

# THE END OF THE TUNNEL

## *Drilling through the Alps*

On the first day of June, more than 1000 members of the public gathered, privileged to have been randomly selected to embark on the initial train trips through the Gotthard Base Tunnel (GBT). And so began the opening ceremony for the world's longest and deepest railway tunnel. Meanwhile, close-by, a memorial was erected, dedicated to the nine persons who lost their lives during the tunnel's construction. The new rail link offers goods-traffic a sensible alternative to the road, while passenger traffic benefits greatly from improved connections and shorter journey times. For all travellers, the railway through the Gotthard signifies a quantum leap.

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Urner Loch wild gorge / Coloured engraving by Rothe after Jentsch, 1790

Over the centuries, the dream of conquering nature has come true through particularly audacious projects. In the Alpine region, such projects have been more adventurous than many others. With the recent opening of the Gotthard Base Tunnel in Switzerland, a new chapter in the region's narrative has begun, adding more myths and memories, technological records, and semantics on the cultural landscape.

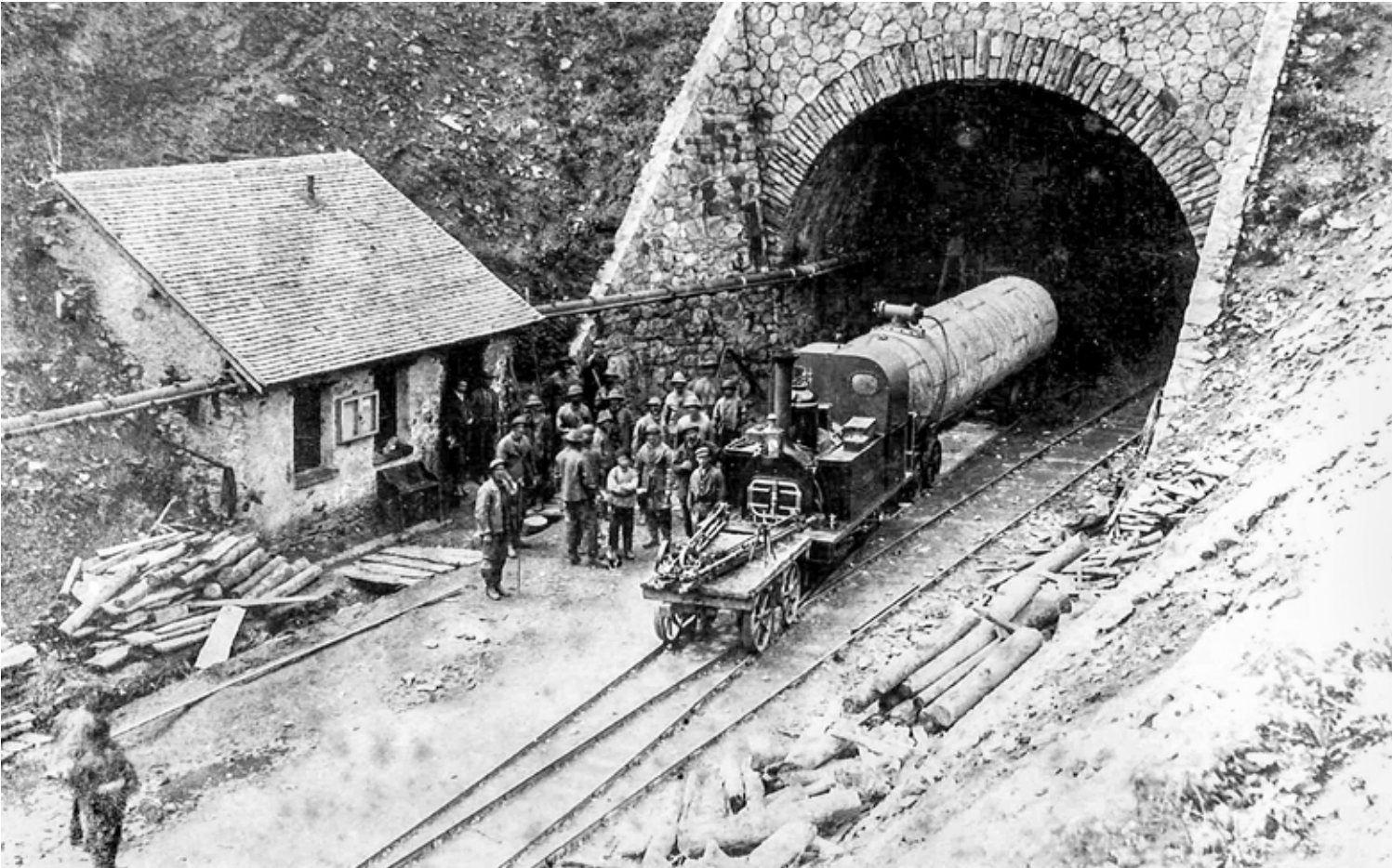
There are only a few occasions when Europe holds it together these days. The completion of the Gotthard Base Tunnel in Switzerland is one of those moments. Heads of State and government officials from Italy, France, Germany, and Austria joined in the opening festivities at the beginning of June. All were full of respect for the Swiss Confederation's achievement. The common tenor of the speeches was that Europe is growing closer together. The European North is now nearer the European South; Rotterdam and Genoa are better connected, as are Zürich and Milan, thanks to the rail tracks passing through these massive mountains (whose peaks are over 3,000 metres high). Visions of mobility seem to be becoming true; and utopian dreams, like Bruno Taut's Alpine architecture, might yet materialise. The



Poster by Rolf Dürig, honouring the 75th anniversary of the Gotthard train in 1957

tunnel is a prime example of the altering of the landscape through technological efforts. After more than 20 years of planning and construction, the 57-kilometre-long railway line will begin full service operations in December.

Practically speaking, the tunnel shortens the distance between Zürich and Milan by up to 45 minutes, with 220-260 trains per day roaring through at up to 250 kilometres per hour. There will be passenger trains every two hours, and lorry traffic on the roads will certainly decrease. The Gotthard Base Tunnel is the longest worldwide; it has no gradients and runs beneath rock 2300 metres high, from Erstfeld in the north to Bodio in Ticino, the Italian-speaking Swiss canton.



Compressed-air locomotive, circa 1870  
Source: SBB Historic, Windisch



Construction site at the tunnel portal in Erstfeld, east of the Reuss river, 2003  
Photo: AlpTransit Gotthard AG





Altar of Saint Barbara, patron saint of tunnellers  
Photo: AlpTransit Gotthard AG



Installation of railroad points at the north entrance of the tunnel in Erstfeld  
Photos: AlpTransit Gotthard AG

The Gotthard Pass has a long history, full of anecdotes. Many technical and engineering records were set in building the Gotthard Base Tunnel, and many traditions were kept as well. Small altars featuring Saint Barbara flank the entrances – the martyr is the patron saint of tunnellers and is thought to protect them, especially during blasting operations.

Today, all the narratives and myths intersect with the high-speed trains and outstanding engineering. In terms of perception and representation, the Gotthard landscape has constantly transformed over the centuries into a natural-artificial region. Several paradigm shifts accompany this development and clearly mark the different cultural understandings and technological capabilities. The recently published Gotthard compendium edited by Marianne Burkhalter and Christian Sumi, based on a research



Mounting of the ballast-free tracks  
Photo: AlpTransit Gotthard AG



The changing of the cross-rollers on the tunnel bore machine at Amsteg  
Photo: AlpTransit Gotthard AG



On completion of drilling operations in the eastern tunnel, the victims were commemorated at the altar of Saint Barbara  
Photo: AlpTransit Gotthard AG



Miners preparing the blasting operation in the west tunnel  
Photo: AlpTransit Gotthard AG





Dismantling of the tunnel boring machine's cutter-head at Amsteg, September 2009  
 Photo: AlpTransit Gotthard AG



Gotthard Base Tunnel construction site  
 Photos: AlpTransit Gotthard AG





Ventilation shaft at Sedrun  
Photo: AlpTransit Gotthard AG



The old Devil's Bridge and the new Devil's Bridge in the canton of Uri, by Friedrich Wilhelm Delkeskamp, 1830 / From the recently published book on the Gotthard (Scheidegger-Spiess, Zürich) that documents the research project by the Accademia di Architettura in Mendrisio in cooperation with ETH Zürich.

project at Accademia di Architettura in Mendrisio (in cooperation with the Swiss Federal Institute of Technology Zürich), explores those shifts by means of historical sources and their significance and relevance to the perception. The proliferation of alien plant species and the new topographies made up of excavated stones from the various tunnels over the centuries are only two of the many directions the book follows. Other essays address the question of the cultural understanding of nature and the appropriation of the Alpine landscape, with a look to the influences of the technical prospects.

At one time, the Gotthard was considered an area of menacing nature that had to be domesticated. Later, a guilty conscience developed concerning the ecological consequences of the actions taken. The perception of the Gotthard dramatically changed as a result. But regardless of all this, a fascination still remains. The Gotthard is a symbol of Switzerland. In former times, it was an Alpine adventure to cross the Pass in a stagecoach. Today, passengers travel in comfortable trains through the Base Tunnel – their sense of the Gotthard is a 20-minute ride through a dark tunnel, leaving the landscape, people, and myths of the region to their imagination. •

[alptransit-portal.ch](http://alptransit-portal.ch)  
[gottardo2016.de](http://gottardo2016.de)

Der Gotthard / Il Gottardo. Landscape – Myths – Technology, ed. by Marianne Burkhalter and Christian Sumi, published by Scheidegger & Spiess, Zürich 2016 (Texts in German, English, and Italian)  
[scheidegger-spiess.com](http://scheidegger-spiess.com)



Newly completed concrete shell with the opening to the ventilation shaft at Sedrun, May 2008. Photo: AlpTransit Gotthard AG



Mounting the track-switch north of Sedrun  
Photo: AlpTransit Gotthard AG