

Large Communication Project

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Switzerland—A Transit Country

Switzerland has long been an important traffic hub and transit country in the heart of Europe. Although Switzerland cannot close itself to future development, it does want to determine its own role in European transport and culture.

Growing traffic

Transport of goods between northern Europe and Italy has increased sixfold in the last 30 years and all forecasts indicate still larger traffic demand. The reasons are found in the political opening of Europe and in the unimpeded exchange of goods in the internal market of the EU.

This has important consequences for Switzerland. The nation's road network is overloaded, and the environment is suffering from excess noise and exhaust gases. The quality of life and traffic safety along the main roads have decreased and the performance limits have been reached.

Switzerland bets on rail traffic

Twenty percent, or more than 20 million tons per year, of the goods traffic crossing the Alps goes through



■ Combined Transport at Lötschberg

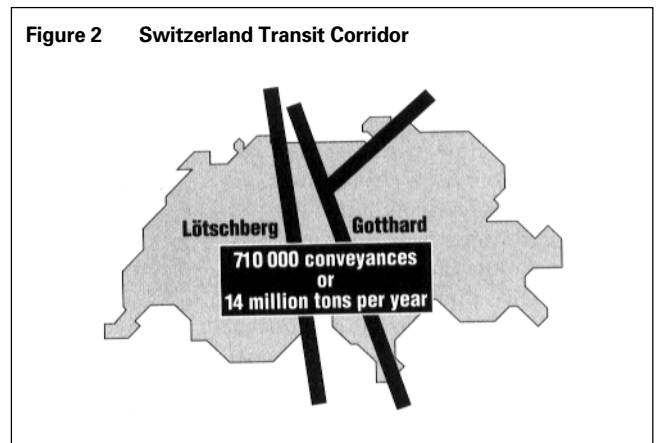
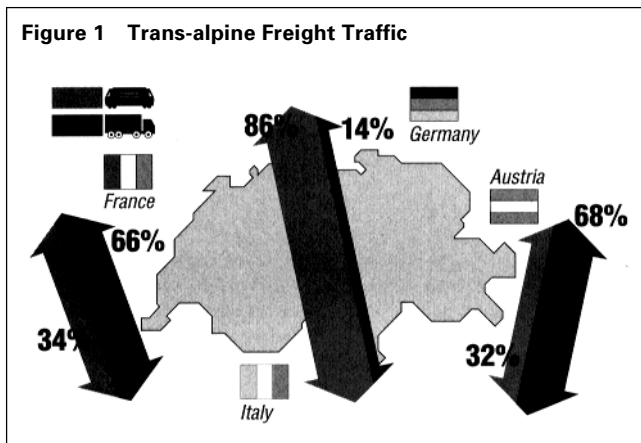
(SBB/CFF)

Switzerland. Presently, about 80% of this traffic is by rail (Fig. 1). With the political opening of Europe and the unimpeded exchange of goods, the transport demand continues to rise. Forecasts indicate that goods transit through the Alps will double by 2010/2020.

AlpTransit is Switzerland's answer to these challenges. Switzerland wants to offer the best service for the

future, but in an environment-friendly manner as possible. Consequently, Switzerland is promoting combined rail/road traffic.

In just 2 years, Swiss railroads have greatly expanded their transit axes for combined traffic through the Alps. Since 1994, the transport capacity for combined traffic has been tripled at Gotthard and at Lötschberg (Fig. 2).



What does “combined traffic” mean?

Combined traffic means combining the advantages of rail and road. Over long distances, goods are best transported by rail while roads serve for finer distribution. Combined traffic is time-saving and efficient and enjoys increasing demand (Fig. 3).

Large container transport

Large containers are ideal for shipping goods. The containers are carried by special trains to ports (Amsterdam, Rotterdam, Antwerp, Marseille, Genova, etc.) and trans-shipped onto container ships. Large containers offer the following advantages:

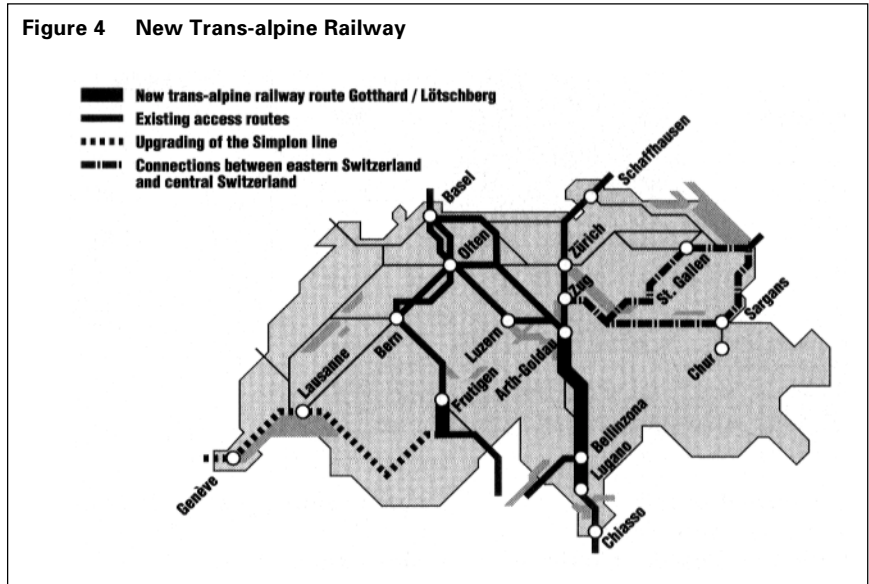
- Worldwide uniform transport of goods
- Transport from sender to recipient without handling
- Rapid transit through Europe from Swiss border to most North Sea and Mediterranean ports in 24 hours

About 20 yards in Switzerland are equipped especially for trans-shipping containers. Containers range from tank containers for liquids to refrigerated containers for perishables. Depending on the size and type of container, between 17 to 26 tons of goods can be loaded.

Piggyback traffic—the “rolling autobahn”

In this system, trucks with and without trailers, and semi-trailers are

Figure 4 New Trans-alpine Railway



loaded on flatbed cars. The driver drives the vehicle onto the car and travels on the same train, so the term “accompanied traffic” is used. The driver and his assistant have beds in a sleeping-car. The “rolling autobahn” offers various advantages. For example:

- Between Germany and Italy, 300 to 450 road kilometers can be saved one way.
- Elimination of the 28-ton total weight limit on Swiss roads. Piggyback traffic can carry vehicles with a total weight of up to 40 tons.
- Real rest and sleep times for the driver while the vehicle travels

300 to 450 km on rails.

Unaccompanied traffic

This system carries semi-trailers and containers without tractors. Semi-trailers with grab edges and exchange containers are loaded and unloaded by a fixed or mobile crane.

After 2005 New Alps Railroad Transversal

AlpTransit, the new railroad transversal will make the Alps more open, and it will handle the increasing flow of goods in an environment-friendly manner with rapid connections in Switzerland. AlpTransit will integrate Switzerland more in Europe and is Switzerland’s answer to the challenge of continuing its traditional function as the traffic hub of Europe. The project has four components (Fig. 4).

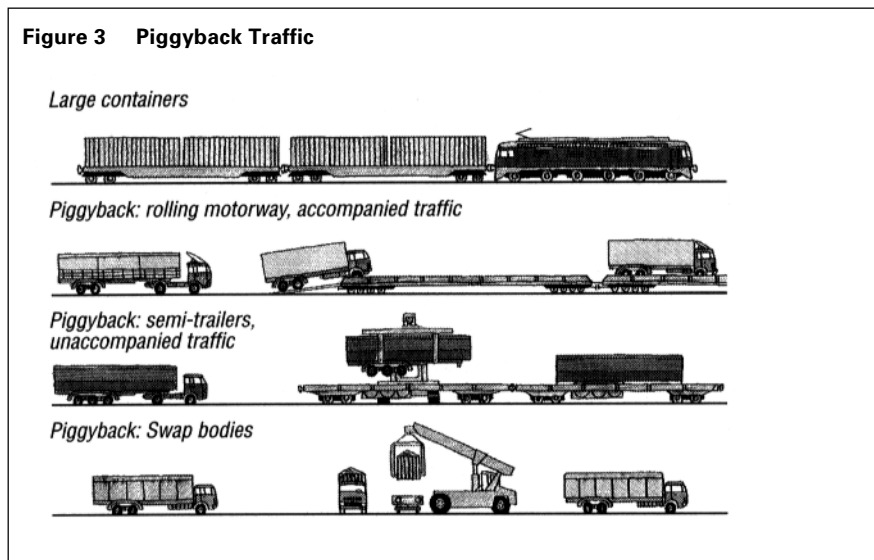
1. Gotthard

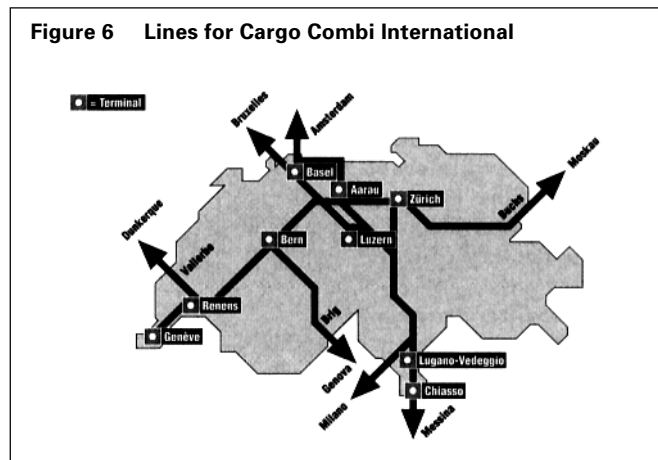
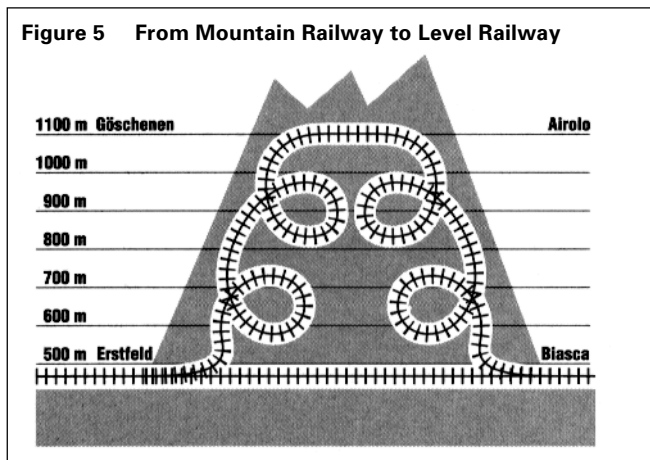
The core is the newly-built Arth-Goldau-Lugano track with tunnels at Gotthard (57 km) and at Monte Ceneri (13 km).

2. Lötschberg

The second element is the line from the Frutigen area into the Rhône valley (Lötschberg tunnel, 30 km), preventing concentration of traffic at Gotthard.

Figure 3 Piggyback Traffic





3. West Switzerland

The position of west Switzerland in the traffic between northern Italy and France is consolidated by the upgraded Simplon line and connection to the French TGV network (Mâcon-Genève).

4. East Switzerland

Connections from east Switzerland will be improved to take east-west traffic flow into consideration.

AlpTransit—Quick, on-time, supervised

The strong points of combined traffic are found in sectors of future growth such as in European traffic. AlpTransit supplements the existing mountain lines with Alps-crossing flat lines and contributes to an attractive and competitive transport system.

• **Attractive travelling times and rapid connections**

AlpTransit and the expansion of the access roads in foreign countries accelerate transit through Switzerland permitting quicker and better connections. Instead of having to change elevation on mountain lines, trains will travel over the lowest Alps, saving time and energy (Fig. 5).

• **High performance**

Switzerland has ratified the European agreement concerning important lines for international combined traffic and related installations. Thus, the high-performance standards defined in this agreement apply to the two

north-south axes of AlpTransit (Fig. 6).

• **Shortest route**

Switzerland is located at the centre of the lines of traffic between Northern Europe and Italy. The direct route from the central European, Scandinavian, and British terminal networks to Italy passes through Switzerland. AlpTransit will also connect the North Sea and Baltic Sea ports and inland shipping via the Rhine with Italy.

• **On-time and supervised**

The average delay is presently 3 minutes per train. This will be the standard in the future. It permits users to shift new market segments to rail and to strengthen realization of just-in-time concepts. Thanks to the new EDP system, it is also possible to inform customers quickly in case of delays. Pilot projects permitting customers to directly monitor shipments 24 hours a day already are being built.

• **High availability**

The high investment permits an enormous capacity jump. With AlpTransit, the present rail capacity of approximately 30 million

tons is being expanded to 70 million tons. This corresponds to approximately 3 to 4 million truck journeys per year. 400 freight trains each day provide high availability.

• **No restrictions for combined traffic**

In the transit agreement, the EU recognizes the 28-ton weight limit and the existing prohibition on driving at night and on Sundays for heavy road traffic. This creates favorable preconditions for combined traffic, which is not subject to these restrictions.

AlpTransit—Into the future economically and ecologically

The first productivity jump was achieved in 1994 with the start of operation of the transit corridor. It permits operation of longer and heavier trains. AlpTransit promotes rationalized production using combined traffic. Shuttles are already playing a pioneering role in daily traffic between the large European economic areas. ■



Peter Merz

Peter Merz was born in 1942 and is town citizen of Beinwil am See, Switzerland. After college education, he attended the Arts and Design school of Bern, and has held PR assignments with various private companies before joining the Swiss Federal Railways 20 years ago. He is the information chief with the general management of the Swiss Federal Railroads in Bern for the AlpTransit and Rail 2000 projects.