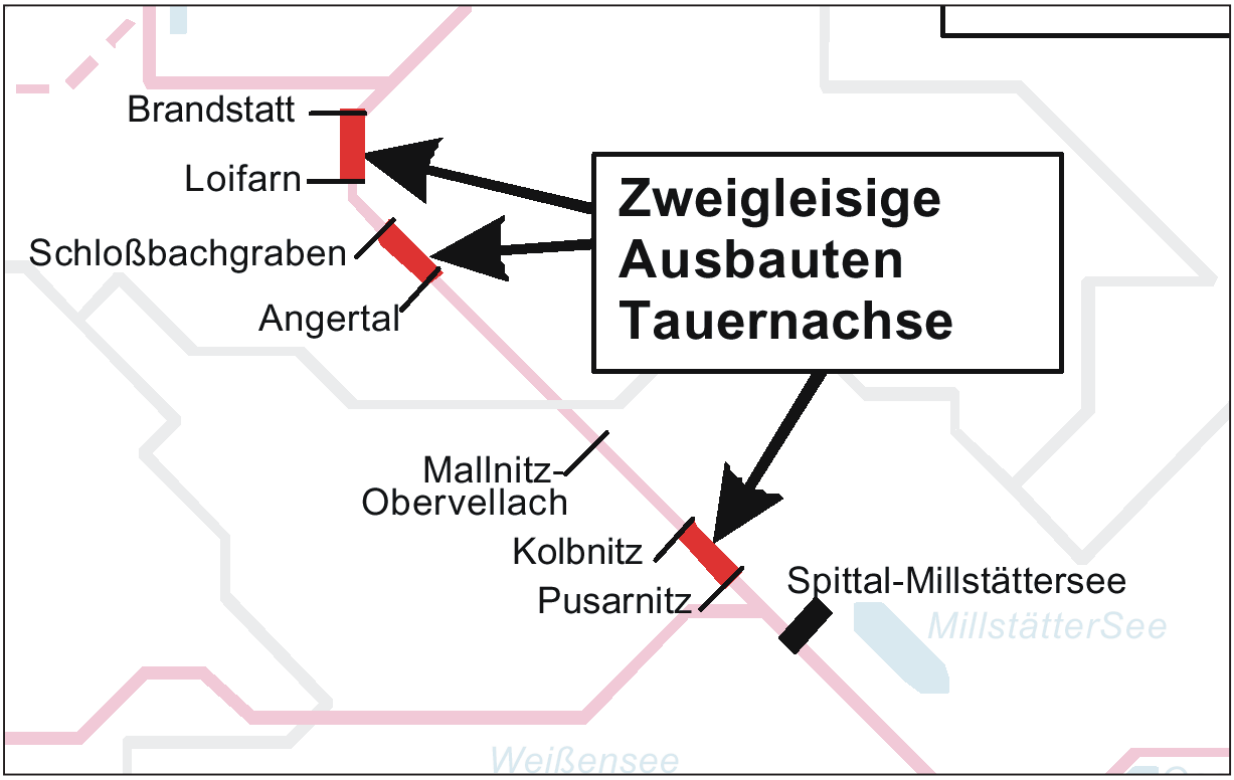


Fig. 6:Twin-Track Upgrades on the Tauern Axis
Source: Action Plan Tauern Rail

South of Villach only the Karawanken Tunnel has twin-tracks. Both the section of the line from Villach to Rosenbach (Karawanken Tunnel-North Portal) as well as the section from Jesenice to Ljubljana are single-track.

The line has no profile limitations and is open for conventional combined traffic without restriction.

The line is completely electrified, whereby in Austria the distribution system with 15 KV and 16.7 Hz alternating current is used. In Slovenia, the line is electrified with 3 KV direct current.

Train protection on the Austrian section of the line is provided by Indusi.

The section of the line between Schwarzach-St. Veit and Spittal/Drau has gradients of up to 29 %. "For technical reasons, a second (and if necessary third) locomotive must be used between Schwarzach-St. Veit and Spittal-Milstättersee to overcome these gradients. The capacity limit for single traction on this section of the line is 550 t, for weights up to 1.050 t double traction is required. For weights above 1,050 t a third locomotive must be used as a pusher locomotive." *Source: Action Plan Tauern Rail Transport*

Capacities

The existing infrastructure between Salzburg and Schwarzach-St. Veit has a capacity of 270 to 280 trains per day. On the section of the line between Schwarzach-St. Veit and Spittal/Drau the number of trains is limited to 130 to 140 due to the single-track sections. Afterwards, capacity until Villach and theVillach Süd Terminal and trans-shipment yard is 250 trains. *(Source: ÖBB-Netz)*.

According to the ÖBB Network division the section of the line between Salzburg and Villach still has a capacity reserve of approximately 40 trains per day.

The line from Villach to Jesenice and then on to Ljubljana still has sufficient capacity reserves, despite the fact that the single-track sections only have a capacity of approximately 100 trains.

Infrastructure Usage Costs

In Austria the costs for one train kilometre on the Tauern axis currently amount to € 1.41 + € 0.001 * number of gross train tonnes. For a freight train with 1,000 tonnes this produces a usage charge of € 568.76 (all figures excluding VAT) for the Salzburg – Jesenice line (236 km). *(Source: www.oebb.at)*.

Terminals

Container Terminal Salzburg Liefering (CTS)

The Salzburg terminal is located on the railway line Salzburg – Freilassing in close proximity to the Salzburg – Liefering junction of the A 1 – Westautobahn.

The CTS has three tracks which are spanned by a gantry crane, these tracks have lengths of 350 m each.

Some 65,000 units have been handled at this terminal in 2001 at a maximum capacity of about 120 000 units per year.

ROLA-Terminal Salzburg

The loading point for the rolling road is located in the eastern part of the main railway station in Salzburg and has two tracks with lengths of 240 and 180 m.

Terminal Villach Süd
The Villach Süd terminal is integrated into the large trans-shipment yard Villach Süd and is located south of Villach on the line from Villach to Tarvisio. It does not, however, have a direct connection with the Tauern axis in the direction of Slovenia.

The terminal possesses 4 tracks with a length of 350 m each under a 40 t travelling gantry. One mobile crane is also available. The Villach Süd terminal also has additional tracks for loading and unloading the rolling road.

The UCT terminal has a daily capacity of 256 load units (LU/d). (Source: IMONET). Handling capacity is currently around 120 LU/d, so that the terminal is currently operating at half capacity.

Munich Riem

The Terminal Munich Riem is located in the east of Munich on the railway line Munich – Mühldorf and the BAB 94.

The trans-shipment yard possesses 8 loading tracks, 4 of which are spanned by travelling gantries. Each track is 700m long. The terminal is equipped with aerial contact lines.

Approximately 1,000 units are handled each day, the equivalent of 15- 20 trains per day (in all directions!). Due to the restricted departure times of the trains (17:00 to 21:00) the terminal operates at full capacity.

The planned direct connection between the Munich Riem terminal and the Munich – Rosenheim line (Truderinger loop) will also improve the terminal's availability for the Tauern axis, as trains for the Tauern axis will no longer need to be routed via the highly frequented Ostbahnhof in Munich and change direction there.

3.2.2 Road Transport

Development Status

The road through the Tauern corridor is constructed as a motorway between Salzburg and Jesenice. However, the three large tunnels, the Tauern, Katschberg and Karawanken tunnels have only one main tunnel with a single lane in each direction. In Slovenia, the motorway between Jesenice and Ljubljana has largely been completed, only one short section between Bled and Kranj still has to be finished.

Due to the generally low level of traffic these sections do not, however, at present create traffic problems for goods traffic on working days.

Infrastructure Usage Costs for Heavy Goods Vehicles

Following the introduction of mileage-based toll fees for heavy goods vehicles on 1.1.2004, the toll fee for the 194 km section of the motorway from Salzburg to the Karawanken Tunnel South Portal for lorries with more than 3 axles is € 87.80 *(Source: Toll calculator at www.go-maut.at)*.

Legal Restrictions

There are currently no legal restrictions upon the transport of goods by vehicles from EU member states. Only vehicles from the Balkan states remain subject to restrictive quotas.

3.3 TRAFFIC DEVELOPMENT – OPERATIONS

3.3.1 Catchment Areas

An analysis of the interlinkage of rail freight traffic on the Tauern in 1999 shows the current catchment areas of the Tauern axis. In the case of railways, traffic between Salzburg, Villach and Slovenia dominates, with the port Koper as the main source of traffic from Slovenia. The branch to and from Italy is not highly frequented.

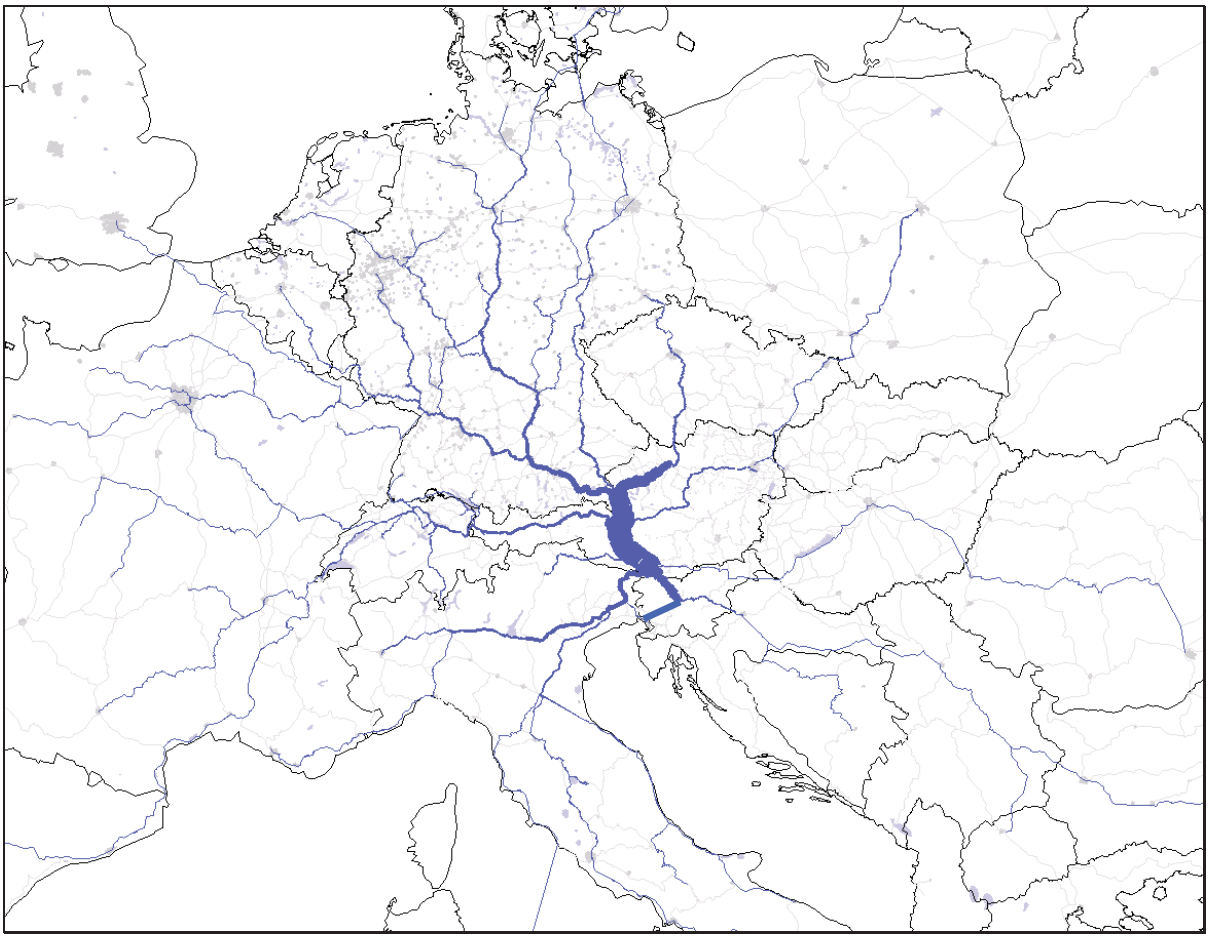


Fig. 7: Traffic Spider Tauern Rail Transport 1999
Source: Survey of Trans-Alpine Goods Traffic 1999

A slightly different picture emerges if one looks at the transport of goods over the Tauern by road. Here, traffic with a reference to western Europe is clearly dominant. A significant percentage of HGV traffic crossing the Tauern travels on to the Italian ports (Trieste, Brindisi) in order to board ferries to Greece and then continue their journey to Turkey.

The extreme distances in transit traffic and the high percentage of international traffic, results in an average distance of approximately 920 km for HGVs. (Source: Survey of Trans-Alpine Goods Traffic 1999).

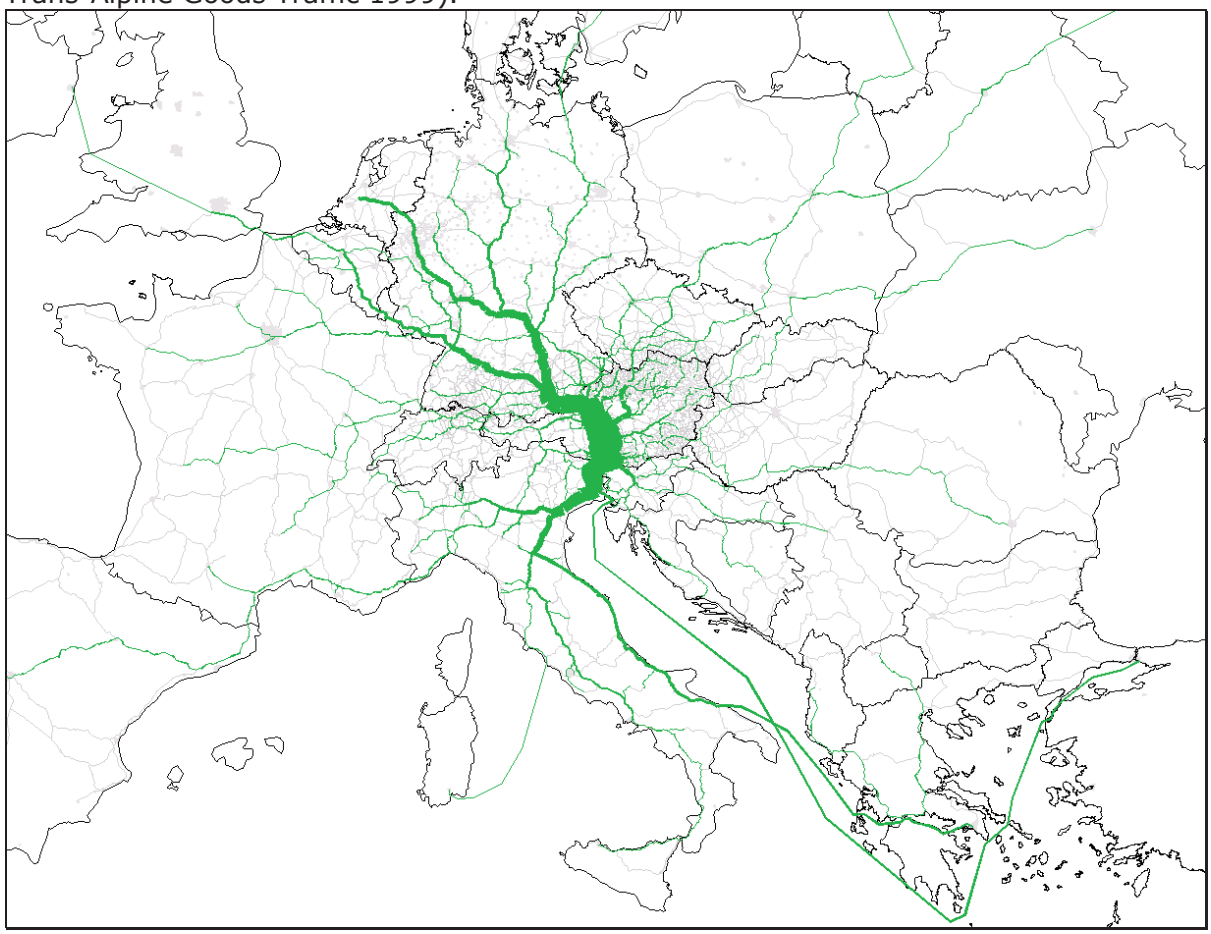


Fig. 8: Traffic Spider Tauern Road Transport 1999
Source: Survey Trans-Alpine Goods Traffic 1999

3.3.2 Traffic Development and Forecast

Traffic development on the Tauern in the years after 1992 was initially characterised by stagnation due to the crisis in the Balkans and the resulting shifts in transport to Yugoslavia, Greece and Turkey to the Danube axis. However, since 1997 there has been a significant increase in the volume of traffic, which reached a peak in 2000.

In this period, road transport rose by 164 %, rail transport by 93 %. The increase in rail traffic was mainly attributable to the increase in full-wagon load services (+ 58 %) and the introduction of the rolling road.

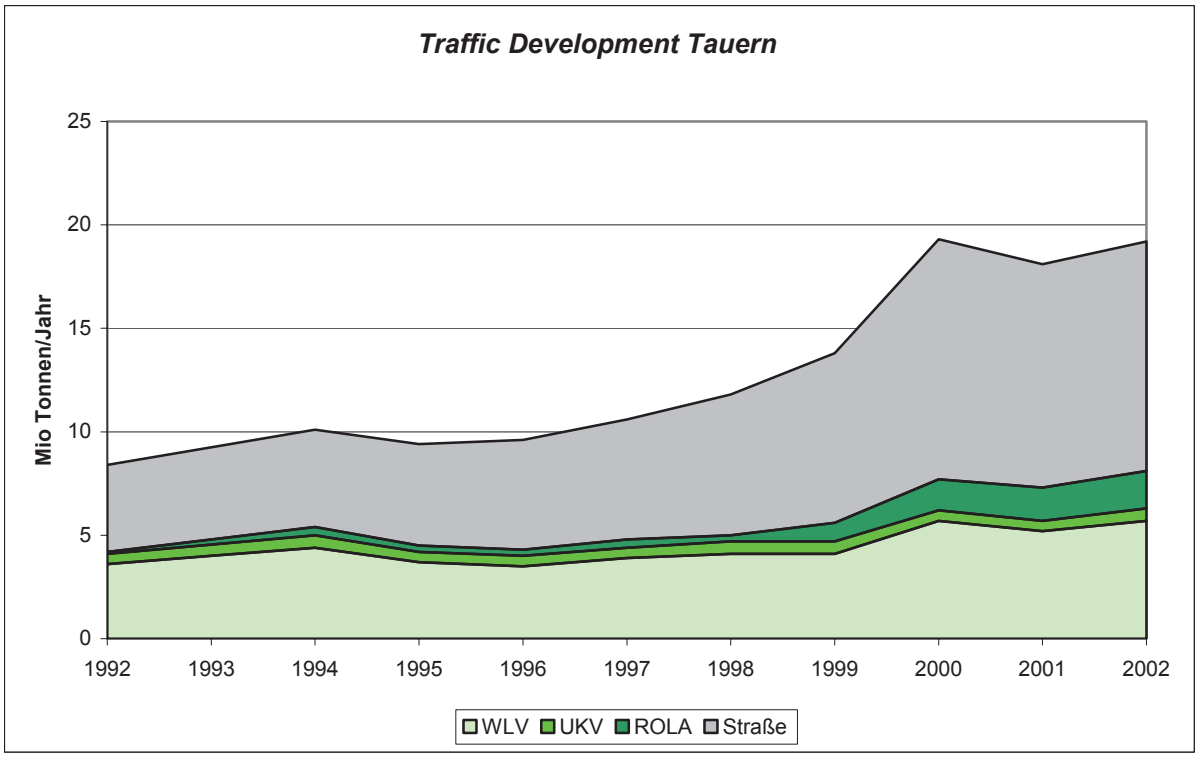
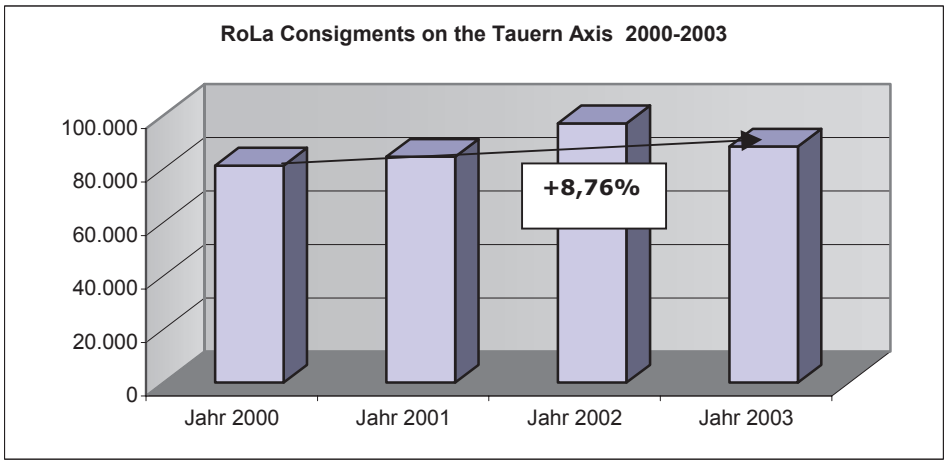


Fig. 9:Traffic Development Tauern 1992 to 2002
Source: AlpInfo

In 2003 22.65% of all RoLa consignments on Austrian connections were transported on the Tauern axis. In the last four years, (2000-2004) the volume of RoLa traffic on the Tauern axis rose by 8.76% to 88.237 consignments.



Modal Split

In 1992 rail traffic accounted for 50% of traffic over the Tauern, the figure for 2002 was 42%. The dominant mode was full-wagon load services followed by the rolling road (RoLa). Unaccompanied combined traffic plays only a minor role.

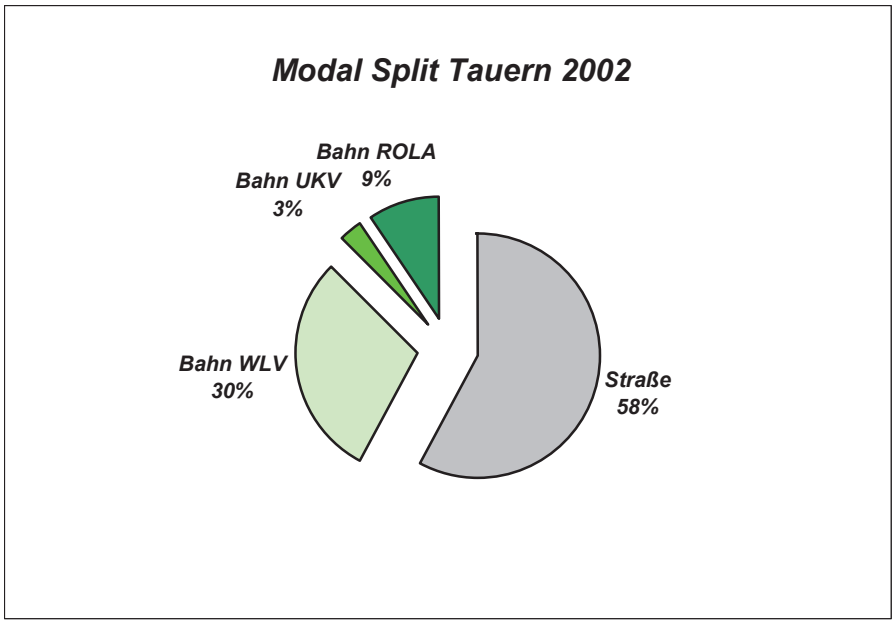


Fig. 10: Modal Split Tauern 2002
Source: AlpInfo

Forecast

The traffic forecasts in the Master Traffic Plan for Austria assume that HGV traffic will increase by approximately 75% in the period 2000 to 2015. For rail traffic, forecasts are available for the years 1998 to 2015. An increase of 60% is predicted for this period. At the time the forecasts were made, these figures appeared plausible. However, due to higher than average growth of full-wagon load services and the rolling road the figure predicted for 2015 was already reached in 2002.

3.3.3 Rail Transport Services/Intramodal Competition

The following table shows the current range of UCT and ROLA services over the Tauern axis. The majority of UCT connections are created by transporting combined traffic consignments together with full-wagon load traffic. At present, the terminals Munich, Salzburg and Wels are the only ones north of the Alps which have direct services. However, connections to the specified trains are available from Salzburg and Wels. South of the Alps, the terminals Villach, Trieste, Ljubljana and Koper are served directly.

The average travelling speed is very slow for most connections. Only the direct connection (which only runs once a week) Munich – Trieste and the ROLA Wels – Villach offers attractive schedules.

Terminals	Type	Operator	Departures per week (total from both directions)	Duration (UCT: end of loading until availability ROLA: Check-in until arrival)	Average travelling speed	Price (Source: Ökombi, Alpe Adria)
Salzburg ⇦⇨ Koper	UCT	Ökombi	10	43 h	9.5 km/h	€ 463,--
Salzburg ⇦⇨ Lubljana	UCT	Ökombi	10	26 h	11.2 km/h	€ 414,--
Salzburg ⇦⇨ Trieste	UCT	Alpe Adria	8	15 h (night journey)	32 km/h	€ 420,--

München ⇦⇨ Trieste	UCT block train	Alpe Adria	2	13 h	48.7 km/h	€ 473,--
Salzburg ⇦⇨ Villach	UCT block train	Ökombi	10	12 h 30 min (night journey)	19 km/h	€ 178,--
Wels ⇦⇨ Villach	UCT block train	Ökombi	10	11 h there, 16 h back (night journey)	30.8 km/h there, 21,3 km/h back	€ 204,--
Salzburg ⇦⇨ Ljubljana	ROLA	Ökombi Adria-kombi	34	8 h 40 min to 12 h	24.2 to 33.5 km/h	€ 270,--
Wels ⇦⇨ Villach	ROLA	Ökombi	98	approx. 7 h	48.4 km/h	€ 235,--

Tab. 1: Block Trains Combined Traffic Tauern Axis, status 2003
Source: Action Plan Tauern Rail Transport

All traffic is handled by the relevant state railway companies. So far, no railway company has started operations in third party networks in the Tauern corridor.

3.3.4 Organisation of Traffic Handling

The quality of cooperation between the ÖBB and the Slovenian national railway company (SZ) is rated highly by the ÖBB (both with regard to the network and freight transport). The ÖBB Network division and SZ drew up a joint continuous track catalogue for the section of the line between Villach West and Ljubljana.

3.3.5 Quality of Traffic Handling

There are no published punctuality statistics for the Tauern corridor. Consequently, the punctuality of operations can only be estimated.

The single-track sections of course have a negative impact on the quality of operations, as delays are then carried over onto trains running in the opposite direction. The elimination of a number of these single-track sections in the next few years should therefore lead to improvements in the quality of services.

3.3.6 Recapitulatory Evaluation

The main function of the Tauern corridor in rail freight traffic today is to connect the ports of Koper and Trieste to southern Germany and the central region of Upper Austria. As the volume of this traffic is rising, rail transport over the Tauern corridor has a great deal of potential.

Against this background, a strategy similar to the Action Plan Brenner is both conceivable and advisable for the Tauern corridor. The following measures from the Action Plan Brenner should be urgently implemented in the Tauern corridor:

- Quality management and the elimination of bottlenecks in operational handling, especially on the Villach – Tarvisio - Udine – Trieste line (see also South corridor)

- Expansion of services for UCT, in particular expansion of block train services from the container port in Trieste to southern Germany and through-services for RoRo traffic from Turkey to Trieste and Koper destined for Germany.

- Development of a continuous axle-based traction concept to accelerate incoming block trains

- Multi-national corridor management to upgrade railway infrastructure between Salzburg, Villach, Ljubljana and Koper

4 PYHRN CORRIDOR

4.1 OVERVIEW

The Pyhrn corridor extends from Budjevice (Czech Republic) in the north to Maribor (Slovenia) in the south. It has a total length of approximately 450 km. The corridor runs from Budjevice to Linz and then over the so-called Pyhrn route to the Bosruck Tunnel, the Selzthal junction and then to the Schober Pass. From there, the corridor runs via St. Michael to Graz. The road has a direct connection through the Gleinalm Tunnel, while the railway takes the longer route via Leoben and Bruck an der Mur. From Graz, the corridor continues south to Maribor.

From the direction of Munich traffic passes through Salzburg and Bischofshofen, then through the Enns Valley and the Selzthal junction to the Pyhrn corridor. The most important feeder line to the Pyhrn corridor from Germany runs from Nuremberg via Passau and Wels.

In the south, the most important lines are those running to Zagreb and Belgrade.

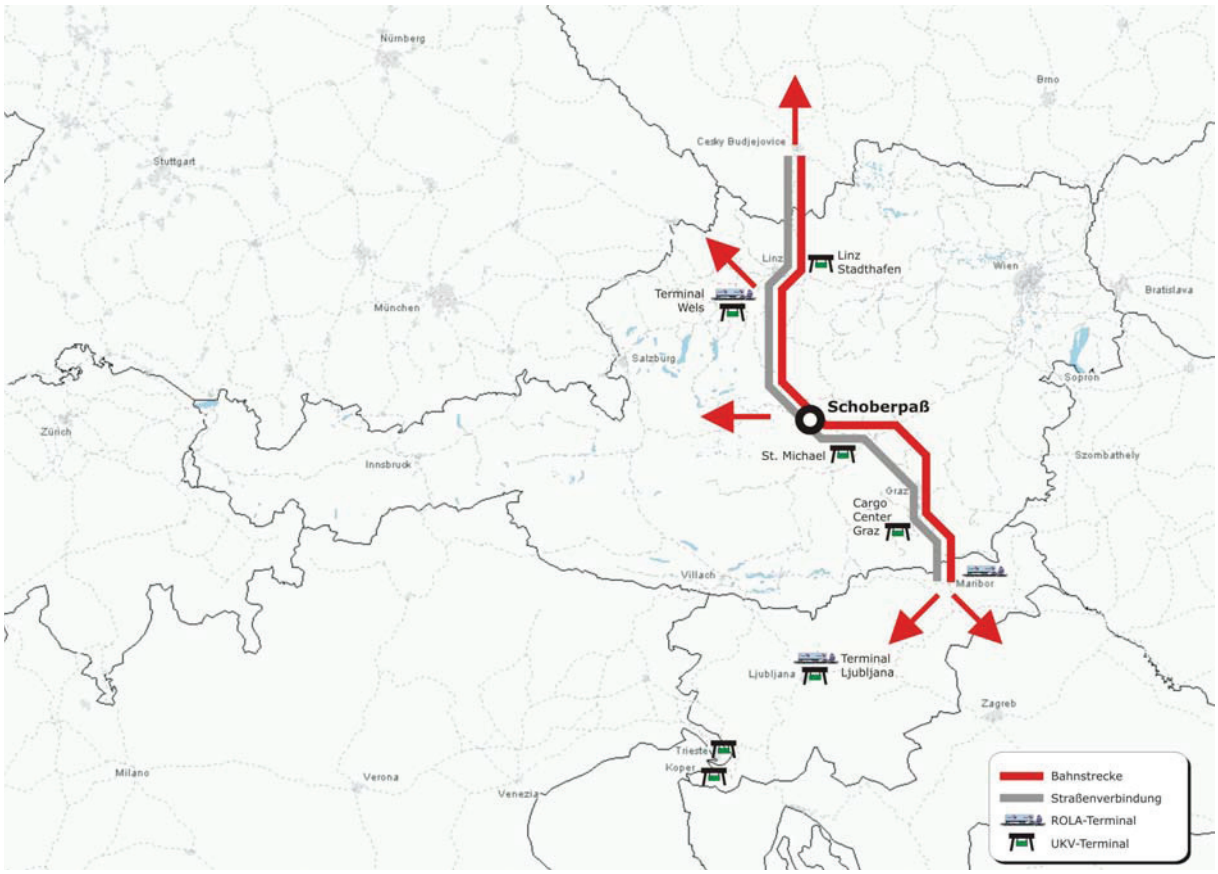


Fig. 3: Outline diagram Pyhrn corridor
Source: the authors

4.2 INFRASTRUCTURE

4.2.1 Rail Transport

Railway Line

Development Status

Most of the railway line from Budjevice to Maribor has only a single track. The section Budjevice – Linz is completely single-track. Some parts of the Linz – Selzthal line have twin tracks (particularly in the vicinity of Linz), however it is also possible to reach Linz by using the line from Selzthal through the Gesäuse via Kleinreifling and St. Valentin. Another twin-track section is currently under construction here. The section of the line from Selzthal to Graz has had a continuous twin track since 2003. The connection from Graz via Spielfeld to Maribor is still a single-track line (except for a short stretch within Graz). However, work is already underway to upgrade the Graz – Werndorf section of the line to twin track operation.

Due to this development work, the Pyhrn corridor has only limited capacity reserves. However, according to the ÖBB-Network division, it would be possible to run an additional 40 freight trains per day in the Pyhrn corridor.

The line has been completely electrified since December 2002. The distribution system in the Czech Republic uses 25 kV/50 Hz alternating current. The change to the Austrian distribution system with 15 kV/16.7 Hz alternating current takes place on the border, which means that a dual-system locomotive or a diesel locomotive must be used for trips from the Czech border railway station of Horni Dvoriste to the Austrian border railway station of Summerau.

The Slovenian part of the corridor (13 km between the railway stations in Spielfeld and Maribor) is electrified with 3 kV direct current.

The individual national sections of the line also feature divergent train protection systems, signalling systems and radiotelephony systems.

The line has no restrictions to its profile and can be used for conventional combined traffic (profile type P/C 400) without restriction.

The line has only slightly gentler gradients than the other main trans-alpine axes. However, the limited track lengths in the railway stations result in restrictions to train lengths on the section Linz – Selzthal.

Infrastructure Usage Costs

In Austria the cost of one train kilometre on the Pyhrn axis currently amounts to € 1.41 + € 0,001 * gross tonnes of the train. This produces a usage charge of € 939.90 (all figures excl. VAT) for a goods train travelling between Summerau and Spielfeld (390 km). *(Source: www.oebb.at)*.

Planned Investments

Plans are underway to improve the efficiency of the Pyhrn corridor – possibly on the basis of a PPP-model. These schemes focus on selective measures to increase capacity, such as lengthening passing tracks in railway stations or safety measures.

South of Graz work has already commenced on upgrading the track from Graz to Werndorf for twin-track operations. Planning is underway for the Werndorf – Spielfeld section. Twin-track operations are also planned between Spielfeld and Maribor.

Terminals

Wels Terminal

The Wels Terminal is located on the Westbahn railway line between the stations Wels and Marchtrenk, and is directly connected to both the Danube axis and the Pyhrn axis. The road link is provided by a separate junction on the A 25 Linzer Autobahn.

Within the Austrian combined traffic system, Wels acts as a regional terminal for the Upper Austrian central region. Moreover, Wels also fulfils an important function as a hub for domestic traffic and an interface between domestic traffic in Austria and international traffic to/from Germany.

The terminal has 6 tracks with a total length of 3, 500 m. 4 of these tracks are spanned by 2 gantry cranes. 2 other tracks are available where consignments are loaded with the help of two mobile cranes. The rolling road is loaded and unloaded on separate loading tracks with a total length of 2000 m.

Wels handled 280 load units per day for UCT in 1998. This was the equivalent of approximately 45 % of the terminal's total capacity of around 550 LU/d or 50 LU per hour (Source: IMONET).

The rolling road in Wels has a daily frequency of approximately 950 HGVs and 1,050 goods wagons.

Linz Stadthafen

The Linz Stadthafen Terminal is part of the Danube port in Linz and is located on the interface between the Danube axis and the Pyhrn axis. Due to the limited amount of space the Linz Terminal is unimportant as a hub or gateway.

The handling facilities feature 2 loading tracks with a total length of 880 m which are spanned by a gantry crane. An additional five mobile cranes are available which are used for loading and unloading between river/road.

Existing facilities in Linz permit the handling of 36 LU/h or 250 LU/d. No information is available regarding capacity utilisation (Source: IMONET).

St. Michael

The UCT Terminal St. Michael is located on the Selzthal - St. Michael line and has a separate connection to the A 9 – Pyhrnautobahn. Despite its location on the interface of the Pyhrn and South corridors the terminal acts as the terminal for the Upper Styrian region and has no hub or gateway function.

The facilities consist of two loading tracks, where trains are loaded and unloaded with 2 mobile loading cranes. Approximately 128 LU/d or 17 LU/h can be handled. Capacity utilisation in 1998 amounted to some 25 % (Source: IMONET).

Cargo Center Graz

The Cargo Center Graz (CCG), which was completed in 2003, is located approximately 20 km south of Graz in the town of Werndorf and is directly connected to the railway line and the A 9 Pyhrn motorway.

CCG regards itself on the one hand as a regional terminal for the Graz region, but also as a hub in the region Styria, Slovenia, Croatia and Hungary.

The CCG has 25,000 qm of storage areas for containers, swap trailers, trailers and 4 700 m craneable tracks and 2 team tracks with a length of 750 m. In addition, there is 1 main track with 780 m, 1 RoLa track (610 m) and 2 gantry cranes and 1 set of mobile lifting equipment with a front spreader. CCG can handle 80 LU per hour. (Source: www.cargo-center-graz.at).

4.2.2 Road Transport

Development Status

The Pyhrn corridor road does not have a continuous motorway structure. The road link along the approximately 75 km section between Budjevice – Unterweitersdorf (approximately 15 km north east of Linz) is currently provided by a two-lane road with junctions. The 13 km long section Kirchdorf – St. Pankraz also runs along a two-lane countryside highway, although here work is already underway to close the motorway gap. The remaining sections of the road are all constructed as motorways.

Due to the generally low level of traffic there are no problems for goods traffic on working days even on those sections of the road which have not been built as motorway.

Infrastructure Usage Costs for Heavy Goods Traffic

Since the introduction of mileage-based toll fees on 1.1.2004 the toll fee for HGVs with more than 3 axles on the 290 km long section of the motorway between Unterweitersdorf and the Austrian/Slovene border has been € 99.40 *(Source: Toll calculator at www.go-maut.at)*.

Legal Restrictions

There are no legal restrictions on road haulage traffic using vehicles from EU member states in the Pyhrn corridor. Vehicles from the Czech Republic, Poland, Slovakia and Hungary will remain subject to quota restrictions until their accession to the EU on 1 May 2004.

4.3 TRAFFIC DEVELOPMENT – OPERATIONS

4.3.1 Catchment Area

Most rail traffic in the Pyhrn corridor at present is inner Austrian traffic between the provinces of Upper Austria and Styria. In particular, traffic between the individual VOEST sites (Linz/Upper Austria, Donawitz/Styria) is handled on this route. The only international traffic of any importance in 1999 was between Germany and Styria.

Inner Austrian traffic also dominates road traffic in the Pyhrn corridor. The percentage of source/destination traffic to and from Germany is, however, slightly higher.

The average distance travelled by HGVs in 1999 was only 554 km (Source: Erhebung Alpenquerender Güterverkehr 1999) and was thus considerably lower than on the Brenner and Tauern crossings.

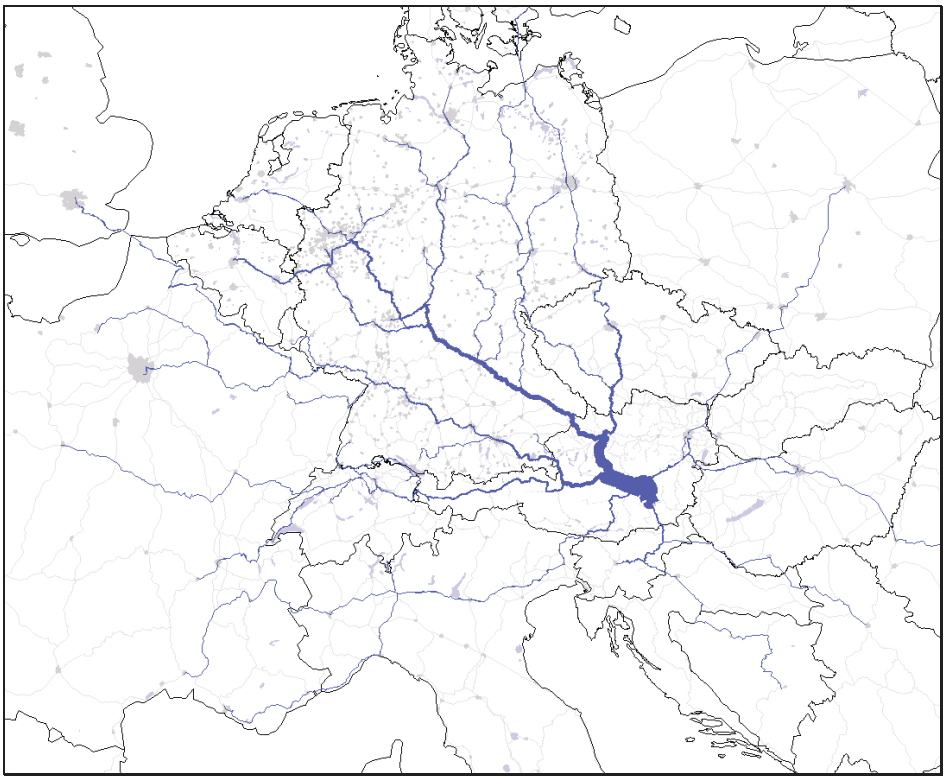


Fig. 11: Traffic Spider Schober Pass Rail 1999
Source: Survey of Trans-Alpine Goods Traffic 1999

4.3.2 Traffic Development and Forecast

Traffic Development

Traffic development in the last 10 years was characterised by steady growth in road haulage and full wagonload services on the railways. Due to the fire in the Tauern Tunnel (road) and its subsequent closure, there was a dramatic increase in the volume of traffic on the Pyhrn corridor road in 1999 as this corridor was the most attractive alternative route. Since then, the volume of traffic on the road has stagnated.

Within rail traffic full wagonload service currently plays an extremely dominant role in the Pyhrn corridor. Neither unaccompanied combined traffic nor the rolling road hold significant shares of the market.

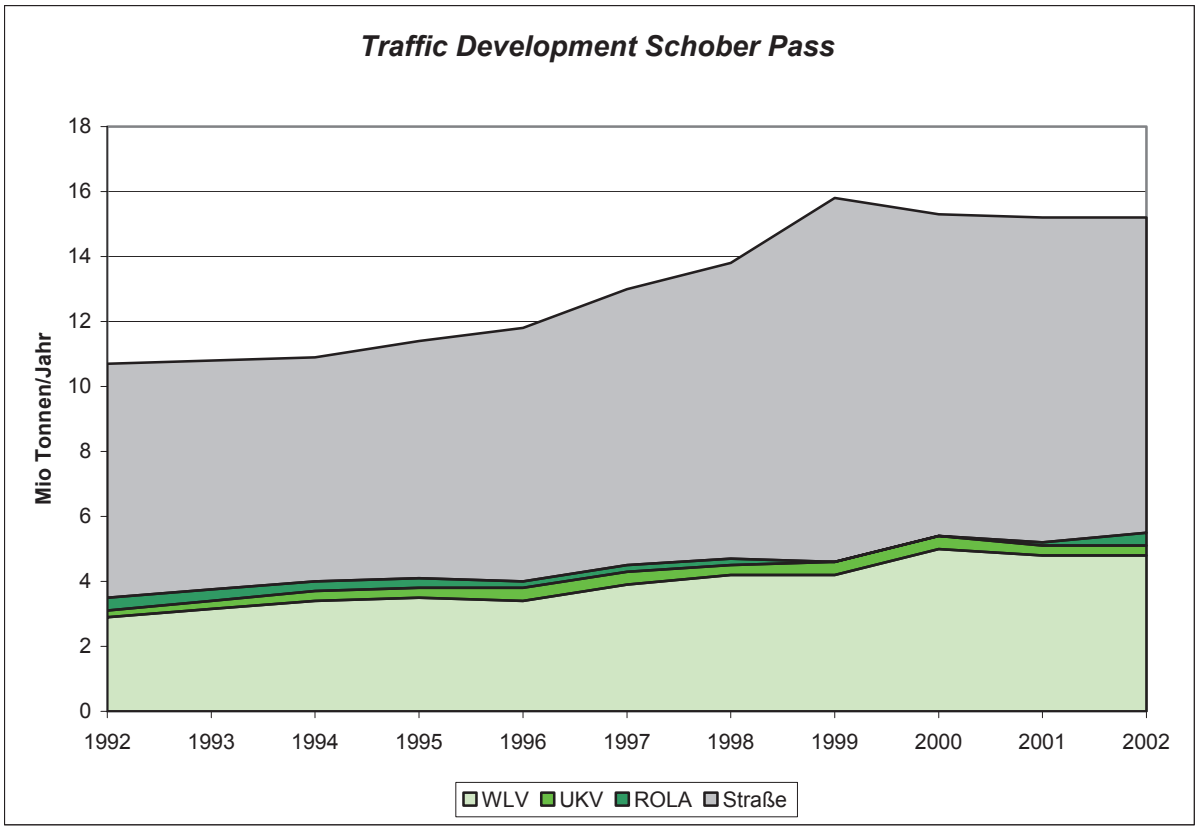
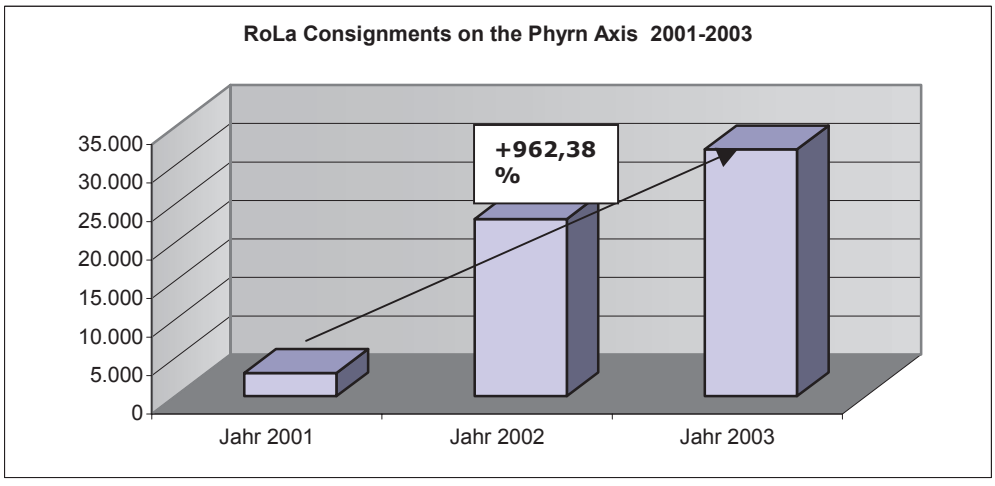


Fig. 12:Traffic Development Schober Pass 1992 to 2002
Source: AlpInfo

Traffic Development ROLA

RoLa consignments on the Phyrn axis in 2003 accounted for 8.23% of all consignments on Austrian RoLa routes. The RoLa connection on the Phyrn axis, namely Wels-Maribor has developed extremely well since it started operations in 2001. In the last three years (2001-2003), the volume of consignments has increased almost ten-fold (+962.38%) to 32,052 consignments.



Modal Split

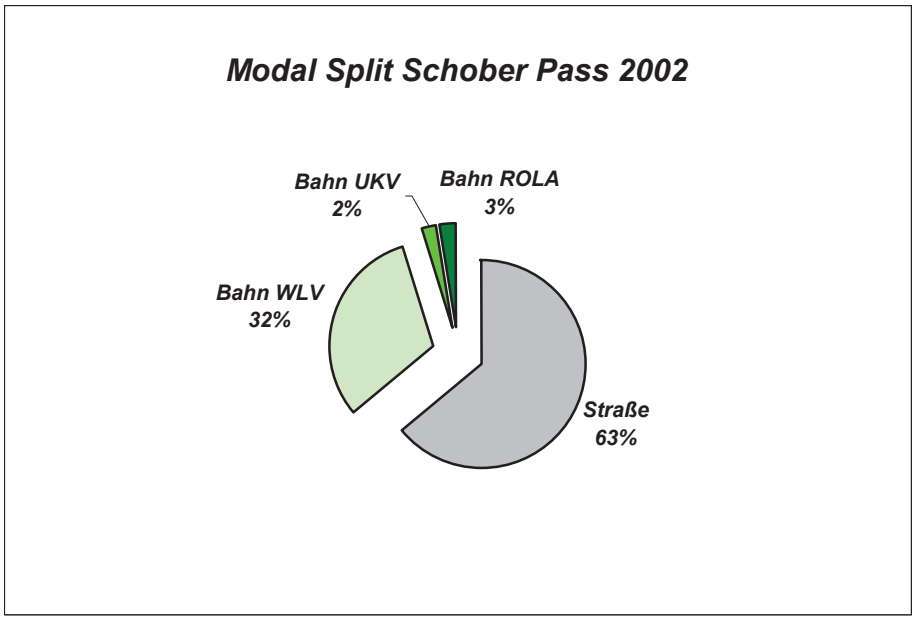


Fig. 13: Modal Split Schober Pass 2002
Source: AlpInfo

The modal split developed very positively between 1992 and 2002. The percentage of rail traffic on the Schober Pass rose from some 33 % to approximately 37 %.

Forecast

The traffic forecasts in the Traffic Master Plan for Austria assume an increase in HGV traffic in the Pyhrn corridor of approximately 120 and 130% between 2000 and 2015. The prediction, therefore, is that this corridor will experience much more dynamic growth than corridors in western Austria. The main reason for this is the enlargement of the European Union and the calmer political situation in former Yugoslavia.

With regard to the railways, forecasts are available for the years 1998 to 2015. In this period, rail traffic on the Schober Pass is expected to grow by 60 %. Growth in the northern section of the corridor Budjevice – Linz and Linz – Selzthal will be considerably lower, at around 35 % 40 %.

If these forecasts prove accurate, this would mean that the railway would loose a significant percentage of its market share.

4.3.3 Rail Transport Services/ Intramodal Competition

Almost no block trains are offered on the Pyhrn axis at present for unaccompanied combined traffic. The sole exception is the LTE block train Graz Werndorf – Duisburg Ruhrort Hafen, which has been running three times a week in each direction since February.

The other UCT connections from the Graz and St. Michael terminals are created by additions to conventional freight trains.

The average speed of most connections is therefore extremely slow. Only the direct connection between Graz – Duisburg and the ROLA Wels – Maribor offer attractive schedules.

4.3.4 Organisation of Traffic Handling

There is certainly plenty of room for improvement in the cross-border cooperation between ÖBB and CD at the Summerau crossing. Although the line has been fully electrified since December 2002, locomotives are changed both in Horni Dvoriste and in Summerau as the system change takes place between the two stations on an open stretch of the line. CD does not posses a sufficient number of licensed dual system locomotives and the locomotives belonging to ÖBB are not licensed in the Czech Republic due to incompatibility with the Czech signalling system.

The quality of cooperation between ÖBB and the Slovenian national railway company (SZ) is described by the ÖBB as very good (both with regard to networks and goods traffic).

4.3.5 Quality of Traffic Handling

No punctuality statistics have been published for the Pyhrn corridor. Consequently, the punctuality of operations can only be estimated.

Of course, the single-track sections of the line have a negative impact on the quality of operations, as delays are then carried over onto trains coming from the opposite direction. Moreover, the existing line in the Pyrhn corridor is under-developed (track length in crossing stations, train intervals which would be possible with modern signalling technology), which probably also impairs operating quality and capacity.

4.3.6 Recapitulary Evaluation

Today, the Pyhrn corridor mainly links Styria, Upper Austria and Germany. International traffic between Germany and the Balkan states is increasingly handled by the Danube corridor and Hungary.

Adopting the approach set out in the Action Plan Brenner 2005 for the Pyhrn corridor only makes a limited amount of sense, as most of the traffic it carries is internal Austrian traffic or bilateral traffic between Austria and Germany and the main focus is not therefore on the interface problem.

Nevertheless, the following measures from the Action Plan Brenner could be applied to the Pyhrn corridor:

- Improved cooperation between railway companies at the Summerau border crossing
- Expansion of UCT services, in particular the development of block trains between the Cargo Center Graz and Germany
- Increased RoLa services between Wels and Maribor and Zagreb
- Multi-national corridor management to upgrade railway infrastructure between Graz and Maribor

5 SOUTH CORRIDOR

5.1 OVERVIEW

The South corridor runs between Brno (Czech Republic) in the north and Udine in the south. The total length of the line between Brno and Udine is approximately 540 km. The corridor runs from Brno via Breclav to Vienna and then on to Wiener Neustadt. The rail line then crosses the Semmering and follows the Mur/Mürzfurche over Bruck an der Mur and Leoben to Judenburg. After Judenburg, the railway line runs over the Neumarkter Sattel to Klagenfurt and then on to Villach. From Villach the corridor runs via Tarvisio to Udine.

The road runs from Brno on the two lane B7 to Vienna and then on to Wiener Neustadt on the Südautobahn. There the road branches off into the A 2, which leads south through the Styrian Hügelland to Graz and then over the Pack and Lavanttal to Klagenfurt. In recent years the S 6/S 36/B 317 axis has been upgraded as the second high-order road link. This mostly runs parallel to the Südbahn railway line. From Klagenfurt onward the two modes of transport run parallel to one another again.

In the north the corridor is fed by lines from the Czech and Polish industrial regions, but also from Hungary and Slovakia (connection to the corridor in Vienna). In the south, the connections to upper Italy and the port of Trieste are the most important long distance routes.

Important transport flows also branch off at Bruck an der Mur and Graz onto the Pyhrn axis toward Slovenia (port of Koper).

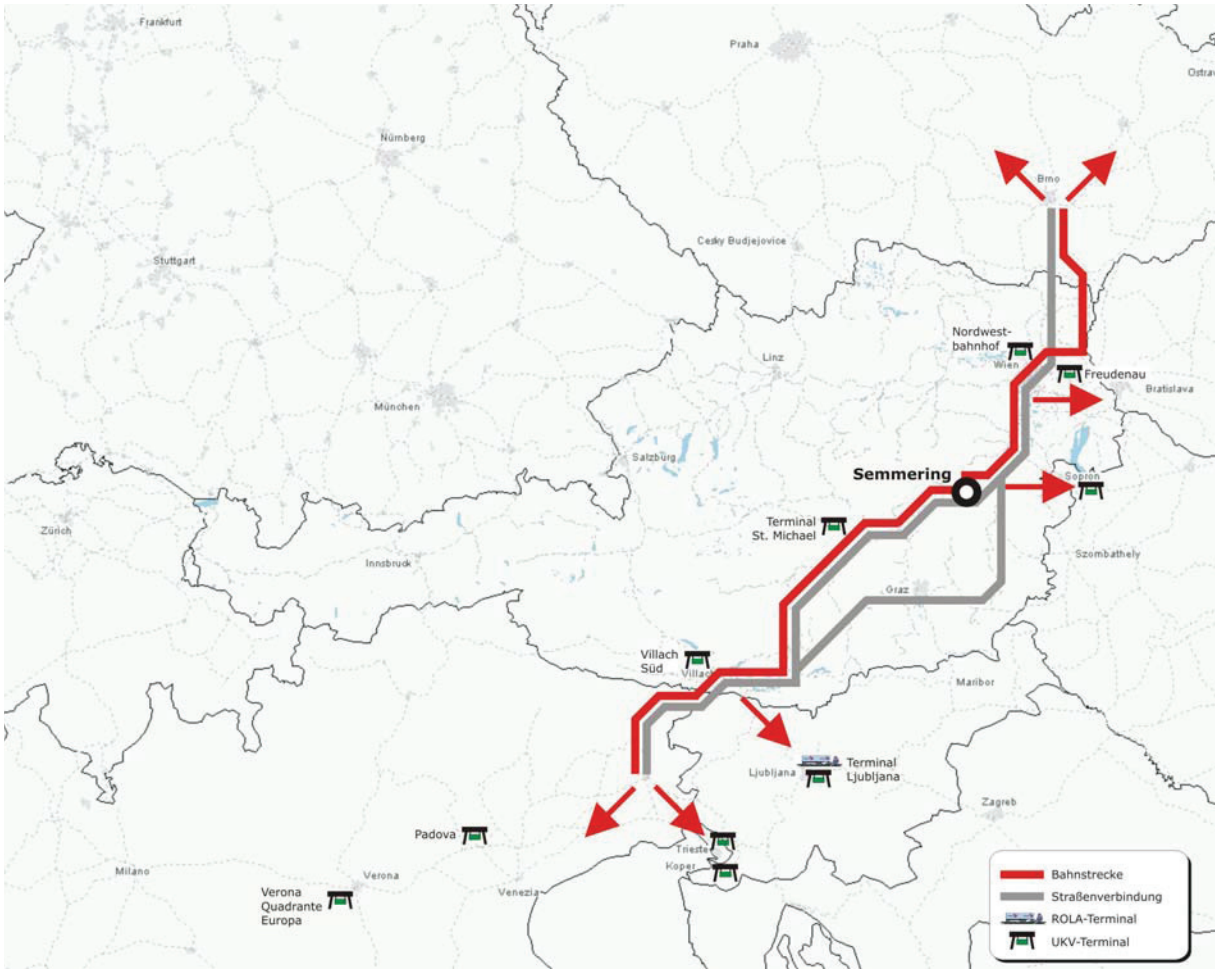


Fig. 3: Outline Diagram South Corridor
Source: the authors

5.2 INFRASTRUCTURE

5.2.1 Rail Transport

Railway Line

Development Status

The railway line from Brno to Udine has been a twin-track line since December 2003 when Klagenfurt St. Veit/Glan was completed and operations were started on the new twin track section Tarvisio Boscoverde – Udine. A total of four tracks are available on a number of sections between Vienna and Wiener Neustadt.

Due to small arc radii and narrow tunnel profiles the section over the Semmering Pass is limited to profile P/C 50/380 for swap containers and semi-trailers. This makes it impossible to operate a rolling road with HGVs with a corner height of 4 m.

The entire line is electrified, with the 25 kV/50 Hz delivery system in use between Brno and the Czech/Austrian border where the system change takes place. Dual system locomotives are needed here for the section Bernhardstal – Breclav, but the ÖBB is able

to provide them in sufficient quantities. In Austria alternating current of 15 KV and 16.7 Hz is used. In Italy, the line is electrified with 3 KV direct current.

Train control on the southern section of the line is currently carried out using track circuits. In Italy, an automatic signalling and section block system has not yet been installed along the entire line, which is why the law requires two engine drivers for each locomotive.

On the Semmering Pass, the line has gradients of up to 26 %. Due to small arc radii pusher operations are impossible, for which reason a large number of freight trains have to be split.

Overall, the line still has sufficient capacity. Only at the Vienna junction do symptoms of capacity overload become apparent at certain times of the day. However, according to the ÖBB Network division there is still capacity for 30 through freight trains per day.

Infrastructure Usage Costs

At present the costs for one train kilometre in the South corridor are € 1.41 + € 0.001 * gross tonnes of the train. For a freight train with 1,000 tonnes this results in a usage charge of € 1,180.90 (all figures excl. VAT) for the section Breclav – Tarvisio (490 km) *(Source: www.oebb.at)*.

Planned Investments

Now that the entire line has been upgraded to twin-track operations, no infrastructure measures are being planned which would have an impact on traffic in the near future. In the long-term, the Semmering Base Tunnel should ease the bottleneck at Semmering. Another long-term project in the South corridor is the construction of the Koralm railway as a second line from Bruck an der Mur to Klagenfurt via Graz.

Terminals

Vienna Nordwestbahnhof

The Vienna Nordwestbahnhof Terminal is located in the city of Vienna on the site of the former Nordwestbahnhof station.

In addition to acting as the combined traffic interface for the Vienna region, the terminal also serves as the hub between the Danube corridor and the South corridor.

The terminal has 7 loading tracks (4 of which are team tracks) which are equipped with 2 gantry cranes. 2 mobile cranes are available for loading and unloading on the team tracks. The tracks have a total length of approximately 1,700 m.

These facilities allowed the transhipment of 310 LU a day in 1998, the equivalent of 50 LU per hour. This year, an average of 236 transhipments were carried out per working day, resulting in a capacity utilisation at the terminal of 76 % (Source: IMONET).

Vienna Freudenau

The Vienna Freudenau Terminal is located in the Danube port Vienna Freudenau. At present this terminal only ships containers; semi-trailers and swap bodies are not loaded.

The terminal has 3 loading tracks, of which one is equipped with a gantry crane. A total of 17 mobile cranes are available for loading and unloading on the two team tracks and loading between the rail, road and inland waterway modes. However, most of them are used for moving empty containers. The tracks have a total length of approximately 1,800 m.

These facilities allowed the transhipment of 280 load units per day in 1998 or 80 LU per hour. This year an average of 159 transhipments per working day was carried out, a capacity utilisation of 57 % (Source: IMONET).

The terminals in Villach and Trieste have already been described in the analysis of the Tauern axis. The St. Michael Terminal was described in the analysis of the Pyhrn axis.

5.2.2 Road Transport

Development Status

This road lacks a continuous motorway structure due to the 115 km long section between Brno and Vienna. Between Vienna and Udine the road has a continuous motorway structure.

North of Vienna, on those sections of the road which have not yet been upgraded to motorways and on the through-road through the city (A 23), daily goods traffic occasionally experiences traffic problems due to simultaneous commuter traffic.

Infrastructure Usage Costs for Heavy Goods Vehicles

Since the introduction of mileage-based toll fees on 1.1.2004 the fee for the 387 km section of the motorway from Vienna to the Austrian/Italian border at Arnoldstein for an HGV with more than 3 axles is € 105.60 *(Source: Toll fee calculator at www.go-maut.at)*.

The toll fee for this kind of vehicle in Italy on the section of the corridor from Tarvisio to Udine (95 km) is € 11.90 *(Source: Toll fee calculator at www2.autostrade.it).*

The total toll fee for the route Vienna - Udine is therefore € 117.50 (all toll fees excluding VAT).

Legal Restrictions

There are no legal restrictions upon heavy goods traffic with vehicles from EU states. Vehicles from the Czech Republic, Poland, Slovakia and Hungary will remain subject to restrictive quotas until their accession to the EU on 1 May 2004.

5.3 TRAFFIC DEVELOPMENT – OPERATIONS

5.3.1 Catchment Areas

The South corridor through Austria is the main link between the conurbation Vienna/Lower Austria and the southern provinces of Styria and Carinthia, as well as to

Italy. It also provides an important link between the Czech Republic and the port of Koper (Slovenia) as well as between Poland and Italy. In 1999 connections from Poland, the Czech Republic, Hungary and Slovakia to Austria and Slovenia had a strong rail focus. Road haulage traffic was largely attributable to inner Austrian traffic and traffic to and from Italy.

The (still) prevailing dominance of inner Austrian traffic in the South corridor is also demonstrated in the low average distances travelled by HGVs crossing the Alps over the Semmering and Wechsel in 1999. This was approximately 386 km.

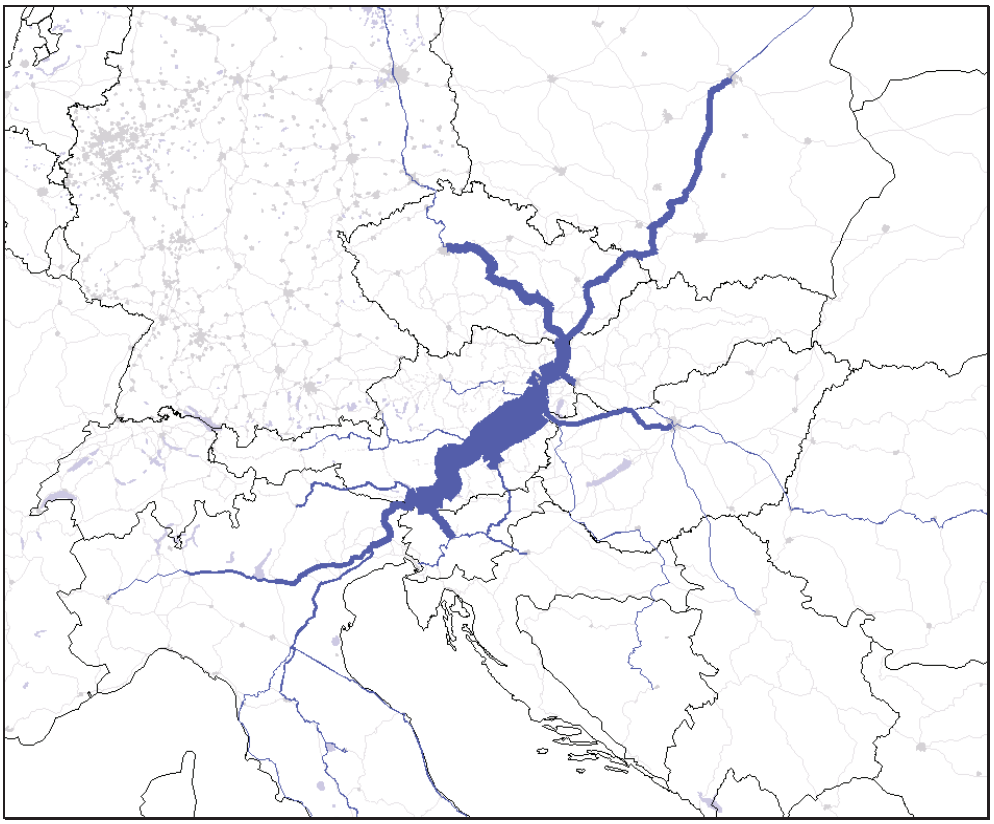


Fig. 14: Traffic Spider Semmering Rail Transport 1999
Source: Survey of Trans-Alpine Goods Traffic 1999

5.3.2 Traffic Development and Traffic Forecast

Traffic in the South corridor (measured in terms of the Alpine crossings Semmering – road and rail and Wechsel – only road) underwent extremely fast growth in the 1990s, with increases in traffic on both the road and railway lines. While growth in the rail segment has stagnated since 2000, road haulage traffic has continued to rise.

In the observation period between 1992 and 2002 the percentage of rail traffic rose from approximately 39 % to approximately 41 %. This is due to the significant increase in full wagonload traffic. Unaccompanied combined traffic plays only a minor role in the South corridor. ROLA transports are currently impossible in this corridor due to profile restrictions on the Semmering Pass.

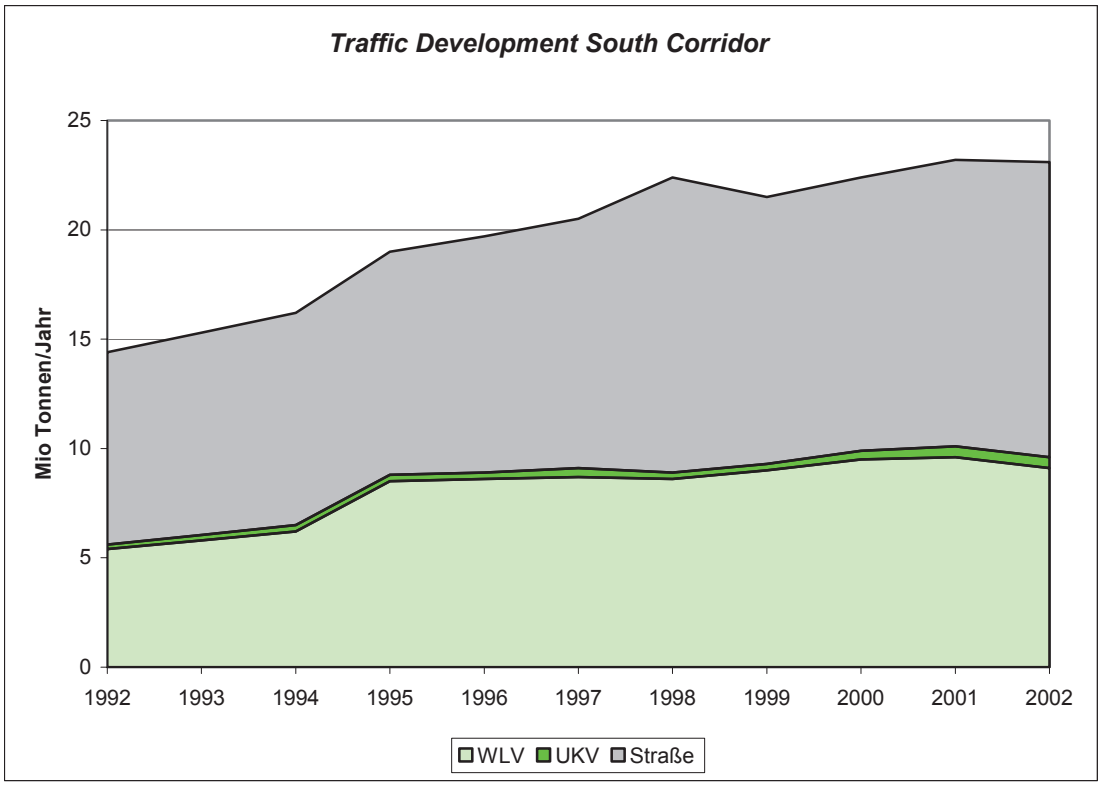


Fig. 15: Traffic Development South Corridor 1992 to 2002
Source: AlpInfo

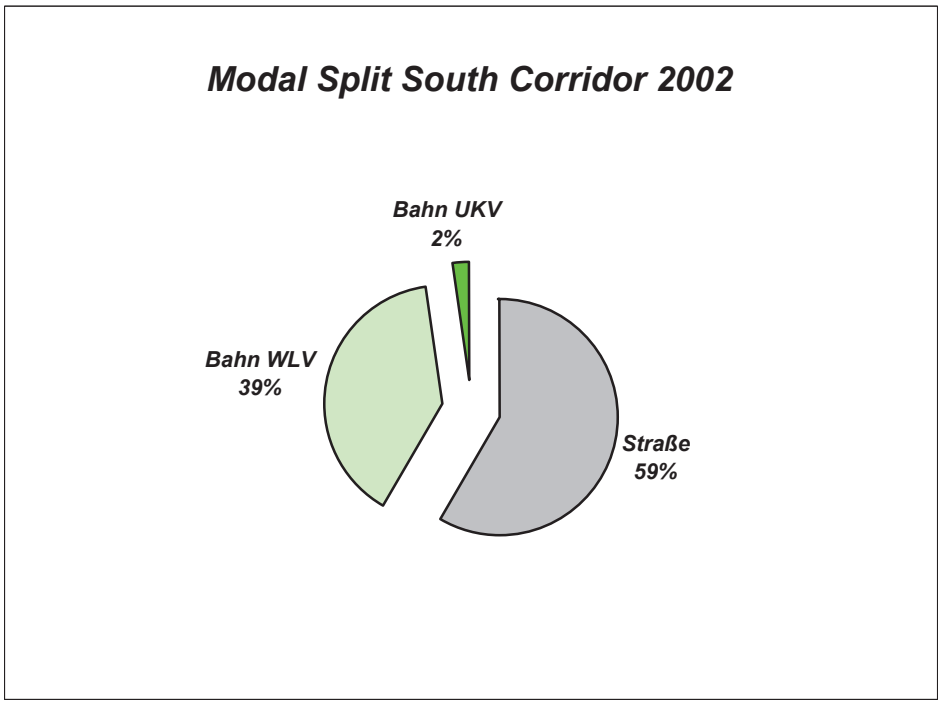


Fig. 16: Modal Split South Corridor 2002
Source: AlpInfo

Forecast

The traffic forecasts in the Master Traffic Plan for Austria assume that HGV traffic in the South corridor will increase by approximately 80% (total alpine crossings Semmering and Wechsel) to 120 % (section Graz – Klagenfurt) between 2000 and 2015. The South

corridor is therefore also expected to register a more dynamic development than the corridors in western Austria. Once again, the reason for this is the enlargement of the European Union and the easing of the political situation in former Yugoslavia.

The forecast value for rail transport in the South corridor is approximately 70 to 80 % higher than the current figures. Consequently, this corridor is also threatened with a decline in the market share of the railways in the future.

5.3.3 Rail Services/Intramodal Competition

At present no block trains are offered for unaccompanied combined traffic on the South axis. UCT connections from Poland, the Czech Republic, Hungary and the Graz and St. Michael terminals are created by additions to conventional freight trains.

5.3.4 Organisation of Traffic Handling

Cross-border cooperation between ÖBB and CD at the Breclav border crossing is far better than at the Summerau crossing. Trains are generally taken over or parked by Austrian dual-system locomotives in Breclav.

Cooperation between ÖBB and FS and Trenitalia Divisione Cargo at the Tarvisio Boscoverde crossing is governed by a number of agreements and working parties.

At the level of the network operators (ÖBB Network division and FS) a high-ranking working party ensures excellent cooperation.

A special service centre in Tarvisio staffed with representatives of Rail Cargo Austria and Trenitalia Divisione Cargo has also been set up to steer the handling of goods traffic and monitor service quality.

5.3.5 Quality of Traffic Handling

There are no published punctuality statistics for the South corridor. However, interviews with representatives of ÖKOMBI, ICA, the BMVIT, ÖBB-Network division and Rail Cargo Austria do permit some estimates concerning the quality of operations.

Despite numerous initiatives and agreements a lack of available resources at Trenitalia Divisione Cargo means that adequate service quality cannot always be guaranteed. In particular, trains which are ordered at short notice to meet extra demand cannot be integrated into the agreed timetable with the necessary flexibility and quality.

This leads to grave problems, especially after disruptions, as it is extremely difficult to organise the departure of backlogged trains under these circumstances.

This problem frequently leads to delays of up to several days (!), with trains being held back sometimes as far down the line as the Czech Republic because Trenitalia Divisione Cargo refuses to accept them in Tarvisio.

Furthermore, Trenitalia has rejected an expansion of the timetable on the grounds of inadequate resources (locomotives and engine drivers) for years, virtually limiting traffic to its current volume. This is despite the fact that all those representatives who were surveyed expressed unanimous agreement that there is still sufficient potential to expand rail freight services over the Tarvisio crossing.

5.3.6 Recapitulatory Evaluation

The South corridor is the main connection between the north Italian industrial area, the ports of Trieste and Koper, the eastern region of Austria and Slovakia, the Czech Republic and Poland. Against the background of these states' accession to the EU, this traffic has great potential for development.

For this reason, a similar strategy to the Action Plan Brenner 2005 is also to be recommended for the South corridor. The following measures from the Brenner Action Plan should be implemented in the Tauern corridor as a matter of priority:

- Quality management and elimination of bottlenecks in handling operations, particularly on the Villach – Tarvisio - Udine – Trieste line
- Expansion of UCT services, especially block trains from the container port in Trieste to Vienna, Slovakia and the Czech Republic
- Development of a continuous axle-based traction concept to accelerate block trains which have to be fed in
- Coordination and evaluation of real track availability in the South corridor
- Improvement of rail links for the South corridor in the direction of Verona and Milan, as well expansion of loading capacities in northern Italy, Slovakia, the Czech Republic and Poland.

BUNDESAMT FÜR VERKEHR
OFFICE FÉDÉRAL DES TRANSPORTS
UFFICIO FEDERALE DEI TRASPORTI
FEDERAL OFFICE OF TRANSPORT

Alpine Convention, Transport Working Group **VIII/7/1/1/1b**
Survey on Switzerland

prepared by Dr Arnold Berndt, Federal Office of Transport, Freight Traffic Section

Situation as of: 15 July 2004

Contents:

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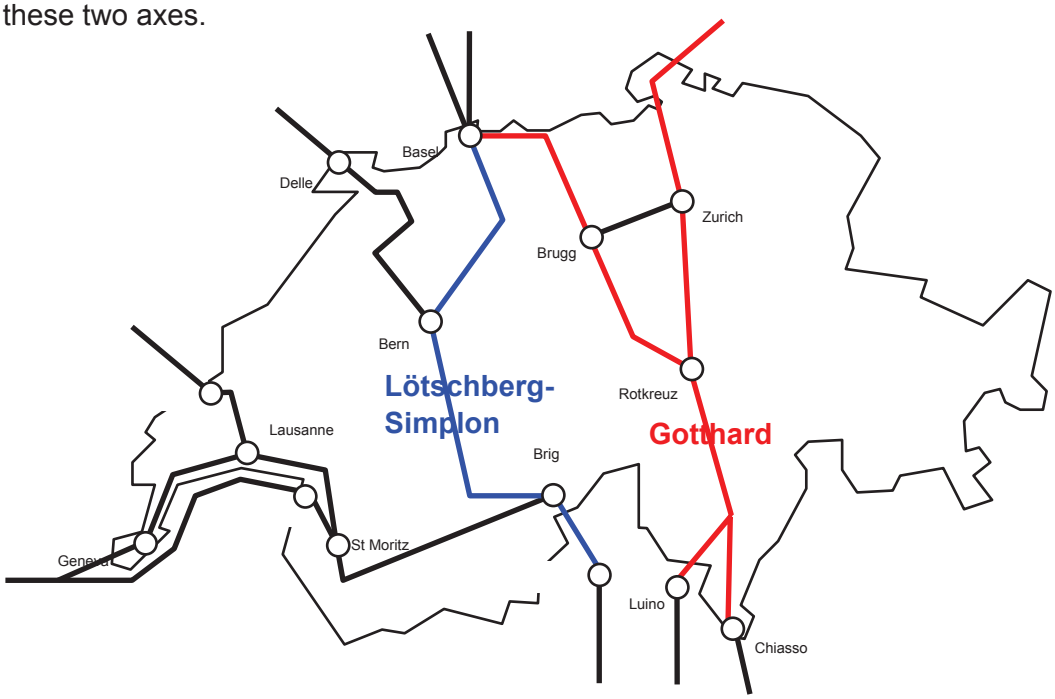
0. Initial situation

With the so-called “Traffic Transfer Act” the Swiss people and parliament have agreed the fundamental principles of the Swiss modal shift policy. According to the Act, trans-Alpine heavy goods road traffic must be maintained at the 2000 level until two years after the entry into force of the Land Transport Agreement, and subsequently it must be reduced gradually or shifted from road to rail. At the latest two years after the opening of the Lötschberg base tunnel - i.e. by the year 2009 - trans-alpine heavy goods traffic must be reduced to a maximum of 650,000 lorries transiting the Alps per year. In order to achieve this goal, a package of accompanying measures for road and rail was agreed in addition to the introduction of the heavy traffic levy (LSVA) and quotas for road freight traffic (40 t / empty and light journeys). The Traffic Transfer Act entered into force on 1 January 2001. By its decision of 28 September 1999, the Swiss parliament appropriated funds for the accompanying measures amounting to CHF 2.85 billion for the period between 2000 and 2010. In addition to the heavy traffic levy (LSVA) as one of the key elements of the modal shift policy - apart from the modernisation of the railway infrastructure (various new lines and the New Rail Link through the Alps (NRLA) including the Lötschberg and Gotthard base tunnels) and the reform of the railways aimed at increasing the competitiveness and thus the efficiency of the railways - a package of measures is implemented in accordance with the Message concerning the Traffic Transfer Act, comprising the following accompanying measures:

- international promotion of rail freight;
- ordering of, and payment for, the “rolling road” or “rolling motorway” (Gotthard and Lötschberg-Simplon);
- financial support for ensuring the availability of the necessary (transhipment) terminal capacities;
- ordering of, and payment for, consignments in unaccompanied combined transport (UCT, container transport);
- reduction of train path prices for rail freight as a whole;
- setting of targets for the enhancement of the efficiency of the railway infrastructure and the operation of the railways;
- quicker completion of the Lötschberg base tunnel;
- reimbursement of the heavy traffic levy (LSVA) for journeys to and from terminals;
- intensified checks on heavy goods vehicles;
- traffic management measures;
- ensuring compliance with the work regulations in the road transport sector.

1. Overview of high-capacity trans-Alpine railway corridors in Switzerland

In Switzerland the Lötschberg-Simplon axis and the Gotthard axis can be classified as high-capacity trans-Alpine railway corridors. The entire trans-Alpine traffic in Switzerland uses these two axes.

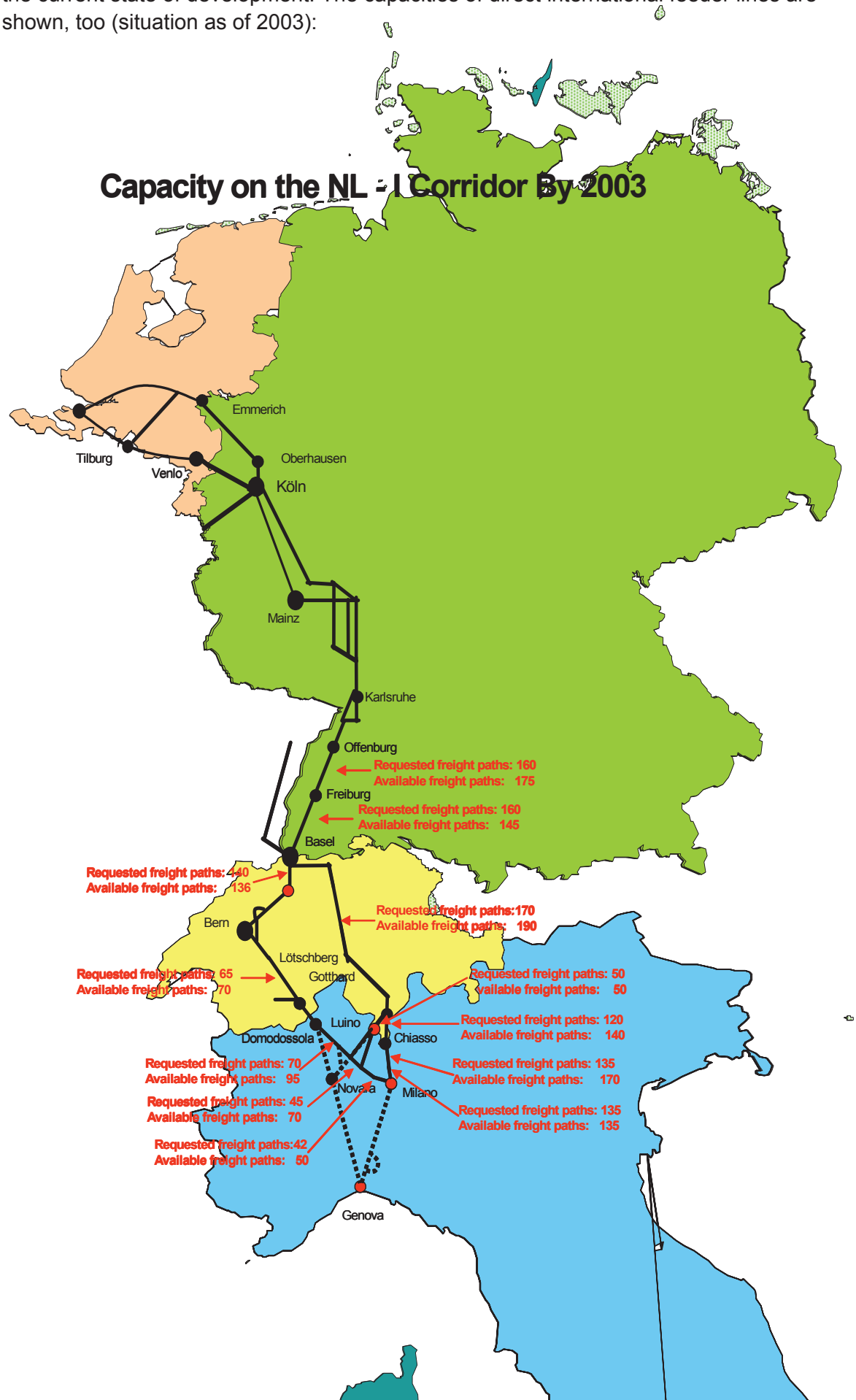


The Simplon tunnel and the Gotthard tunnel can be qualified as “Alpine crossings”. For both axes there are not only different international feeder lines available but also Swiss feeder lines. In the above diagram, the main routes of the Lötschberg axis are highlighted in blue and those of the Gotthard axis are marked in red; the black lines indicate alternative routes on which part of the trans-Alpine transport operations are carried out. Among the feeder lines outside Switzerland are in particular the route along the Rhine in the North - with feeder traffic originating in the ARA ports, the Ruhr area and the Rhine-Main region - and the routes from Belgium via France. The feeder lines in the South begin or end in the Milan region, in Piemont and the Ligurian ports. Which axis should be preferred depends on whether the destination is located in the West or the East: the areas of Novara, Busto Arsizio, Alessandria and Torino can best be reached via the Simplon axis and Luino on the Gotthard axis, and for the operation of services to the areas east of Milan (including Melzo, Brescia etc.) the Gotthard axis via Chiasso is used.
In 1882 the 15-km-long Gotthard tunnel was opened to traffic. After the turn of the century two Alpine chains were pierced in a row with the Lötschberg tunnel (14.6 km) and the Simplon tunnel (19.8 km) (opening to traffic: 1913). The Gotthard line was designed as a double-track line from the beginning and the widening to two tracks of the Lötschberg line was completed in 1992. In 2001, the corner height was increased to 4 metres; the corner height for the Gotthard tunnel is 3.8 metres. On the Lötschberg axis the rail network of the Swiss Federal Railways (SBB) is used up to Thun. The section between Thun and Brig is operated by BLS. The route between Brig and Domodossola is again part of the SBB infra-structure.
On the Gotthard axis only SBB infrastructure is used on Swiss territory.

2. Railway infrastructure

Capacities of the corridors

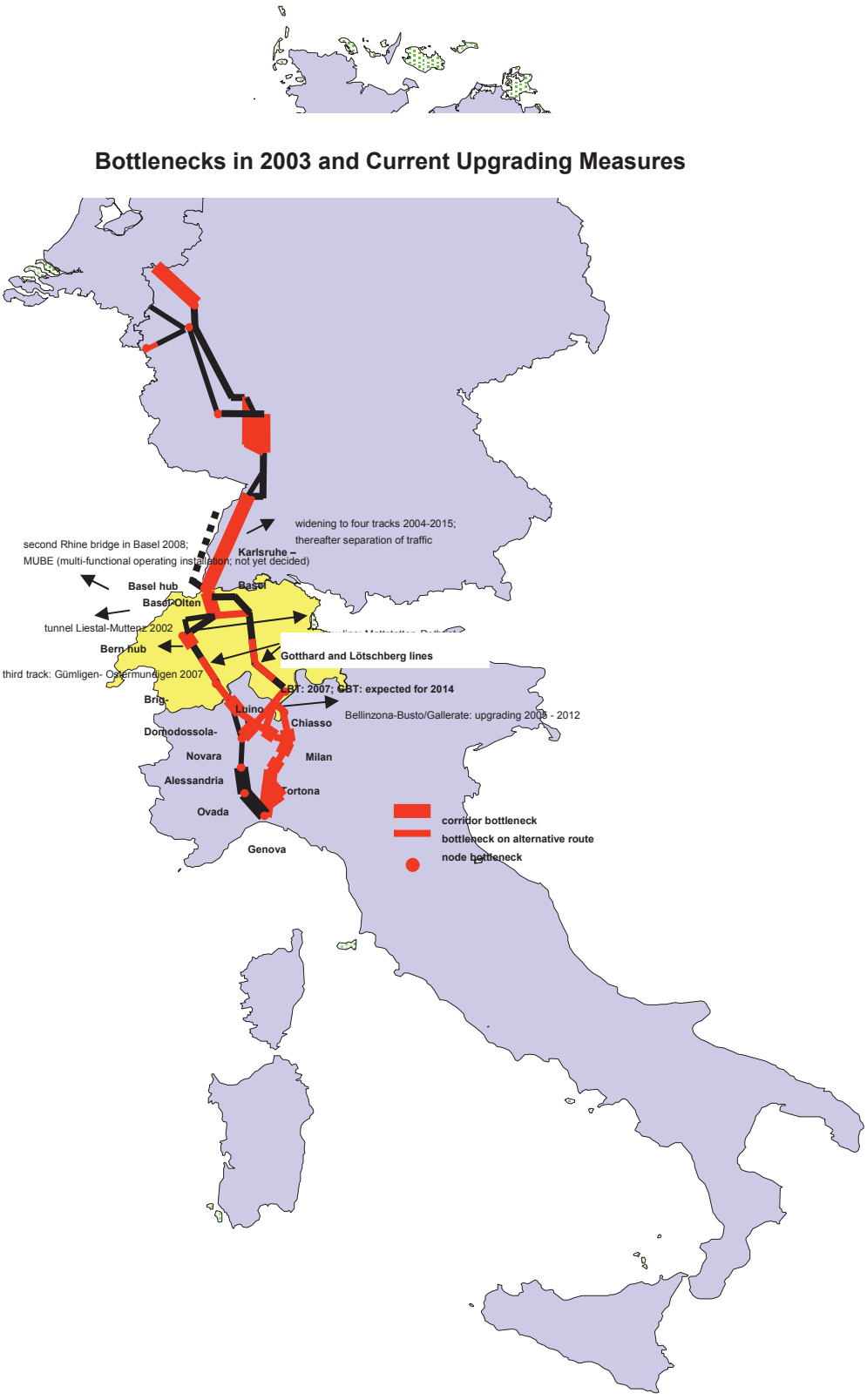
The following map shows the freight path capacities that are available on both axes under the current state of development. The capacities of direct international feeder lines are shown, too (situation as of 2003):



Apart from the available freight paths, the approximate number of freight paths requested for the relevant line section is also indicated.

Planned upgrading measures

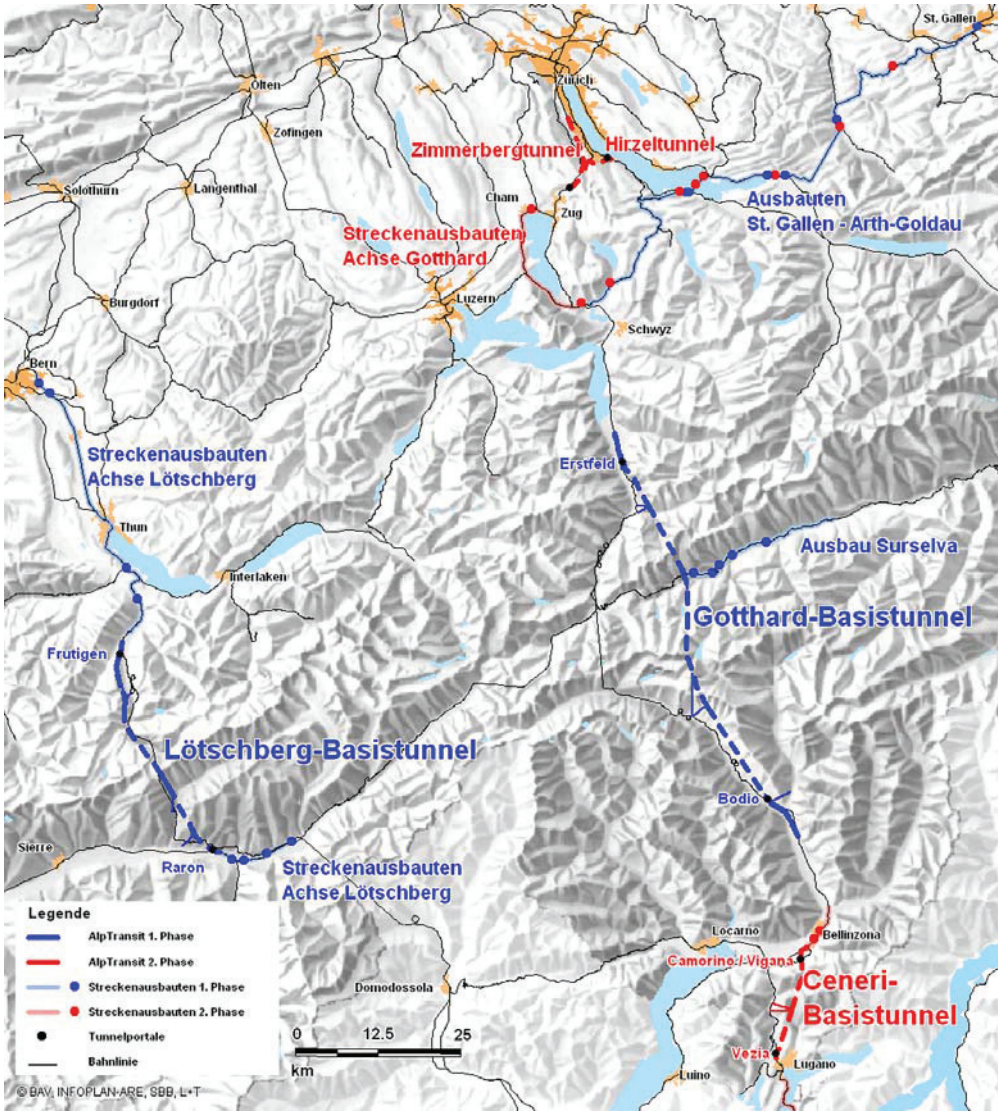
Currently, various upgrading measures are planned or already being implemented on the Swiss corridors and their feeder lines. The relevant line sections are shown in the following map together with the expected date of opening to traffic:



In the Swiss view, the key upgrading measure is the construction of the New Rail Link through the Alps (NRLA). In the field of freight transport, the NRLA with its two new base tunnels through the Alps will provide higher transport capacity and quality and result in a reduction of railway operating costs. The competitiveness of the railways in the freight transport sector will be strengthened significantly. In this way, much more traffic can be shifted from road to rail, which is a pre-condition for the implementation of the Article on the Protection of the Alps.
The key elements of the NRLA concept are:

- **Upgrading of the Lötschberg-Simplon axis:** between Frutigen (Canton Bern) and Raron (Canton Valais) the 34.6-km-long Lötschberg base tunnel is being constructed; the construction works started in 1999. The base tunnel is planned to be opened to traffic in 2007. All tunnel construction contracts have been awarded. Of the 88 kilometres of tunnel tubes, 80 kilometres have been excavated so far (situation as of January 2004), which corresponds to 90% of the total tunnel system.

- **Upgrading of the Gotthard axis:** between Erstfeld (Canton Uri) and Bodio (Canton Ticino) the 57-km-long Gotthard base tunnel is being constructed; the construction works also started in 1999 and are expected to be completed by 2015. Works are being carried out on four of the five large construction sites. The approval procedure for the planned path alignment by which the Gotthard base tunnel is to be connected with the main line in the Canton Uri was started in January 2003. The start of construction of the approximately 15-km-long Ceneri base tunnel between Camorino and Vezia is planned for 2006. The period of construction is approximately 10 years.



In accordance with the „Message concerning the construction of the Swiss rail link through the Alps" of the Swiss Federal Council of 23 May 1990, the new infrastructure is intended to provide the following freight transport capacities (base line and mountain line):
Gotthard: 300 paths (trains in both directions);
Lötschberg: 104 paths (trains in both directions).

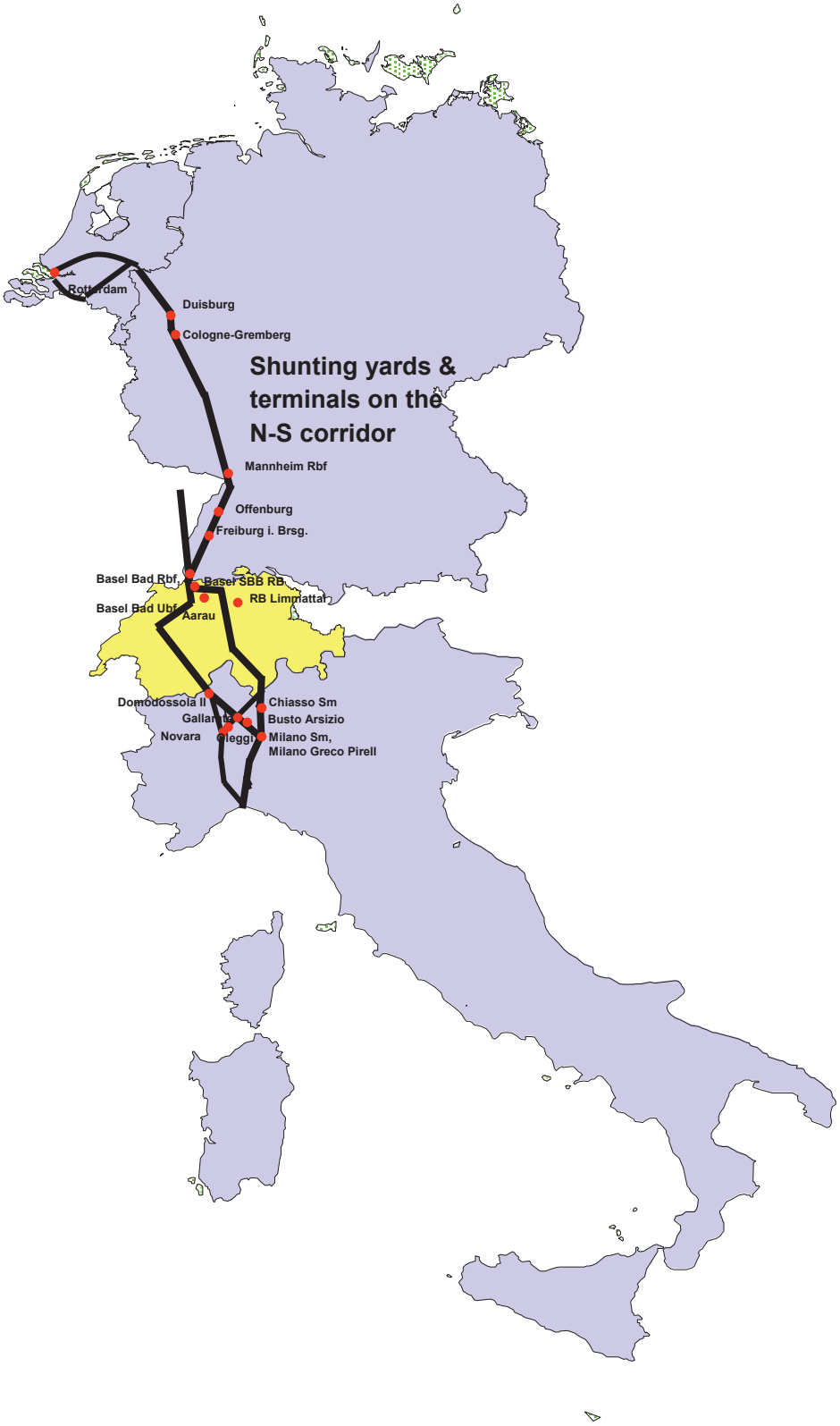
Railway infrastructure user charges (train path prices)
For the use of railway infrastructure, train path prices are charged according to the common list of services of the railway infrastructure operators SBB, BLS and RM.
The train path price for freight transport includes a minimum price and a contribution margin. The minimum price for maintenance is CHF 0.0025 per gross tonne-kilometre plus CHF 0.40 per train-kilometre for train operation services. Furthermore, there are supplements for nodes.
The contribution margin amounts to CHF 0.0052 per net tonne-kilometre on the SBB network and CHF 0.0036 per gross tonne-kilometre on the BLS network.
In the framework of the Swiss modal shift policy, the contribution margin is currently borne by the Swiss Confederation which subsidizes the train path price and, in the case of combined transport, also part of the minimum price.

Consequently, the prices for the operation of a freight train with 1000 gross tonnes on the different axes from border to border are as follows:

Route / type of traffic	Train path price	
Basel – Gotthard – Chiasso (321.6 km)	CHF	2090.24
- less train path subsidies	CHF	964.64
- combined transport	CHF	482.24
Basel – Gotthard – Luino (291.53 km)	CHF	1889.80
- less train path subsidies	CHF	869.45
- combined transport	CHF	432.14
Basel – Lötschberg – Domodossola (242.58 km)	CHF	1592.50
- less train path subsidies	CHF	743.48
- combined transport	CHF	379.61

All prices exclusive of VAT and energy costs. No responsibility is accepted for the accuracy of this information.

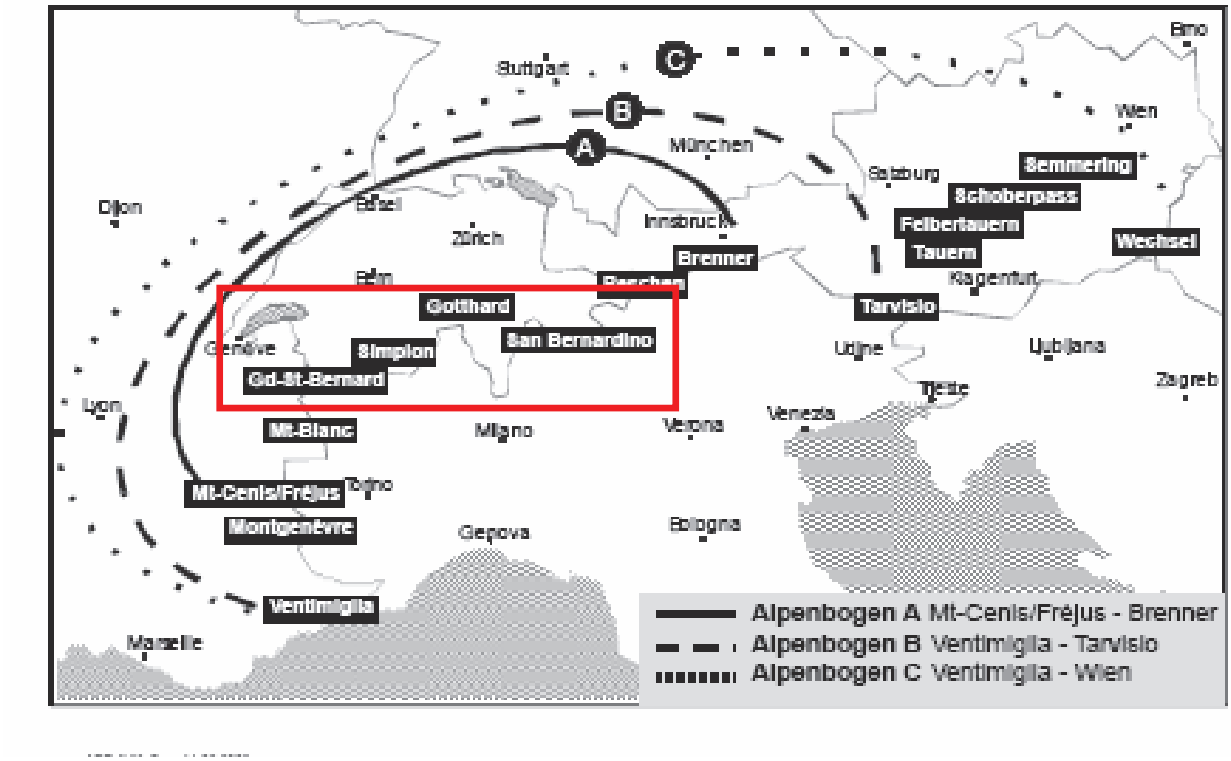
Terminals
The following terminals play a role in unaccompanied and accompanied combined transport on the Swiss trans-Alpine transport axes:



In the framework of the Swiss model shift policy, financial support is provided for investments in CT terminals in Switzerland and abroad. Currently, important projects are planned or already being implemented south of the Alps in Domodossola, Gallarate, Melzo, Chiasso-Balerna und Grandate.

3. Road infrastructure

There are four Alpine crossings available in Switzerland for road freight transit traffic. These are – as the following illustration shows – San Bernardino, Gotthard, Simplon und Gd. St Bernard.



Alpine arc A, B and C

Infrastructure user charges
In 2001, Switzerland introduced the heavy traffic levy (LSVA) which applies to the entire Swiss road network. There are no extra charges for the use of Alpine crossings.

Bringing into force	1 January 2001
LSVA applies to	vehicles > 3.5 tonnes; entire Swiss road network
Calculation	kilometres travelled + maximum permissible weight of the vehicle + emission category
Rates until 2004	▸ 1.42 Swiss centimes per tonne-km for Euro II+ ▸ 1.68 Swiss centimes per tonne-km for Euro I ▸ 2.00 Swiss centimes per tonne-km for Euro 0
Cost of a transit journey	210 Francs (Basel – Chiasso, 40 t vehicle)
Use of revenues	▸ 2/3 fonds for major railway projects (NEAT, Bahn 2000, HGV, noise protection) ▸ 1/3 cantons (road infrastructure costs)
Charging system	▸ On-Board Unit (mandatory for domestic vehicles) ▸ self-declaration (foreign vehicles without OBU)

In the years to come the LSVA is planned to be increased gradually:

- **Increase of the LSVA by 2005**
  - increase of the average rate from 1.68 to 2.44 Swiss centimes per tonne-km
  - different emission categories:
    +/- 15% of the average rate
  - transit journey: increase from 210 Francs to 300 Francs
- **Increase of the LSVA as of 2007/2008**
  - average rate: 2.7 Swiss centimes
  - transit journey: 325 Francs

Legal restrictions

- The 34 t weight limit will apply until 1 January 2004. At present, permits for carrying out journeys with vehicles having a maximum permissible weight of 40 t are limited by quotas and may be obtained in a limited number.
- On the entire Swiss territory both a ban on night driving between 22:00 and 5:00 o'clock and a ban on Sunday driving apply. Exemptions may be applied for.

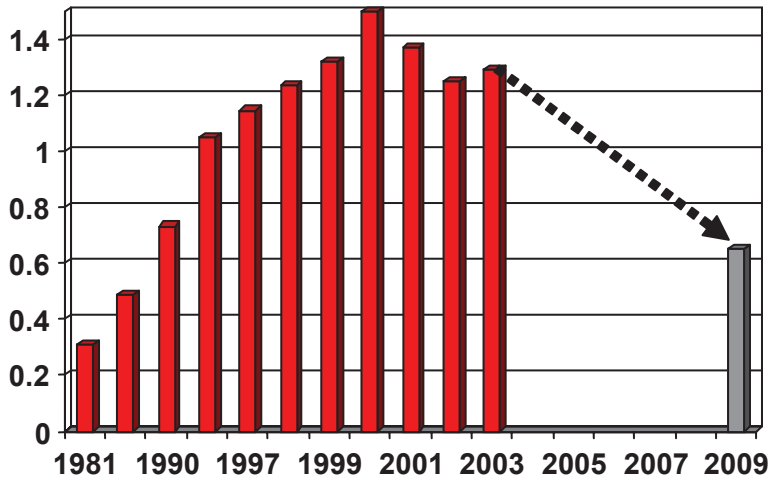
Road traffic management at the Gotthard tunnel

After the accident in the Gotthard tunnel in Oktober 2001 a special system for passage through the Gotthard road tunnel was introduced. The new drop counting system ensures that a safe distance is maintained between the lorries. The drop counting system involves that each lorry is sent individually into the tunnel. The number of lorries which are allowed to pass through the Gotthard tunnel ranges between 60 and a maximum of 150 vehicles per hour and direction. It is variable and depends on the passenger car traffic volume. What is important in this context is that the total traffic volume per hour and direction is limited to 1000 passenger car units (PCUs); one lorry corresponds to 3 passenger car units. The total daily capacity has levelled off at around 3000 - 4000 lorries. In this way it became possible to relieve traffic on the more dangerous San Bernardino route. The phase RED will be used as usual and activated if the capacity of the new system is exceeded.

4. Traffic trends

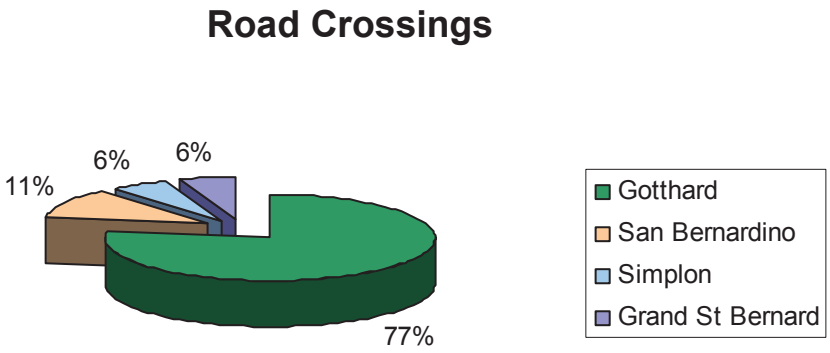
Road traffic

The following road freight traffic trends can be observed at the Alpine crossings. The indicator is the number of HGV journeys. The aim of the Swiss modal shift policy is to reduce these journeys to 650,000 by 2009.

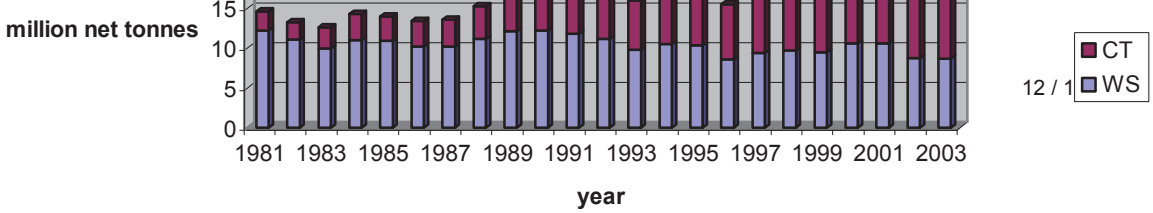


lorries transiting the Alps (in millions)

In 2003, the number of heavy goods vehicles transiting the Alps increased by 3 per cent compared with the previous year. The requirement of the Traffic Transfer Act to stabilize the traffic volume has already been met: the traffic volume was significantly lower than in the reference year 2000. However, in order to meet the long-term objective of modal shift, further considerable efforts are required.
In 2003, 1,292,000 heavy goods vehicles crossed the Swiss Alps. Even though heavy goods traffic increased by 3 per cent compared with the previous year, it was nevertheless 8 per cent lower than in 2000 which was the last year in which circumstances were comparable to 2003. The strong decline in the number of vehicles between 2001 and 2002 (minus 9 per cent) can partly be attributed to the closure of the Gotthard road tunnel as a result of the Gotthard tunnel accident and to the safety measures that had to be carried out at the Gotthard and San Bernardino routes. Thanks to the introduction of the modified traffic management system at the Gotthard tunnel (drop counting system) more lorries were able to use this route again.
The trans-Alpine journeys are distributed over the different Alpine crossings as follows:



Rail traffic
As regards the development of the rail traffic volume over the past 22 years the situation is as follows: as with the general volume of traffic, a significant and continuous growth can be observed which is influenced by the overall economic trend:

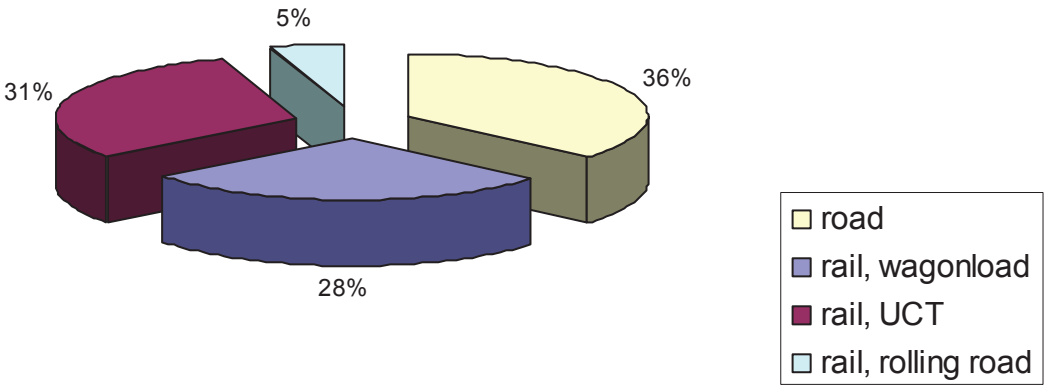


In 2003, the rail transport capacity increased by 5 per cent in total. Whereas combined transport increased by 10 per cent, wagonload services decreased by 2 per cent. The strong growth of unaccompanied combined transport and “rolling road” transport shows the great importance of these rail transport modes as the key transport modes for modal shift.

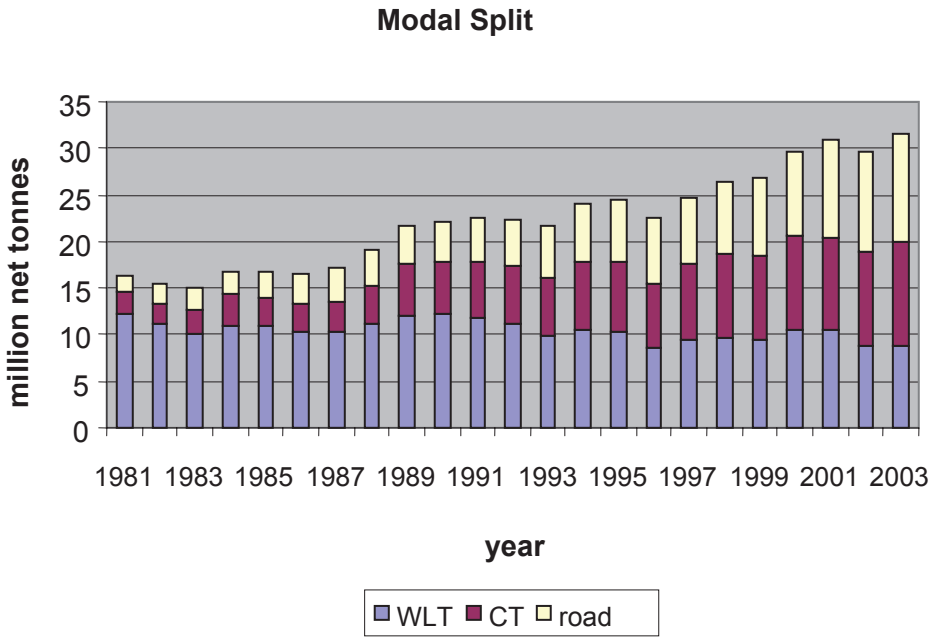
Modal split

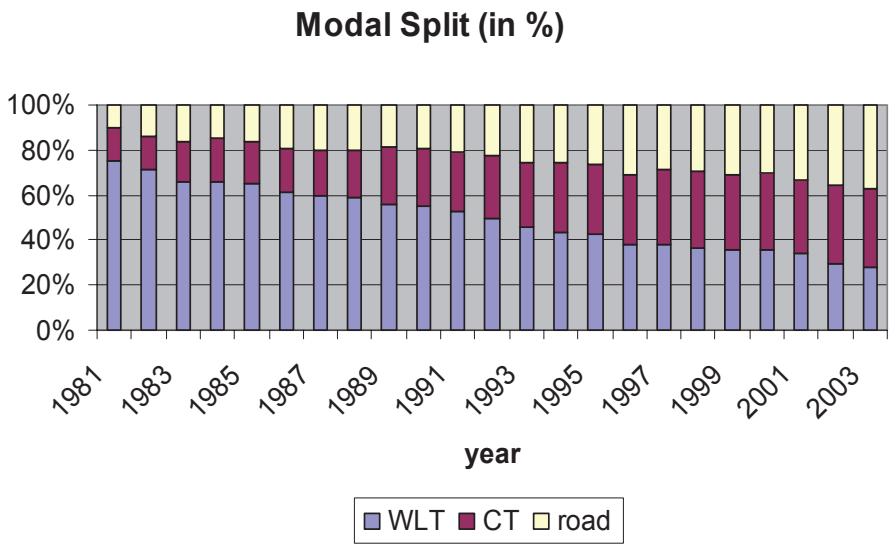
The percentage of rail freight on the Swiss axes amounted to 64% in 2003; the percentage of road transport amounted to 36%:

Modal Split in 2003



The trend shows for all of the transport modes that the total volume of trans-Alpine freight traffic (in net tonnes) has doubled over the past 22 years. The increased traffic volume was primarily handled by road, but in the period under review railway capacity was also increased by 33%. In the field of rail transport, a significant modal shift from “classic” wagonload services to combined transport has taken place.
This trend is shown in the following diagrams:



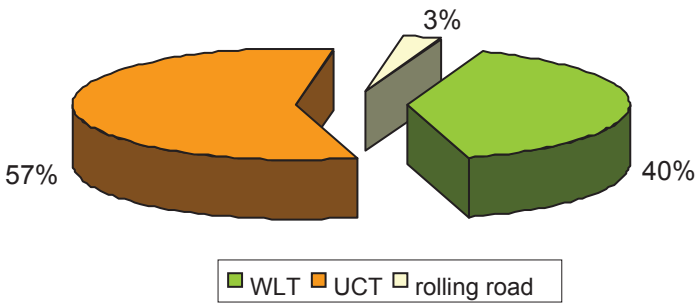


Distribution of traffic over the transport axes

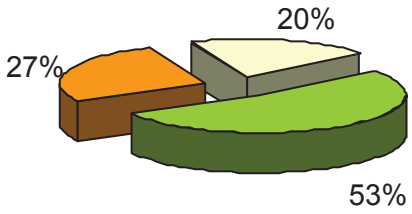
If the two Swiss axes are considered separately, it becomes evident that they are different from each other in terms of traffic volumes and types of transport. In 2003, 5.586 million net tonnes were carried via the Lötschberg-Simplon axis; on the Gotthard axis 14.326 million net tonnes were carried. Consequently, the Gotthard axis has remained the axis with the higher rail freight capacity, even if the Lötschberg axis has gained in importance over the last few years (widening to two tracks, increase of the corner height). As a result of the increase of the corner height, much of the “rolling road” traffic in transit through Switzerland also goes via the Lötschberg-Simplon axis.

The different types of traffic are distributed as follows over the Simplon-Lötschberg and Gotthard axes (the size of the pie charts is proportional to the volume of goods carried in net tonnes):

Gotthard



Lötschberg



Supply of rail transport services and intra-modal competition
The following table shows the current supply of UCT and “rolling road” connections on the Swiss axes:

Connections in unaccompanied combined transport in 2004:

Operator:	Connection:	Trains (2004 schedule):
Ambrogio	Muizen - Gallarate	450
Ambrogio	Neuss - Gallarate	450
Cemat SpA	Antwerpen - Novara	420
Cemat SpA	Antwerpen (II) - Novara	240
Cemat SpA	Genk Euroterminal - Novara	448
Cemat SpA	Ronet - Novara	360
Cemat SpA	Ronet - Novara/Milano	450
Cemat SpA	Ronet - Tavazzano/Piacenza	210
Conliner	Rotterdam - Melzo	420
Eurocombi SpA	Zeebrugge - Melzo	780
ERS	Rotterdam RSC - Padova	460
ERS	Rotterdam RSC - Melzo	1,104
EuroShuttle A/S	Maschen - Castelguelfo	797
Hangartner Terminal AG	Aarau - Domodossola II	36
Hangartner Terminal AG	Basel Weil - Domodossola II	470
Hangartner Terminal AG	Hamburg/Cologne - Domodossola II	470
Hangartner Terminal AG	Karlsruhe - Domodossola II	470
Hangartner Terminal AG	Rostock - Domodossola II	282
Hannibal Spa	Zurich/Mannheim - Melzo	368

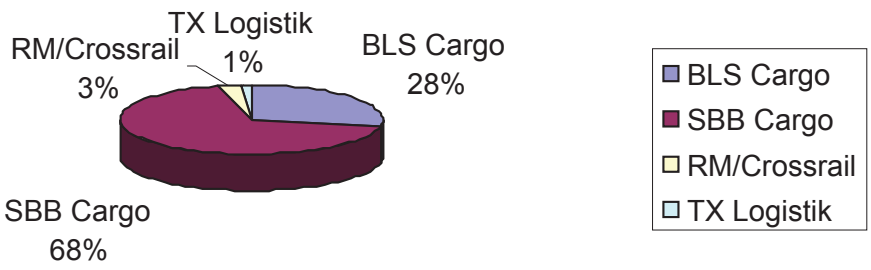
Hupac	Aarau - Busto	500
Hupac	Aarau - Stabio	510
Hupac	Antwerpen (Basel) - Oleggio	800
Hupac	Basel Weil - Busto	494
Hupac	Duisburg - Busto	480
Hupac	Duisburg - Novara	270
Hupac	Hamburg / Hannover - Desio	480
Hupac	Cologne - Brescia	440
Hupac	Cologne - Busto	2,260
Hupac	Lübeck - Busto	352
Hupac	Mannheim / Ludwigshafen - Busto	2,076
Hupac	Rotterdam RSC - Novara	1,540
Hupac	Rotterdam/Ede - Brescia	490
Hupac	Singen - Milano	1,180
Hupac	Taulov - Luino	450
ICF	Antwerpen - Bologna	2,400
ICF	UK - Milano Smistamento	450
Norfolkline Ltd	Hams Hall - Novara	216
RDP	Rotterdam RST - Milano Rogoredo	490
RM/Crossrail	Duisburg - Domodossola II	462
RM/Crossrail	Wiler - Domodossola II	462

Connections in accompanied combined transport:

Operator:	Connection:	Trains (2004 schedule):
Hupac Rola	Basel - Lugano Vedeggio	660
Hupac Rola	Freiburg i. Br. - Lugano Vedeggio	460
Hupac Rola	Singen - Milano	930
RAlpin AG	Freiburg i.Br. - Novara	4,300

Currently, four railway operators provide services on the Swiss axes. The market shares for traction services in the field of combined traffic (basis: railways) are distributed as follows:

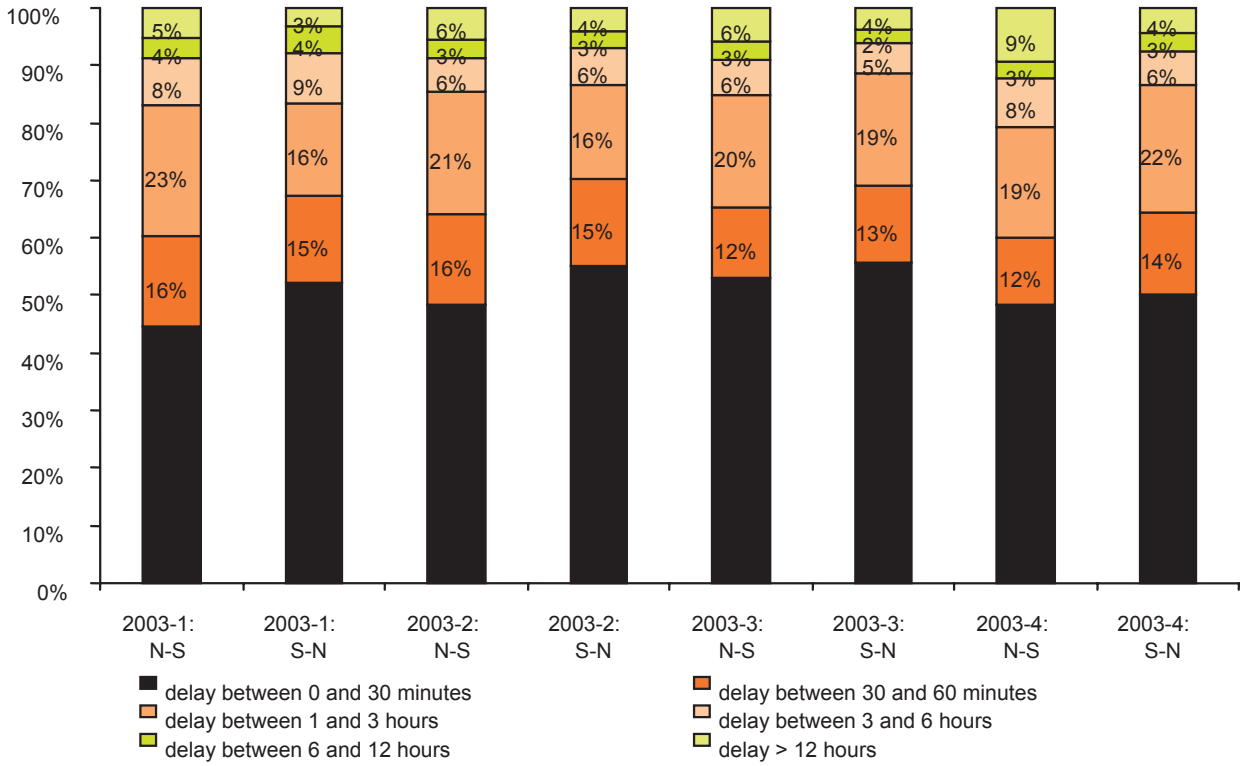
Market Shares of CT Trains Used for Trans-Alpine Transport in 2004



“Classical” transport services are provided by SBB Cargo, BLS Cargo and TX Logistik. BLS Cargo carries out a large part of the transport services in co-operation with Railion Deutschland.

The original division of labour by axes (SBB Cargo is responsible for the Gotthard axis and BLS Cargo for the Lötschberg-Simplon axis) does no longer exist. Today, SBB also operates services at the Lötschberg axis and BLS Cargo operates a large number of trains on the Gotthard route. RM operates services at the Lötschberg, TX Logistik at the Gotthard.

Quality Monitoring
In the framework of quality monitoring the Swiss Federation systematically records delays in combined transport and their causes. The following diagram shows the distribution for 2003, divided into North-South and South-North traffic.



The delays are more and more frequently incurred on international feeder lines whereas infrastructure-related delays (mainly German infrastructure) have slightly decreased.

5. Rail freight subsidies

In the 2004 budget the following funds have been appropriated to rail freight:

= budgetary framework of 28 September 1999

Measure	2003 Budget (CHF million)	2004 Budget (CHF million)
Payments for combined transport (train path price reductions and orders including rolling road)	189.3	203.2
Train path price reductions for wagonload services (WS)	67.3	66.3
Investments in terminals *(loans/payments)*	39.1 35.0	28.4 20.7
Additional HGV checks	20	20
(Private sidings)	19.9	17.8
Total	**370.8**	**356.4**

The great majority of means are used for trans-Alpine rail freight in accordance with the targets set out in the Traffic Transfer Act.

6. International projects for the improvement of the quality of the rail freight axes running through Switzerland:

IQ-C Working Group: International Group for the Improvement of the Quality of Rail Freight Transport in the North-South Corridor

On 9 January 2003, the Memorandum of Understanding for the Improvement of the Quality of Rail Freight Transport in the North-South Corridor was signed in Lugano by the Netherlands, Germany, Italy and Switzerland. All measures for the improvement of quality agreed in Lugano are being implemented according to plan at an intensive level. The co-operation between the representatives of the four ministries in the IQ-C working group is very good. A progress report was prepared which was taken note of by the transport ministers of the four countries involved.
The following 14 measures have been proposed and are examined in the framework of the project:

- Corridor Control Center
- one-stop-shop
- transparency of the train path price
- integrated planning of the timetables
- making the prioritisation of services more flexible, in particular with regard to delays
- corridor-specific locomotive fleet
- cross-border use of locomotives and train drivers
- better co-ordination and flow of information in the daily planning and dispatching of the railway undertakings
- analysis and planning of the capacity of the North-South corridor
- removal of bottlenecks and optimisation of the capacity of the North-South corridor
- extension of the simplified customs procedure
- reciprocal recognition of train driver training and licensing
- reciprocal recognition of locomotive registrations
- market observation aimed at avoiding distortion of competition

Since the ministerial meeting the working group has held a number of meetings (with representatives from all countries) in which the railway undertakings, customs authorities, market observation authorities and infrastructure managers of the corridor countries also

took part. Currently, the measures are implemented together with different participants in the following areas:

- Measures under the responsibility of the states:
  study on the reciprocal recognition of traction units and traction unit drivers to be prepared by an external contractor; discussion, examination and implementation of a proposal made by the Swiss customs authorities to ensure that the simplified customs procedure is applied to Community goods and accessible to all freight services.
- Measures under the responsibility of the infrastructure managers:
  following up of different measures of the infrastructure managers such as the further development of the one-stop-shop, transparency of train path prices in the corridor, capacity planning and removal of capacity constraints in the corridor, enhancing the flexibility of the priority rules; consideration of the possibility of introducing uniform conditions of use for the corridor rail network.
- Measures under the responsibility of the railway undertakings:
  consideration of the possibility of locomotive fleets, cross-border operation of locomotives and improved data exchange.

7. Summary assessment

The main function of the Swiss crossings is to connect the ARA ports and the industrial areas along the Rhine with the Milan area as well as the Lombardy and Piemont. Both the economic potential of these centres and Switzerland's active modal shift policy offer great potential for rail freight transport on the Lötschberg-Simplon axis and the Gotthard axis. Through the opening to traffic of the New Rail Link through the Alps (NRLA) and the resulting additional infrastructure capacities the axes will gain in importance.

Against this background and in the framework of the Swiss modal shift policy, measures similar to those defined in the "Brenner Action Plan" are already being implemented on the Swiss crossings. The international co-ordination of the measures is primarily the responsibility of the IQ-C Working Group. In contrast to the measures of the "Brenner Action Plan", these measures cover the entire transport routes from the Netherlands to the destination areas in Italy.

Some of the individual measures that are part of the packages of measures set out in the "Brenner Action Plan" are not only implemented on the Brenner axis but also on the Swiss crossings (even though not simultaneously). The activities set out in the packages of measures are to a large extent the responsibility of the railway undertakings (e.g. axis-oriented traction concept) or the infrastructure managers (e.g. corridor operating control centre). The Government has to provide incentives for quick implementation. The provision of financial support for the upgrading of unaccompanied and accompanied transport infrastructure as well as the tackling of interoperability issues (recognition of traction units and their drivers) are the responsibility of the Government.

VIII/7/1/1/1c

TRANSPORT POLICIES IN ITALY

WITH PARTICULAR REFERENCE TO WORKS RELATING TO THE TRANSALPINE CORRIDORS

June 2004

GENERAL PROGRAMMING AND POLICIES

1.1. General Transport Plan and "Target Law"

The General Transport Plan ("GTP") has identified a series of operations aimed at modifying, so far as possible, the redistribution of transport methods in favour of the railway system and with greater consideration to goods transport.

In compliance with the objectives and guidelines set out in the Transport Protocol in various parts such as:

- Art. 1: aims - point a)
- Art. 7: General strategy for transport policy - point 1a)
- Art. 10: Rail and boat transport - point 1 a), b), c), d), e).

the relevant strategies for environmental and international transport policy are:

- development of the potential for rail goods transport across the Alpine area, also in conjunction with the principal Northern Italian ports;
- creation of routes that make it possible to develop North-South goods transport by rail with design characteristics that are adequate for transport of containers and mobile crates (also high-cubes), linked with the hub ports of Gioia Tauro, Taranto, Genoa, Trieste (rail freeways) and the principal Alpine border crossings.
- Upgrading the system of road-rail interchange centres in southern Italy according to a technical and functional classification of the centres themselves (interports, intermodal centres and logistical hubs) and taking into account the potential user areas.

These operations relate, in the first place, to the **railway border crossings and their access lines** for which the GTP identifies the following operations:

Alpine railway border crossings system and their access lines

- Upgrading all of the current Alpine links - the new Modane border crossing and access line with the infrastructural and technical upgrading of the Turin-Modane line and the Turin goods belt to resolve the bottleneck on the Turin-Modane route; the Brennero base tunnel and access line; a new access line on the Italian side of the Gottard tunnel to create a route with greater capacity linking Switzerland and Central Europe, which is connected with the new Gottard and Loetcheberg base tunnels in Switzerland; completion of track-doubling on the Genoa-Ventimiglia line, goods transport improvement operations for the access line to the Simplon, completion of track-doubling the Bologna-Verona and Tarvisio - Pontebba lines.
- Upgrading the link from the port of Genoa and Liguria to the Po Valley and the Simplon and Gottard border crossing and upgrading the Gronda North in Milan.

Longitudinal rail links

- Quadrupling AC of the Turin-Milan-Rome-Naples main route.
- Operations on the Tyrrhenian coastal route Genoa – Rome - Naples – Battipaglia – Reggio C.–Messina – Palermo and Messina – Catania - Siracusa branch: upgrading Pisa-Livorno, quadrupling the Naples-Salerno-Battipaglia line and upgrading the Battipaglia-Reggio

Calabria line to permit an increase in North-South goods traffic, completion of the track-doubling on the Catania-Messina line and track-doubling at the most heavily used terminals on the Palermo – Messina line;

- Operations on the Adriatic coastal route Venice – Bologna – Rimini – Bari – Taranto and Lecce (completion of track-doubling along the Adriatic coastal line and connection with the port at Taranto).

As it is universally accepted that the shifting of demand from road to rail can only take place through a widespread use of intermodal systems, the GTP provides for a consistent upgrading of the **system of interports and goods centres.**

System of Alpine border crossings and access lines

Route	**Works**
Ventimiglia-Genoa	- Completion of track doubling and technological upgrading
Modane	- Infrastructural and technological upgrading Turin-Modane - Turin goods belt - New border crossing and access line - Upgrading Aosta-Chivasso
Simplon	- Improvements for goods transport (Domodossola-Luino-Novara-Ovada-Genoa line)
Gronda North Milan	- Gronda West
Genoa-Milan	- Third border crossing (Genoa-Arquata) – functional phase - Upgrading Tortona-Voghera
Brennero	- Completion of track doubling Verona-Bologna - New base tunnel and access line
Chiasso-Milan (Gottard)	- Upgrading Milan-Chiasso, Gronda East and southern belt of Milan (phase) - New line and access to tunnel
Tarvisio-Pontebba	- Completion of track doubling and technological upgrading

Source: General Transport and Logistics Plan – January 2001

So far as operations on the **road sector** are concerned, the GTP has concerned itself almost exclusively with identifying operations for improving the existing road network.

These improvements are necessary as a result of safety requirements and to resolve obvious bottleneck situations that cannot be ignored (as set out in art.7 "General strategy for transport policy" - point 2 d) of the Transport Protocol).

In relation once again to the Alpine area and to the Italian road network, the operations relate to:

Works examined relating to the Northern Network

N°	**Road**	**Section**	**Length of works (km)**
UPGRADING OPERATIONS ON EXISTING MOTORWAYS			
3 4	A4 A28	Turin-Milan Sacile-Conegliano	126 13
NEW ROADLINKS			
6 7 8		Asti-Cuneo Lombard mountain foothill route Brescia-Bergamo-Milan	73.2 90 61

9 10		Veneto mountain foothill route Mestre loop road	60 8.5

Source: General Transport and Logistics Plan – January 2001

The "Target Law" was passed in 2002, supplementing the contents of the GTP with new infrastructural operations. A specific heading is set aside for discussing this document.

Insofar as **transport policy** operations, and therefore the regulation and control of medium to long distance transport, the GTP sets out a series of indications and guidelines that aim to apply the principle of internalisation of existing costs (in compliance with the provisions of the art.10 (point 1c) of the Transport Protocol). It does not identify specific operations but refers the problem to a specific analysis.

1.2. General policies for the Alpine border crossings

Studies carried out at European level demonstrate that the transport of goods by rail has diminished by 23% in terms of t-km between 1970 and 1995. Over the same period there has been an increase of 150% on the road.

There has also been a strong increase in transalpine traffic which has tripled over the last 25 years. The traffic in France, Switzerland and Austria has increased from 28.2 Mt/year in 1970 to more than 112 Mt/year in 1995.

The breakdown by mode of transport confirms the loss in market position of the railway. While the quantity transported increased from 42.4 Mt in 1990 to 49.0 Mt in 1997, it lost in terms of its share of the market from 21.5 in 1990 to 17.8 in 1997.

The European Union has for some time been seeking strategies to bring a large amount of goods traffic which is now on the road back to the railways. In particular, the agreement recently reached between Switzerland and the European Union brings European policy into line with Swiss policy and harmonises the measures necessary to rebalance traffic flow over the whole Alpine area.

In Italy, the General Transport and Logistics Plan (GTLP) sets out objectives of the same nature in order to stem the exponential growth of road traffic and its concentration on the major routes.

Transport policies aimed at transferring traffic from road to rail are essential in order to achieve the objective of substantially modifying the present situation. Without them the investments envisaged (current position plus project) are only capable of preventing the further decline in the rail quota (from 38% in the current situation to 33% in the trend situation), being sufficient only to maintain current levels and only partially to improve them to around 40%.

To this is added the desire to develop the use of long and short distance rail traffic in order to reduce pollution levels, in accordance with the Kyoto commitments. In effect, gas emissions and the greenhouse effect have increased over the last few years, above all by the contribution of transport in CO2 emissions. It is therefore necessary to encourage policies for altering transport methods in the face of these trends.

On the Italian side, in particular, benefits could be obtained by the improvement of regional rail links with residential areas along the valleys, providing conditions for the reduction of commuter traffic on the road. It would also be possible to make considerable improvements to the quality of the environment by replacing goods transport by road along the routes in question with rail transport.

1.3 The "Target Law"

The Ministry for Economics and Finance, by Resolution no.121/01, set out the first Strategic Infrastructures Programme.

The Programme is a formal supplement to the General Transport and Logistics Plan, approved by Presidential Decree on the 14 March 2001.

It takes the form of a detailed plan for the programming of public works which are considered to be of strategic importance in Italy. The plan had been previously anticipated in the Economic and Financial Programming Document 2002-2006, which provides an estimated figure of 51,645 million Euros in 5 years, with state funding of 50% and funding for the remaining 50% by way of project-financing.

This relates to operations of a multi-modal nature involving both upgrading works to the road system as well as works to the railway networks and underground transport systems in the major cities.

An intervention plan has been drawn up with the relative cost forecasts relating to the transport system in the Alpine area, included in the specific heading dedicated to "Border crossing system". This provides for an overall expenditure of **Euro 227.2 million** before the end of 2004.

Within this framework, the priority works have been selected as part of plans for upgrading the TEN (Trans-European Network) financed by the EU:

- Brennero corridor, with new rail tunnels and upgrading of the Munich-Bolzano-Verona motorway route and a new Mantova-Parma by-pass;
- Corridor 5, with a new railway tunnel of the Lyon-Turin-Trieste high speed railway and upgrading of the Turin-Milan-Brescia-Venice motorway;
- Development of the “Autostrade del Mare” coastal motorway system, with upgrading of north-south coastal services and the ports concerned.

2. GENERAL STRATEGIES

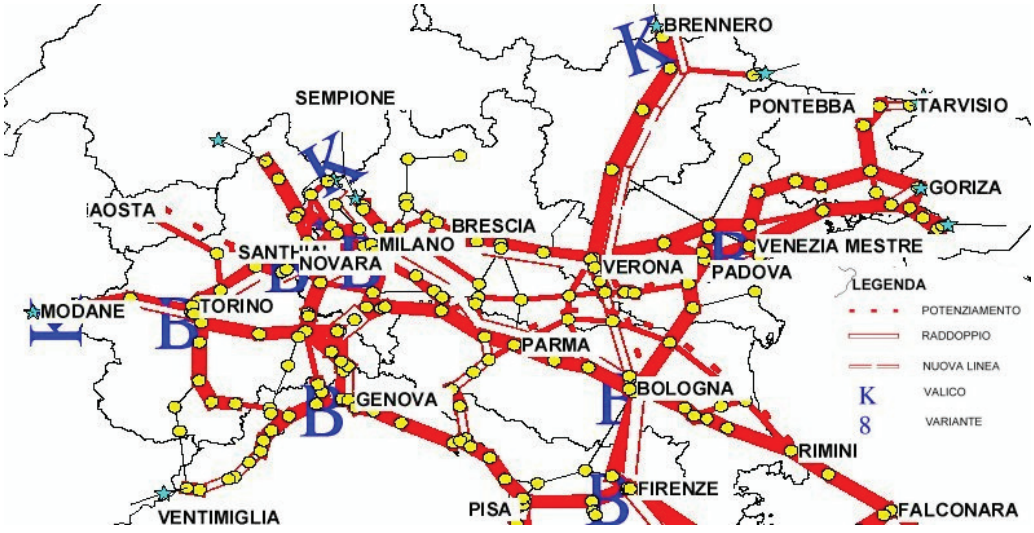
The significant strategies for environmental and international transport policy are:

- development of the potential for transporting goods by railway across the Alpine area, also with links to the main northern Italian ports;
- creation of routes that make it possible to develop the North-South transport of goods by rail with design characteristics that are adequate for transport of containers and mobile crates (including high-cubes), with connections to the hub ports of Gioia Tauro, Taranto, Genoa, Trieste (rail freeways) and the principal Alpine border crossings;
- upgrading the system of road-railway interchange centres in Southern Italy according to a technical and functional classification of the centres themselves (interports, intermodal centres and logistical hubs) and taking into account the potential user areas.

2.1. The principal works to the railway network

The works considered in the GTLP analysis have been selected by starting with State Railways programmes as well as Community intervention frameworks and the proposals by area authorities who have responsibilities relating to the National Integrated Transport System (SNIT) network.

Works on the railway network



traduzione:
legenda = key
potenziamento = upgrading
raddoppio = track doubling
nuova linea = new line
valico = border crossing
variante = improved route

Alpine border crossings and access lines

Route	Works	Residual cost estimate (*) from 1-1-2000 (†)
Ventimiglia-Genoa	- Completion of track doubling and technological upgrading	2,070
Modane	- Infrastructural and technological upgrading Turin-Modane - Turin goods belt - New border crossing and access line (1) PARTIAL TOTAL - Upgrading Aosta-Chivasso (**)	360 1,500 3,800 *5,660* (2)
Simplon	- Improvements for goods transport (Domodossola-Luino-Novara-Ovada-Genoa line)	140
Gronda North Milan	- Gronda West	280
Genoa-Milan	- Third border crossing (Genoa-Arquata) – functional phase (4 bis) - Upgrading Tortona-Voghera PARTIAL TOTAL	2,700 400 *3,100*
Brennero	- Completion of track doubling Verona-Bologna - New base tunnel and access line (3) PARTIAL TOTAL	1,400 5,000 *6,400*
Chiasso-Milan (Gottard)	- Upgrading Milan-Chiasso, Gronda East and southern belt of Milan (phase) - New line and access to tunnel PARTIAL TOTAL	2,000 3,000 *5,000*
Tarvisio-Pontebba	- Completion of track doubling and technological upgrading	200
	TOTALE COSTO DEL SISTEMA	*22,850*

Source: General Transport and Logistics Plan – January 2001

(*) Cost necessary for carrying out or completing the work.
(†) Costs set out in thousand millions of Italian Lire
(**) Works indicated in the recommendations of the permanent parliamentary commissions, not submitted for evaluation.
(1) The estimate of cost relates to the first functional phase.
(2) Sum to be ascertained
(3) The estimate related to approximately 40% of the total cost of works.
(4 bis) For these works the market estimate is 4,500 thousand million lire.

In the "Target Law", the works and related expenditure forecasts relating to the transport system in the Alpine area are included under the specific heading dedicated to "Border Crossing System", which provides for an overall expenditure of **Euro 527.2 million** before the end of 2004:

WORKS	COST (millions of Euro)	EXPENDITURE FORECAST (millions of Euro)
Safety tunnel Frejus Tunnel	167.8	5.2
Upgrading Frejus Pass	1,807.6	74.0
Upgrading Simplon Pass	1,807.6	74.0
Upgrading Brennero Pass	2,582.3	74.0
Upgrading Mont Blanc Tunnel	516.5	300.0

Other works in the Alpine area envisaged by the "Target Law", which do not however provide for expenditure forecasts for the works, are:

- Connection between Cuneo-Nice;

- Connection between Venice-Udine-Vienna

2.2. The "rail freeways" project

The rail freeways project establishes a series of international rail routes for goods services, linking the major European ports from north to south, and east to west, as well as connecting various important cities with the same ports. There are various important corridors in Italy, involving principally the two coastal lines and the Frejus-Turin-Milan (Bologna) line.

The corridors must have three fundamental characteristics:

1. the service operators must be able to obtain access through a single organisation (this is known as the one-stop shop- OSS);
2. there must be a guaranteed commercial speed of 60 km/h and clearly established journey times;
3. access to the corridors must be liberalised so as to permit competition between various operators.

From the infrastructural point of view, it is envisaged that the States and the authorities owning the rail networks will carry out upgrading operations, including major works, in the event of demand expanding at a consistent pace.

Nevertheless, two years after the agreement between European ministers, the project remains inactivated. The objective technical difficulties are due to the behaviour of several key countries. For example, transit tolls have been established that are so high as to make it impossible to outside operators to have access. More generally, these operators find it too risky competing with organisations which are still not subject to stringent accounting controls imposed by company separation or even privatisation of the "goods" companies.

By way of extremely brief outline, the freeways project:

- imposes a system of infrastructural operations;
- functionally connects the Mediterranean area and southern Italy with northern Europe;
- puts into perspective the problems of the Alpine border crossings in a strategic and functional context;
- favours the railway system;

2.3. THE PRINCIPAL WORKS TO THE ROAD NETWORK

The policy of upgrading the road system is based on the strategic objective of transferring passenger and goods traffic from the Central Italy traffic route (A1 motorway) to the Adriatic coastal route (the "Romea" State Highway + A14 motorway) and the Tyrrhenian-Brennero route (A22+A15+A12 motorways), without excluding improvement works to the A1 itself, with the creation of a new border crossing and the third lane of the Rome-Orte motorway.

Upgrading works are also proposed for the motorway and dual carriageway network crossing and entering highly urbanised areas: the Bre-Be-Mi (Brescia-Bergamo-Milan) system, the creation of the Mestre loop road, the Genoa and Bari bypasses and the roads into the centre of Trieste.

Works on the road network that affect the Alpine corridors

N°	Road	Section	Length of works (km)	Priority	Cost of works (†)
WORKS ON ANAS ROADS AND MOTORWAYS					
1	R26	Gorizia-Villese	17	no	not available
-	SS36+37	Monza-Villa di Chiavenna	78	no	not available
-	SS434	Intersection A4 (Verona)-A13 (Rovigo)	77	no	not available
		TOTAL	*172*		
UPGRADING WORKS ON EXISTING MOTORWAYS					
2	A5	Aosta-Quincinetto	58	no	not available
3	A4	Turin-Milan	126		940
4	A28	Sacile-Conegliano	13		250
5	A1	Bologna-Florence	85		5,800
		TOTAL	*282*		
NEW CONNECTIONS					
6		Asti-Cuneo	73.2		1,618
7		Lombard mountain foothill route	90		3,800
8		Brescia-Bergamo-Milan	61		1,580
9		Veneto mountain foothill route	60		1,500
10		Mestre loop road	8.5		1,564
11		Rovigo-Vicenza	53	no	not available
12		Thiene-Trento	63	no	not available
13		Parma-Mantova	50	no	not available
14		Genoa interchange	90		3,000
		TOTAL	*548.7*		

(†) Costs set out in thousand millions of Italian Lire

Source: Ministry of transport and navigation – January 2001

France's Contribution to the « Corridors » Sub-Group of the Alpine Convention

Trade between Northern Europe, notably the Benelux countries, on the one hand, and Italy, on the other hand, make up a major part of European rail traffic. Several Italian freight corridors link the great traffic points of these areas. It is clear that ***there are strategic stakes for European rail freight development, via these various freight corridors,*** because of the potential traffic involved and major projects seeking to increase infrastructure capacity on the given routes, including some currently under construction,.

1- Inventory of existing corridors:

At the heart of one of Europe's hubs of affluence, great transport corridors link Northern ports to Italy, and not only by rail. Main roads linking the major Belgian, Dutch and German North Sea ports to Northern Italy group together nearly one third of European traffic, including the various routes of the busy Antwerp/Rotterdam-Lombardy corridor that make up over 10% of this traffic. In this context, more than 60% of combined traffic (including moving road services) crosses the Alps.

There are two major rail routes enabling to reach Italy from one of the two great Benelux ports. The first is a dual route through Germany and Switzerland (via the Loetschberg and Simplon tunnels, as well as the Saint Gothard Tunnel), the second route crosses Belgium, Luxembourg and France.

They have similar lengths, but the Rhine route seems to have the best assets. Its heavy traffic uses both banks of the Rhine, totalling 150 to 200 freight trains per 24 hours, including more than a third in international transit. 75% of this traffic uses the Saint Gothard Tunnel, while the rest flows through the Loetschberg and Simplon tunnels. Traffic in transit via Switzerland is very important for the Swiss railway network, as it makes up 35% of CFF Cargo (a historical company) traffic, with over a hundred trains a day, including almost half from or heading towards Northern ports.

It is expected that this route will eventually be too congested, thus requiring the use of other routes. This has already led to strengthening capacity via major new projects, notably between Karlsruhe and Basle. On the Swiss side, Saint Gothard line capacity is planned to be increased by 25% (excluding the base tunnel).

The French North-South rail transit route crosses Lorraine and reaches Basle mainly via Metz and Strasbourg. There is heavy Benelux-Italy traffic on this route, with over half of freight carried in combined traffic. There are other routes for similar traffic, via Modane, the Moselle train path and Dijon, as well as the Maurienne line. Belgium-Italy North-South traffic volume distribution between routes via Basle and Modane is 57% / 43% and 65% / 35% in the opposite direction.

These various North-South routes will use or will be linked to East-West feeder lines, such as the « Betuwe Lijn » (line that will link Rotterdam with the German border in 2007), « Steel Rhine » line for the port of Antwerp or the so-called « Athus-Meuse » line; a new route recently put into service between Namur and Luxembourg.

Modane and Basle are the two major gateways for French or transit trade traffic to Italy. It is clear that the Basle junction is a real North-South rail traffic hub, but is also an extremely critical congestion area because of such heavy existing and future traffic. If today less Benelux-Italy traffic flows via Modane, future growth problems for routes via Basle must strengthen the long-term position of the Modane line and its available capacity, thus appropriate operational measures must be implemented.

2- Netherlands-France corridor study:

Today, there is only limited goods rail traffic between Rotterdam, other Northern ports and France. However, it would be useful to provide pertinent freight routes throughout Europe and highlight the great French North-South ECO-FRET rail corridor, within the prospect of creating high-performance freight routes such as the Lyon-Turin and Perpignan-Figueras projects.

In order to meet economic sector requirements, the Dutch Ministry of Transport approached its French counterpart to work jointly on an international rail freight corridor between Rotterdam and France (notably the Dijon and Lyon areas, including the Franco-Italian border crossing at Modane), using the great « ECO FRET » line in France.

France therefore showed interest in this common work between states involved in a Rotterdam/France corridor and is willing to actively take part in defining an action plan that aims to improve given freight routes.

These works aim to:

- assess the potential market of such a route and conditions required to help this market grow;
- define a short-term and medium-term (5 years) action plan within the scope of public authorities;
- lead to signing a memorandum of understanding between involved states, as has already been the case between the Netherlands, Germany, Switzerland and Italy for the Rotterdam-Milan corridor.

After several meetings between Dutch, Belgian and French ministry departments, specifications were prepared to perform a study, supporting future reflections, which is planned to be conducted within the next few weeks.

3- Strategy of rail operators:

It is clear that the great Transalpine trade corridors offer growth opportunities to new rail operators after the liberalisation of the rail freight market.

The latter is notably true on great Transalpine rail transit routes via Switzerland and Austria and on which a sometimes complex partnership network (takeovers, trade agreements, ordinary technical structures, etc.) is being forged between old and new railway companies. These partnership agreements can enable historical operators to access certain markets that were previously closed to them and strengthen their positions in relation to their competitors.

We should also mention the co-operation being implemented between various infrastructure managers, within the RAIL NET EUROPE association framework. This association continues and extends the aim of co-ordinated action between infrastructure managers of operating European railway networks and thus meets the requirements of provisions in article 15 of the 20001/14/CE directive. ***International co-operation between infrastructure managers can only stem from a future vision of corridors. Despite the numerous meanings covered by this notion, a corridor aims to fluidify traffic and requires co-ordinated work between various participants.***

RAIL NET EUROPE started analysing available capacity in a 2003 study and this is being continued by the UIC, for the following routes:

-Rotterdam-Genoa via Hemmerich, Cologne, Karlsruhe and Basle
-Antwerp-Milan via Athus/Bettembourg, the Alsace plain and Basle
-Metz-Milan via Dijon and Modane.

Finally, note that at the end of 2003 (until 2007), an experimental rail highway service was set up between Aiton (France) and Orbassano (Italy) via Modane. This service uses the MODALOHR system, equipped with low-floor carriages, but with standard-size wheels, and offers four trips a day. It can only be accessed by a small section of road traffic (mainly tankers), because of the limited size of the Mont-Cenis railway tunnel until 2007. That year, the setting up of a suitable gauge (work is currently in progress) will enable most of the road traffic to be carried on this route.

4-Actions aiming to improve short-term free flow:

Apart from major projects for creating new lines, which will greatly improve infrastructure capacity, any increased rail traffic fluidity along these various routes is dependent upon railway company or infrastructure management partnership agreements, resulting in actions that enable to improve interoperability and various works that strengthen infrastructure on existing routes.

The first aspect was mentioned above (point 3)

As far as interoperability is concerned, there are notably already interoperable engines running at both ends of several trains between France and Italy. The transport plan is also being adjusted to improve performance, thanks mainly to increased complementarity of train paths available in both countries and a better awareness of client requirements. Various

operational measures seek to improve the quality of services (for example, a shortened parking term at the Modane border point and a joint Franco-Italian structure monitoring services in that station). Also, on the Bettembourg-Basle route, operation rationalisation and interoperability measures are currently being implemented. There have already been concrete results in organising train paths and interworking between engines.

Various actions aiming to improve infrastructure capacity are currently under way in France. First of all, in order to improve traffic flow at Modane, the Mont-Cenis Tunnel is being upgraded to a B1 gauge in 2003/2007 and other tunnels are also being upgraded between Chambéry and Turin. Also, Maurienne line infrastructure is being improved via the upgrading of access lines to the future base tunnel and these works are part of modernisation operations on the Dijon-Chambéry-Modane-Turin route currently being built or planned by Réseau Ferré de France and its Italian railway counterpart (larger tunnels, modernising and increasing the safety of signalling, improving train monitoring, new developments at several points along the route, etc…).

French infrastructure along the route linking Bettembourg to Basle is also enjoying short-term improvement. Thus, the « Athus-Meuse » freight route will soon offer a new extension via a new western line on the French network, which will enable to relieve traffic congestion on the existing Moselle train path.

5- Conclusions: French proposals:

Previous paragraphs enabled us to become aware of the strategic importance of the great Transalpine corridors. First of all, we must precisely examine how existing corridors operate:

- characteristics of traffic flow involved,
- present operators and their strategies,
- setting up measures to fluidify traffic (i.e. Brenner Plan) and the effects of these measures.

France is ready to grasp the opportunity of developing a great North-South Transalpine corridor in transit on its territory.

It considers that a western Transalpine corridor concept must be taken into account, linking the Belgian and Luxembourg borders with Modane, via the so-called « Magistrale ECO-FRET » route, which thanks to its operational and infrastructure improvements offers significant assets for becoming a high-performace route, before the building of the new Lyon-Turin line.

Within this framework, a similar approach to the one for the Brenner Plan could be undertaken:

- characteristics of traffic flow involved,
- present operators and their strategies,
- identifying problems affecting traffic flow and measures required to find solutions.

France **Mont Cenis/Fréjus: Lyon- Turin**

Function:

The Maurienne corridor's main function is to enable trade traffic to flow between several French regions, the port of Le Havre, the United Kingdom and Belgian ports, but also the Iberian Peninsula and Italian ports and the main economic centres of that country.

Measures that can be applied from the « Brenner 2005 » action plan:

- Strengthening co-operation between railway companies in order to speed up and increase the viability of the Modane border crossing
- Developing interoperability, notably for engines
- Setting up a co-ordinated transport plan between both countries
- Experimenting a rail highway service during gauge upgrading works (the experiment between Aiton – France and Orbassano – Italy started in November 2003, with a daily service of 4 return trips).
- Gauge upgrading works enabling to attain B1 size by 2007, which would authorise transport of most road goods vehicles

Modal traffic distribution (source: Alpinfo)

In 1994, total traffic = 34.2 million tons, including:

- Rail, full carriages = 13%
- Rail, unaccompanied combined transport = 10%
- Road (via Mont-Blanc and Fréjus tunnels) = 77%

In 2002, total traffic = 34 million tons, including:

- Rail, full carriages = 13%
- Rail, unaccompanied combined transport = 12%
- Road (via Mont-Blanc and Fréjus tunnels) = 75%

Function:

This corridor's chief function is to link several French regions, but mainly the Provence-Alpes-Côte d'Azur Region, as well as Spain to Italy.

This corridor has very limited freight capacity because of high passenger traffic (major international and regional lines)

Measures that can be applied from the « Brenner 2005 » action plan:

No measures in particular, because of the rather secondary character of this corridor.

Modal traffic distribution (source: Alpinfo)

In 1994, total traffic = 10.4 million tons, including:

- Rail, full carriages = 10%
- Rail, unaccompanied combined transport = 0
- Road = 90%

In 2002, total traffic = 15.5 million tons, including:

- Rail, full carriages = 6%
- Rail, unaccompanied combined transport = 0
- Road = 94%

Bundesministerium
für Umwelt, Naturschutz
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VIII. Tagung der Alpenkonferenz
16 November 2004, Garmisch-Partenkirchen

TOP 7

Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 1/1e
Brenner 2005 Action Plan
(VIII/7/1/1/1e)

Action Plan

(Final version as agreed upon at the 3rd workshop in Berlin on 28/29 October 2002)

Action Plan aimed at achieving, by 2005, an increase in trans-alpine rail freight and, in particular, combined transport in the Germany-Austria-Italy corridor

Preamble

For decades goods transport across the Alps has been under particular pressure because of the need to reconcile economic and ecological interests. This pressure will increase further if - in accordance with current forecasts - trans-alpine traffic grows by approximately another 70 % in the period from 2000 to 2015.

About two thirds of the current freight volume pass in transit through Austria. The Brenner axis plays a dominant role here. The modal split shows that more than 70 % of all freight is carried by road across the Brenner. The traffic volume on the Brenner increased by more than 60 % between 1989 and 2001.

In the same period, the rail freight volume across the Brenner increased by 170 %. This positive development could only be achieved due to the high growth rates in combined road-rail transport which improved its share of the overall rail freight volume from 40 % (1989) to more than 75 % (2001). Conventional rail freight, on the other hand, has been characterized by a rather stagnating trend since the beginning of the nineties.

However, in recent years, the growth dynamics of unaccompanied combined transport in particular, have not lived up to the expectations. This is due, on the one hand, to infrastructure obstacles such as capacity bottlenecks on the rail network and at the key terminals for combined transport between Germany and Italy and, on the other hand, to deficiencies in cross-border coordination.

One of the main reasons is the sometimes less than satisfactory performance of the railways in terms of their operating quality, which clearly limits the competitiveness of combined transport in logistically demanding market segments. Moreover, the

performance deficiencies also have a negative impact on the productivity of the resources used (locomotives, wagons, transhipment terminals, personnel).

Protocol No 9 of the Act of Accession of Austria to the EU stipulates that the Ecopoints system introduced in 1992 for the transit of heavy goods vehicles through Austrian territory is to be applied for a transitional period. In this context, the European Community and the Member States concerned have also committed themselves to taking measures within their sphere of competence to improve the level of service provided in rail freight and combined transport across the Alps.

As requested by the Laeken summit, the Commission proposed the introduction of a temporary regulatory system for alpine transit to be applied for a further limited period. The proposal is currently being examined by the Council and the European Parliament.

Against the background of the current problems in trans-alpine goods transport, the transport ministers of Germany, Austria and Italy, Kurt Bodewig, Mathias Reichhold and Pietro Lunardi, as well as the Greek state secretary Ioannis Konstantinidis met in Berlin on 5 July 2002 and agreed to convene three working groups. Germany chaired one working group that examined the possibilities for short- and medium-term measures to increase trans-alpine rail freight. Discussions among all relevant stakeholders from industry and the administration were held during a number of workshops, and the main priority was coordination of measures to promote combined transport on the Brenner axis in the Germany-Austria-Italy corridor. An analysis of problems elaborated beforehand served as their basis of discussions.

The results were summarized in the "Brenner 2005" Action Plan which contains a list of measures required to organize and ensure the short- to medium-term upgrading of the level of service provided in combined transport in this corridor. From the point of view of all those concerned, this Action Plan is the most important prerequisite for the achievement of the objective to increase by 2005 combined transport on the Brenner axis by at least 50 % as compared to 2001 figures. Thus, it would be possible to shift the expected growth in the road haulage sector away from the roads. The Action Plan also takes up measures and projects to improve the competitiveness of rail freight on the Brenner axis, which have already been started or planned. It consolidates these

approaches, supplements them by additional actions and supports them by means of an implementation plan that is aimed at the objective of bringing about a modal shift.

By adopting this Action Plan, all parties concerned expressly commit themselves to applying a coordinated procedure to increase capacity and improve the competitiveness of trans-alpine rail freight. However, infrastructure projects will only be realized if their planning and funding are feasible.

The Action Plan sends a signal to shippers, forwarders and carriers encouraging them to continue and increase their efforts to include combined transport on the Brenner axis in their logistic concepts.

"Brenner 2005" Action Plan

The "Brenner 2005" Action Plan comprises three packages of measures:

Package of measures I

Measures with top priority whose implementation will be initiated immediately and which will consolidate the competitiveness of combined transport - and in particular unaccompanied combined transport: these measures comprise pragmatic actions to improve and stabilize the quality of services and to eliminate serious capacity bottlenecks:

1. Improvement and intensification of the cooperation that has already begun between railway undertakings, including infrastructure managers

2. Improvement of communications and data exchange to optimize the interfaces between the parties involved and to optimize resource control and customer information

3. Introduction of an overall quality management system

4. Removal of bottlenecks in operations (movements, terminals)

Package of measures II

Measures which will be implemented in the short term and which will improve the competitiveness of unaccompanied combined transport thus creating the basis for opening up additional transport markets. They comprise primarily activities to enhance the quality of services (transport time, pathing) and efficiency to improve the market viability of services as well as a continuous expansion of the range of combined transport services provided.

1. Development and implementation of a seamless axle-related traction concept (interoperability)

2. Expansion of services in unaccompanied combined transport and further adaptation of the quality characteristics to the requirements of the market

3. Joint appraisal of the prospects of services in accompanied combined transport (rolling road) and coordination of short- to medium-term expansions of services

Package of measures III

Measures which can mostly be realized in the medium term and which form the basis for a long-term growth of combined transport as a whole: activities of this kind are aimed at enhancing the capacity in terms of pathing, traction and transhipment while taking the interrelationship between accompanied and unaccompanied combined transport into account.

1. Coordination and appraisal of the actual availability of paths on all relevant network sections and at all junctions affected for further increases in traffic

2. Upgrading and modernization of the railway infrastructure (lines, junctions)

3. Improvement of rail links to and increasing transhipment capacity at the CT terminals in Italy and Germany

"Brenner 2005" Action Plan monitoring

The transport ministers will agree to observe, monitor and support the implementation of the measures compiled in the Action Plan in their respective spheres of competence and to encourage their competent national organizations to act accordingly.

A follow-up meeting for the ministers to discuss the progress made and potential further measures will be held in Berlin in the autumn of 2003. For this purpose, Germany will function as a coordinator and will present a joint report.

In order to enable the coordinator to prepare this report, all parties concerned will inform him before 30 June 2003 on the status of all measures taken and projects initiated.

Annex:

Detailed description of the packages of measures

Brenner 2005 – Package of measures I

Measures to achieve and secure a marketable quality of service in combined transport – especially in unaccompanied combined transport – with implementation to begin immediately (start of implementation before the end of 2002)

1. Improvement and intensification of the cooperation that has already begun between railway undertakings, including infrastructure managers

1.1 Immediate removal of existing traction bottlenecks by providing sufficient resources (locomotives and drivers)

Responsible: BRC

1.2 Ensuring the availability of the resources required for Brenner transit, i.e. locomotives and drivers, by means of service guarantees, incl. an agreement on penalties

Responsible: BRC

1.3 Widening the terms of reference of the Brenner service agency to cover the fields of resource control and optimization of organization

Responsible: BRC

1.4 Simplification and/or standardization of administrative procedures and removal of operational obstacles at border crossings by standardization the regulations of the infrastructure managers and transport operators

Responsible: Network Working Group
Involved: BRC and railway undertakings

2. Improvement of communications and data exchange to optimize the interfaces between the parties involved and to optimize resource control and customer information

2.1 Evaluation and prioritization of the existing weak points in the fields of communications and data exchange and preparation of an action plan

Responsible: BRC

2.2 Optimization of the quality/validity in data collection and transmission between CT operators and railway undertakings, both among each other and between the players

Responsible: BRC

2.3 Elimination of existing manual interfaces in the exchange of operational data

Responsible: BRC

2.4 Provision of reliable information on train location and out-of-course running by the infrastructure managers

Responsible: Network Working Group

2.5 Development of a computerized system which, in the event of delays, can be used to provide timely information to CT customers on the time at which the loading units are likely to be available at the arrival terminal ("estimated time of availability")

Responsible: RCA
Involved: railway undertakings, Network Working Group, Cemat, Ökombi and Kombiverkehr

3. Introduction of an overall quality management system

3.1 Elaboration of seamless quality assurance measures

Responsible: BRC
Involved: Network Working Group

3.2 Conclusion of quality agreements (determination of service commitments, development of rules for measuring and evaluating the quality of service and development of a system of penalties

Responsible: BRC
Involved: Network Working Group

3.3 Development of a computerized quality management system

Responsible: BRC
Involved: Network Working Group

4. Removal of bottlenecks in operations (movements, terminals)

4.1 Improved coordination of rail, shunting and terminal operations at Verona Q.E.

Responsible: RFI
Involved: Trenitalia, RTC and Cemat

4.2 Equipping all terminals in Germany and Italy involved in Brenner transit with overhead electrification extending as far as possible into the terminal

4.3 Realization of direct access to/egress from the approach to Verona Q.E. from/to the north (to be commissioned on 12 December 2002)

Responsible: RFI

4.4 Realization of direct access to Trento CT terminal (to be commissioned in the first half of 2003)

Responsible: RFI

4.5 Exploration of the possibility of extending combined transport to other Italian terminals apart from Verona, taking into account the existing network of freight villages (Padua, Bologna and Turin for Northern Italy, Nola and Marcianise for Southern Italy), the origin/final destination of the goods and the possibility of operating trainload services

Responsible: Cemat, Ökombi and Kombiverkehr
Involved: Trenitalia and RTC

Brenner 2005 – Package of measures II

Short-term measures to improve the quality of services and enhance efficiency, accompanied by a gradual expansion of CT services (planning in 2002, implementation by autumn 2004)

1. Development and implementation of a seamless axle-related traction concept (interoperability)

1.1 Efficiency enhancement in the traction field by optimizing the deployment of locomotives, taking into account an economically acceptable deployment of multi-current locomotives, and by developing joint driver training concepts

Responsible: BRC, in coordination with the existing activities of the Network Working Group

1.2 Standardization and simplification of locomotive approval procedures, including existing multi-current locomotives on the Brenner axis

Responsible: RFI (Italy) in cooperation with the Federal Railway Office (Germany) and the Federal Ministry of Transport, Innovation and Technology (Austria), with the participation of the rail industry and railway undertakings

2. Expansion of services in unaccompanied combined transport and further adaptation of the quality characteristics to the requirements of the market

2.1 Timetable improvements to reduce transport times on existing links in order to open up new market segments in unaccompanied combined transport

Responsible: Cemat, Ökombi and Kombiverkehr in cooperation with the Network Working Group, BRC and the railway undertakings

2.2 Improvement and extension of the existing gateway concept by greater interlinking with the national networks in Germany and Italy

Responsible: Kombiverkehr and Cemat in cooperation with the railway undertakings

2.3 Quicker processing of timetable requests: the infrastructure managers' one-stop shopping must be quicker than the processing of individual requests

Responsible: Network Working Group

3 Joint appraisal of the prospects of services in accompanied combined transport (rolling road) and coordination of short- to medium-term expansions of services

3.1 Review and assessment of the capacity utilization and management of all current rolling road terminals along the Brenner axis

Responsible: Network Working Group in cooperation with Bertani, Cemat, Kombiverkehr and Ökombi

3.2 Examination of the existing rolling road services with the aim of extending them, both on the German side in a northerly direction and on the Italian side towards Verona, in order to relieve congestion on the southern side of the Brenner motorway as well

Responsible: Ökombi in cooperation with Bertani, Cemat and Kombiverkehr

3.3 Review, assessment and coordination of the plans, developed by Austria and coordinated in the ÖBB area, to expand accompanied transport (rolling road) including the availability of resources (locomotives and wagons) and infrastructure (rolling road terminals plus availability of paths on all network sections)

Responsible: RCA in cooperation with Bertani, Cemat, Kombiverkehr and Ökombi plus the railway undertakings and the Network Working Group

4. Assistance programmes

Review and appraisal of the existing and planned national assistance programmes for combined transport with regard to their effectiveness for achieving the objective, associated with the action plan, of shifting freight traffic from the roads to the railways

Responsible: Federal Ministry of Transport, Building and Housing (Germany), Federal Ministry of Transport, Innovation and Technology (Austria) and Ministry of Building and Transport (Italy)

Brenner 2005 – Package of measures III

Measures required for the medium-term enhancement of capacity in the fields of pathing, traction and transhipment in order to achieve the desired modal shift effects by 2005 and beyond

1. Coordination and appraisal of the actual availability of paths on all relevant network sections and at all junctions affected for further increases in traffic

1.1 Availability of paths for freight traffic, taking into account the current status of development of the infrastructure and appraising market viability in coordination with the CT operators

Responsible: Network Working Group

1.2 Joint analysis and appraisal of bottlenecks in the infrastructure with regard to the expected increase in the volume of freight carried by CT

Responsible: Network Working Group

1.3 Review and appraisal of the possibility of including, in the medium term, other arteries, especially the Tauern artery in conjunction with the Tarvisio – Udine – Padova/Trieste route, in the concept for developing rail freight between Germany, Austria and Italy

Responsible: Bertani, Cemat, Kombiverkehr and Ökombi in cooperation with the Network Working Group and the railway undertakings

2. Upgrading and modernization of the railway infrastructure (lines, junctions)

2.1 Joint review and coordination of the upgrade requirements, taking into account the expected growth in the volume of freight carried by CT on the Brenner axis (see the final paper of the meeting of the "Infrastructure" working group on 25/26 September 2002, e.g. upgrading the line between Wörgl and Innsbruck)

Responsible: Infrastructure Working Group (chaired by the Minister of Transport of the Federal Republic of Austria)

3. Improvement of rail links to and increasing transhipment capacity at the CT terminals in Italy and Germany

3.1 Review of the existing upgrade plan for CT terminals in Germany, taking into account the impact of the plans to increase the volume of freight carried by CT on the Brenner axis

- Derivation of upgrade measures required and acceleration of the planning and implementation process
- Coordination and guarantee of funding

Responsible: DB Netz and DUSS plus Federal Ministry of Transport, Building and Housing

3.2 Nationwide introduction of a computerized terminal control system at CT terminals in Germany

Responsible: DB Netz and DUSS

3.3 Construction of the "Trudering Curve" to provide a direct link to Munich-Riem

Responsible: DB Netz

3.4 Realization of the planned upgrade concept for Verona Q.E. CT terminal

Responsible: RFI

3.5 Development of a concept to increase the transhipment capacity in the Milan region within the framework of the Italian plans on the structure and upgrade of terminals

Responsible: RFI

3.6 Design and construction of a new public terminal for intermodal freight trains in the local authority area of Isola della Scala/Verona by STR AG

Responsible: STR

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Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 2

Report by the Subgroup « Transport costs »
of the Transport Working Group of the Alpine Convention
(VIII/7/1/2)

THE ALPINE CONVENTION
WORKING GROUP "TRANSPORT"

WORKING SUBGROUP "TRANSPORT COSTS"

2ND MEETING – 26TH JULY 2004

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO (MINISTRY OF THE ENVIRONMENT) SALA VERDE - ROME

The meeting was attended by:

Mr. Paolo Angelini – Ministero dell'Ambiente e della Tutela del Territorio - Italy

Mr. André Leuxe – Ministère de l'équipement, du logement, des transports, du tourisme et de la mer - France

Mr. Roberto Maja – Piedmont Regional Authorities– *Polytechnic of Milan* - Italy

Mr. Ernst Marburger – Ministero dei Trasporti (Ministry of Transport) - Germany

Ms. Rossella Napolitano – Ministero delle Infrastrutture e dei Trasporti - Italy

Mr. Christian Rankl – Amt del Vorarlberger Landesregierung - Austria

Mr. Massimo Santori – Ministero dell'Ambiente e della Tutela del Territorio – *Csst SpA* - Italy

Ms. Elisa Boscherini – Ministero dell'Ambiente e della Tutela del Territorio – Co-ordinator of the Working Subgroup on Costs – Alpine Convention

The *first item on the agenda* concerned the Italian proposal for a questionnaire to collect cost data, to be divided by item and to be used to assess the Transport Protocol implementation costs.

The Italian delegation described the intermediate questionnaire, "Proposal for an intermediate questionnaire to collect cost data", which is to be considered as a summary of the final questionnaire, "Proposal for a questionnaire to collect cost data", in order to simplify the work of the Subgroup (both documents are enclosed herewith).

The objective of the questionnaire, is the integration of the cost items and the relevant proposals for indicators and units of measurement indicated by all partners, in order to obtain a shared document, to be presented during the meeting of the Working Group "Transport" in Chambery on 6th and 7th September.

Taking account of the general indications that will result from the next meeting of the Working Group Transport in Chambery, the Subgroup "Costs" will meet again to define the shared and final indicators and units of measurement aimed at the assessment of the various cost items. The assessment will be based on value ranges in compliance with the criteria in force in each country.

Within this framework, every country will be able to indicate possible specific national characteristics.

As to the next working stages of the Subgroup "Costs", the Italian delegation proposed the following operating steps:

1. Collect the necessary information to fill in the questionnaire based on already existing data for each country without carrying out ad hoc surveys.
2. Compare the data to make them as homogeneous as possible, in order to calculate the trans-Alpine transport costs (passengers and freight) in the current situation and considering the future demand and supply (for example, infrastructural and managerial actions for the implementation of the Transport Protocol).

The other delegations made the following remarks vis-à-vis the Italian proposal:

- The French delegation suggested focussing the attention on external costs, since the indicators enabling their assessment are more difficult to find.

- The Austrian delegation highlighted the importance of art. 14 of the Alpine Convention, especially when it comes to the internalization of external costs.

- The German delegation pointed out the importance of the charging mechanism, to cover the costs not yet supported by the users.

The Italian delegation underlined the need not to focus the analysis on the charging system only, since this is one of many solutions leading to the externalization of the transport costs, ensuring a sustainable trans-Alpine transport.

All delegations agreed that the definition of cost items and indicators is an important preparatory activity for the assessments to be made within the framework of the WG Transport. The subgroup "costs" could be asked to carry out a model-based assessment of the scenarios concerning the "true costs" of trans-Alpine transport.

Since Mr. Ernst Marburger, representative of the German delegation and head of the subgroup "corridors", was attending the meeting, a special reference was made to the importance of the co-ordination between the subgroups, in order to carry out the work at the best.

The *second item on the agenda* led to a debate concerning the need on the part of the subgroup "costs" to express an official position vis-à-vis the draft Eurovignette directive.

The meeting of the EU Ministers of Transport on 11th June 2004, also attended by the 10 new EU Member States, highlighted the complete lack of any form of agreement concerning the directive proposal by the Commission.

As a result, all delegations did not consider it appropriate for the Subgroup Costs to take up a position that may differ from the official positions of the single states.

As yet, the Subgroup "costs" has agreed to formally indicate that the implementation of the draft Eurovignette directive under discussion would not allow the implementation of the Transport Protocol.

The Austrian delegation has been asked to put forward a proposal for a summary report on the topic, to be enclosed with the proceedings of the next meeting of the Working Group "Transport".

The next meeting is scheduled in October. Meanwhile, the information and the documents can be exchanged through the following e-mail address: elisa.boscherini@iol.it.

CONVENZIONE DELLE ALPI
GRUPPO DI LAVORO "TRASPORTI"

SOTTOGRUPPO DI LAVORO "COSTI DEL TRASPORTO"

2° RIUNIONE – 26 LUGLIO 2004

MINISTERO DELL'AMBIENTE E DELLA TUTELA DEL TERRITORIO SALA VERDE - ROMA

Hanno partecipato alla riunione:

Paolo Angelini – Ministero dell'Ambiente e della Tutela del Territorio - Italia

André Leuxe – Ministère de l'équipement, du logement, des transports, du tourisme et de la mer - Francia

Roberto Maja – Regione Piemonte – *Politecnico di Milano* - Italia

Ernst Marburger – Ministero dei Trasporti - Germania

Rossella Napolitano – Ministero delle Infrastrutture e dei Trasporti - Italia

Christian Rankl – Amt del Vorarlberger Landesregierung - Austria

Massimo Santori – Ministero dell'Ambiente e della Tutela del Territorio – *Csst SpA* - Italia

Elisa Boscherini – Ministero dell'Ambiente e della Tutela del Territorio - Coordinatrice del Sottogruppo di Lavoro Costi – Convenzione Alpina

Nel *primo punto all'ordine del giorno* è stata analizzata la proposta di questionario, elaborata dall'Italia, finalizzata alla raccolta dei dati, suddivisi per voce di costo, utili per la valutazione del costo di attuazione del Protocollo Trasporti.

La Delegazione Italiana ha illustrato il questionario intermedio, "Proposal for an intermediate questionnaire to collect cost data", redatto come elemento di sintesi dal questionario finale "Proposal for a questionnaire to collect cost data", al fine di semplificare il lavoro del sottogruppo (entrambi i documenti sono riportati in allegato).

L'obiettivo del questionario è l'indicazione da parte di tutti i partners di integrare le voci di costo e le rispettive proposte di indicatori ed unità di misura, al fine di ottenere un documento condiviso, da presentare alla riunione del Gruppo di Lavoro Trasporti di Chambery del 6/7 Settembre.

Tenendo conto delle eventuali indicazioni generali che emergeranno nel corso della prossima riunione del GdL Trasporti, in Chambery, il Sottogruppo Costi tornerà a riunirsi per definire in via condivisa e definitiva gli indicatori e le unità di misura, finalizzate alla monetizzazione delle singole voci di costo, espressa in forchette di valori compatibili con i criteri vigenti di ciascun paese.

In questo ambito, ciascun Paese potrà indicare eventuali specificità nazionali.

Per quanto riguarda le successive tappe del lavoro del Sottogruppo Costi, la Delegazione Italiana ha proposto i seguenti step operativi:

3. raccogliere le informazioni necessarie per compilare il questionario sulla base di dati già esistenti in ciascun paese, senza effettuare indagini ad hoc,
4. affiancare i dati per renderli il più omogenei possibili in modo utile per calcolare eventualmente i costi del trasporto transalpino (viaggiatori e merci) in situazione attuale e in scenari futuri di domanda e di offerta (ad esempio, set di interventi infrastrutturali e gestionali previsti per l'attuazione del Protocollo Trasporti).

Le altre delegazioni hanno risposto alla proposta italiana con le seguenti osservazioni:

- la Delegazione Francese ha suggerito di concentrare l'attenzione sui costi esterni per i quali risulta più difficile trovare degli indicatori in grado di permettere la loro monetizzazione;

- la Delegazione Austriaca, ha evidenziato l'importanza di attenersi al dettato dell'art. 14 della Convenzione delle Alpi, in particolare per quanto riguarda la necessità di internalizzare i costi esterni;

- la Delegazione Tedesca, ha messo in luce l'importanza dello strumento della tariffazione per coprire quei costi non ancora supportati dagli utenti.

La Delegazione Italiana ha ribadito, da parte sua, la necessità di non circoscrivere l'analisi alla sola finalità tariffaria, essendo questa una delle diverse soluzioni in grado di esternalizzare i costi del trasporto, ai fini della sostenibilità del trasporto transaplino.

Tutte le delegazioni hanno convenuto che le attività di definizione di voci e parametri di costo sono propedeutiche a valutazioni da inquadrare nell'ambito delle attività del GdL Trasporti, da cui potrà emergere la richiesta al Sottogruppo Costi di procedere ad una valutazione modellistica per scenari relativi alla "Verità dei Costi" del trasporto transalpino.

Infine, è stata colta l'occasione della presenza del Presidente del Sottogruppo Corridoi, Mr. Ernst Marburger, in qualità di rappresentate della delegazione tedesca, per mettere in luce l'importanza del coordinamento tra sottogruppi al fine di svolgere al meglio il lavoro.

Nel *secondo punto all'ordine del giorno* si è sviluppata la discussione sull'opportunità di esprimere una posizione ufficiale del Sottogruppo Costi riguardo alla bozza di direttiva Eurovignette.

La riunione dei Ministri dei trasporti dell'UE dell'11/06/04, svoltasi in presenza dei 10 nuovi Membri dell'Unione Europea, ha evidenziato la completa mancanza di accordo riguardo alla proposta di direttiva della Commissione.

Ciò ha indotto tutte le delegazioni a non ritenere opportuna una presa di posizione del Sottogruppo Costi, che possa distaccarsi dalle posizioni ufficiali dei singoli Governi.

Allo stato attuale, il Sottogruppo Costi ha comunque concordato sull'opportunità di indicare formalmente che l'attuazione della bozza di dispositivo della Direttiva Eurovignette in discussione non consentirebbe l'attuazione del Protocollo Trasporti.

La Delegazione Austriaca è stata incaricata di avanzare una proposta per una nota sintetica sul tema, da porre agli atti della prossima riunione del GdL Trasporti .

Si è stabilito di riunirsi nuovamente nel mese di ottobre. Nel frattempo lo scambio di informazioni e di documenti avverrà tramite l'indirizzo mail elisa.boscherini@iol.it.

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Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 2/2a

Proposal for a questionnaire to collect costs

(VIII/7/1/2/2a)

Transport Working Group of the Alpine Convention - "Costs" Subgroup

Proposal for a questionnaire to collect costs - Questionnaire draft - July 2004

Question	Type of answer	Answer
Project under review	Name	
General information about the project		
Project type		
- new infrastructure	Yes/No	
- improvement of existing infrastructure	Yes/No	
Financing mode		
- public	Yes/No	
- project financing	Yes/No	
Infrastructure carrying out costs		
- global carrying out cost of the project	euro	
- mitigation of the impacts costs	euro	
Management costs		
Transport company costs		
- infrastructural maintenance	euro	
- vehicles maintenance	euro	
- energy consumption	euro	
- workers	euro	
Users costs		
- fuel cost	euro	
- toll or fare cost	euro	
- time cost	euro or hours	
External costs		
Health damages		
- illnesses from accident causes	euro	
- illnesses from pollution causes	euro	
Environment damages		
- atmospheric pollutants	tonn/years or number of persons exposed	
- noise level	dBA or number of persons exposed	
- vibration level	(to define)	
Accidents		
- number of accidents versus traffic	number / vehicles x km	
- number of dead persons versus traffic	number / vehicles x km	
- number of injured persons versus traffic	number / vehicles x km	
Benefits		
Transport related benefits		
- transport time reduction	hours	
- traffic congestion reduction	hours	
- pollution reduction by road traffic reduction	tonn/years	
- accident reduction by road traffic reduction	number / vehicles x km	
Accessibility		
- reduction of time to reach some important places or towns	hours	
- number of new train/bus stops	n°	
Economic benefits		
- increasing of tourist presences	n°	
Social benefits		
- increasing of employed labour force	n°	

Transport Working Group of the Alpine Convention - "Costs" Subgroup

Proposal for a questionnaire to collect cost data - Questionnaire draft - July 2004

Voice of Cost	Index Example	Notes
Infrastructure carrying out costs (infrastructure owner)		
- global carrying out cost of the project (of which mitigation of the environmental impact costs)	euro (euro)	
Management costs (operational manager)		
- ordinary system maintenance	euro	
- operating	euro	
External costs (general public)		
- atmospheric pollutants	tonn/years x number of persons exposed	
- noise level	dBA x number of persons exposed	
- number of accidents/dead persons/injured persons vs traffic	number / vehicles x km	
- effects on local economy	euro	
- effects on employed labour force	euro	
Transport costs (user)		
- trip time	euro/hours (changing x user typology)	
- energy consumption	euro/vehicles x km	
- toll cost	euro/Km	

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Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 2/2b
Draft statement by the Subgroup "Transport costs"
to amend Directive 1999/62/EC
(VIII/7/1/2/2b)

Draft statement by the "Cost" subcommittee on proposals made by the European Parliament (EP) and the European Commission (EC) to amend Directive 1999/62/EC on charging for use of certain infrastructures by heavy goods vehicles

Under **Article 14** of the Transport Protocol on the application of the Alpine Convention, the issue of true costs in implementing the user-pays system is agreed upon. The goal is gradually to introduce a system of vehicle-specific charges. This will enable the actual costs to be covered fairly.
This should then lead to the introduction of systems that:

- Favour the use of environmentally friendly means of transport,
- Lead to a balanced use of the transport infrastructure,
- Offer incentives to use increasingly the opportunities for ecological and socio-economic pollution reduction through structural and regional planning measures traffic control.

In all former proposals by the EP and EC on new directives on charges, the issue of true costs was not sufficiently taken into account. Both in former EP proposals and in the Commission's proposals, the pre-condition states that by amending the directive on costs, infrastructure costs may not be raised (EP) i.e. no additional charges for companies (EC) may result.

A serious implementation of the issue of true costs will lead to an inevitable rise in road costs as a result of the internalisation of external effects.

To implement the contents of the agreement in Article 14:

> *"in order for better accounting of the cost of the various means of transport to influence the effects of traffic control, the parties have agreed to implement the user-pays principle and support the development and adoption of a means of calculating the infrastructure costs and external costs".*

the amendment to the directive on road costs plans for the possibility to internalise gradually the costs of the following external effects:

- accidents
- environment
- health
- traffic jams.

Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit

alpenkonvention • convention alpine
convenzione delle alpi • alpska konvencija

VIII. Tagung der Alpenkonferenz
16 November 2004, Garmisch-Partenkirchen

TOP 7

Verkehr

Tätigkeitsbericht der Arbeitsgruppe „Verkehr"

Anlage 3
Proposals for indicators
(VIII/7/1/3)

Paris, May 14th 2004

Transport Group Proposals
for Indicators

Numbers shown between brackets refer to the indicators proposed in the document discussed at the 3rd meeting of the working group "Environmental objectives and indicators" - Munich (24-26 March 2004)

1**) Indicators that should be part of the "core" or "key" and their field**

- Tonnage of goods crossing the main Alpine range annually, separately for rail and road, while distinguishing total traffic from transit traffic *(reformulating indicators 019.1 and 020.1)*
- Mapping of road network with permanent tallying, and showing traffic density via dashes with varying thickness (separately for HGVs and LVs).*(019.2 and 023.1)*

On a reference network, made up of approach routes leading to crossing points of the main Alpine range, **as recorded in the CAFT survey:**

- Goods traffic at crossing points, in tons/year, separately for rail and road, while distinguishing total traffic from transit traffic *(reformulating indicators 021.2 and 021.3)*
- Annual number of HGVs at crossing points (total, transit)
- Annual number of private motorcars at passes/toll tunnels *(021.1)*
- Map indication of toll sections and indicating average toll, while distinguishing crossing tunnels (separately for HGVs and LVs)

2) **Indicators still requiring research work**

- Road accidents: number of killed/serious injuries by department, in relation to the department's permanent number of inhabitants (or traffic density, this point will need to be studied)
- Number of towns/villages and corresponding inhabitants served by a regular line or demand responsive service (excluding school travel) *(017.1)*
- Number of people travelling by train *(024.1)*
- Number of people travelling by bus or using regional transport *(024.2)*

For each of the last three data, the Transport Group proposes to search for the most appropriate indicators, because of the heterogeousness of data between various Alpine countries.

- Number of HGVs and/or tonnage loaded onto rail, by piggyback *(020.2)*
- Areas – and inhabitants – exposed to intense noise *(069.1 and 069.2)*

Note: on this last point, the group proposes to follow the European Parliament and Council directive n°2002/49/CE of 25 June 2002 covering the assessment and management of noise in the environment, which plans setting up strategic noise maps, by 2007 (respectively 2012), for urban areas of more than 250,000 inhabitants (resp. 100,000), for major roads with traffic exceeding 6 million vehicles a year (resp. 3 million), for major railway lines with traffic exceeding 60,000 trains a year (resp. 30,000), for airports that record more than 50,000 movements a year. Part of the data (to be specified) from this exercise would be integrated into monitoring the state of the Alps.

3) Case studies

- For **air quality**, the Transport Group confirms the position passed during its meeting of 16 February 2002: it prefers objective data, like the concentration of pollutants monitored by measurement networks, for example. Data (collected from a certain number of sensitive points) changes could be monitored in time, on these points. In the short term, some pilot experiments could be subjected to a case study.
  Other case studies, for example cadastres of emissions performed in certain zones, distinguishing the contribution from main sources, could also be shown.
  However, the Transport Group is clearly not in favour of starting to produce global emission indicators for the transport sector in the Alps, as one can understand from reading indicator proposals 040.1 to 040.6.
- **Monitoring household mobility expenses** (097b), for various modes of transport, does not seem relevant, as this seems to involve national averages. The Transport Group proposes the alternative solution of monitoring rail and road costs (general) on a few Alpine intercity routes, which would enable to clarify household transport mode choices.

For the Transport Group

Jean LAFONT

TOP 7

Beschlussvorschlag

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NOVO
15.11.2004

Die Alpenkonferenz

1. nimmt den Tätigkeitsbericht der Arbeitsgruppe Verkehr zur Kenntnis und dankt der Vorsitzenden und der Arbeitsgruppe für die geleistete Arbeit.

2. nimmt den vom Ständigen Ausschuss verabschiedeten „Synthesebericht über die nationale Umsetzung des Verkehrsprotokolls" zur Kenntnis.

3. verabschiedet beiliegende Erklärung zum Thema Verkehr.

4. beauftragt den Ständigen Ausschuss und die Arbeitsgruppe „Verkehr" unter französischem Vorsitz, nach Maßgabe des beschlossenen Mandats ihre Arbeit fortzusetzen und der IX. Alpenkonferenz hierüber zu berichten.