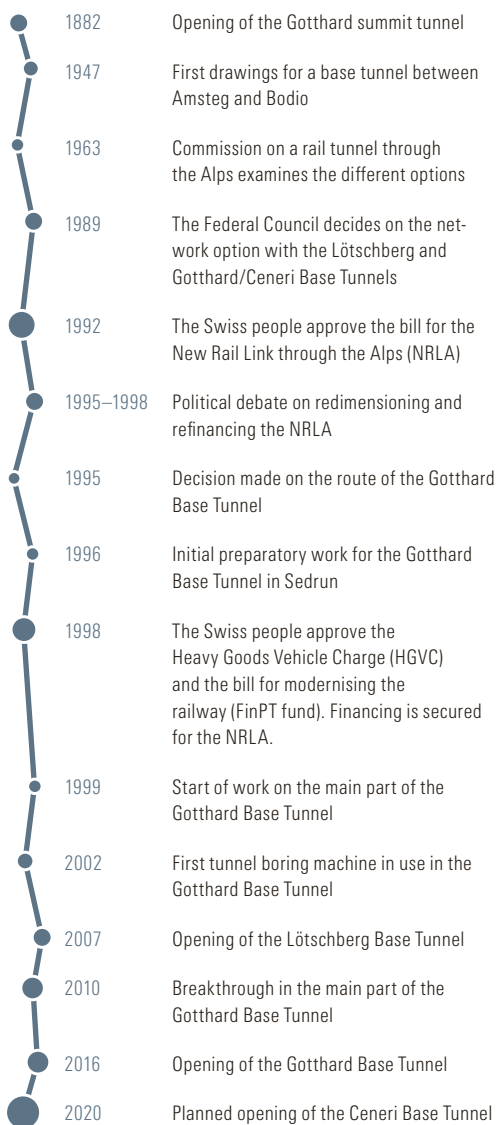


The Gotthard history



Quantum leap for railway transport

The Gotthard Base Tunnel shortens the journey from Altdorf (Canton Uri) to Bellinzona (Canton Ticino) by 30 km and constitutes a low gradient railway through the Alps. Thanks to the tunnel, trains can cross the Alps much faster from north to south and from south to north. Freight transport benefits from the low gradient that makes it possible to use longer, heavier trains, fewer locomotives, and fewer time-consuming shunting manoeuvres. Freight transport by rail becomes more efficient and reliable, and thus more competitive as well. Up to 260 freight trains will be using the tunnel every day; by contrast, the traditional route over the mountains allows a maximum of 180.

Passenger transport will gradually start to benefit from the reduction in travelling times from end 2016. After work has been completed on the approach routes and on the Ceneri Base Tunnel, passengers between Zurich and Lugano will save about 45 minutes. Passenger trains will travel through the tunnel at speeds of up to 200 km/h, and top speed can achieve 250 km/h. On the north-south route they will run at half-hourly intervals, twice as frequently as before.

1 June 2016: a key date

On 1 June 2016, AlpTransit Ltd. (the manufacturer) hands over the Gotthard base tunnel through the Swiss Confederation (the purchaser) to its future operator SBB. After further tests, the tunnel will become operational on 11 December 2016, according to the new time table.





On behalf of the population

A significant proportion of north-south freight transport in Europe travels through Switzerland. All indicators predict a clear increase in traffic in the decades to come.

Switzerland wants to promote modes of transport that are efficient, environmentally friendly and space-saving. In several votations, the population has spoken in favour of shifting transalpine traffic from road to rail. The New Rail Link through the Alps (NRLA) with the Gotthard Base Tunnel represents a central element of this transport policy.

The population also approved to secure the funding for the NRLA and other large-scale rail projects using the Finöv Fund and its successor from 2016, the Rail Infrastructure Fund.


The longest railway tunnel in the world

At 57 km, the Gotthard Base Tunnel is the longest railway tunnel in the world. It has only low gradients, and its highest point lies at 550 m above sea level. Not counting exploratory work, it took 17 years to construct. Labour was carried out round the clock in three shifts.

The minors had to bore through different layers of rock: from hard granite to cracked sedimentary rock. The two main tubes were primarily tunnelled using tunnel boring machines, and for the resting 20 percent blasting was used. With a rock overburden of up to 2300 m, the Gotthard base tunnel is not only the longest, but also the most deeply set rail tunnel in the world.



Facts and figures

- Length: 57 km (the longest rail tunnel in the world)
 - Duration of tunnel journey: a little under 20 minutes
 - Two single-track tubes, connected by cross cuts every 325 m
 - Total length of all the tunnels: 152 km
 - Northern portal in Erstfeld (UR), southern portal in Bodio (TI)
 - Highest point of the tunnel: 550 m above sea level
 - Maximum rock cover: 2,300 m
 - Construction time (excluding exploratory work): 17 years
 - Main tunnels drilled with tunnel boring machines (80%) and blasted (20%)
 - Excavated material: 28.2 million tonnes
 - Cost of the Gotthard Base Tunnel: CHF 9.7 billion (cost dating from 1998, excluding increase in VAT and construction interest; effective total cost: CHF 12.2 billion)
 - Cost of the entire NRLA, including the Lötschberg, Gotthard and Ceneri Base Tunnels: CHF 18.2 billion (cost dating from 1998, excluding increase in VAT and construction interest; effective total cost: approx. CHF 23 billion)
 - Tunnel capacity: up to 260 freight trains and 65 passenger trains per day
 - Timetabled speed: freight trains 100 km/h; passenger trains up to 200 km/h
 - Maximum speed: freight trains 160 km/h; passenger trains 250 km/h
 - Train protection system with cab signalling (ETCS Level 2)
 - Reduction in journey time from Zurich to Lugano after completion of the axis (from 2020): around 45 minutes
 - Commercial opening of the Gotthard Base Tunnel: 11 December 2016
- 



Opening of the Gotthard base tunnel 1 June 2016



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Office of Transport FOT



SBB CFF FFS



Ladies and gentlemen,

1 June 2016 is a day of celebration! After 17 years of construction, hard work and monumental effort by all those involved, today we are finally able to open the Gotthard Base Tunnel. And we can do so with thankfulness, joy and enormous pride.



We are grateful to the builders of this tunnel. They can all be proud of their achievements. We also thank the population of the region for their understanding and their patience, and to the voting population of Switzerland, who laid the foundation stone for building the Gotthard Base Tunnel when they voted to approve the New Rail Link through the Alps (NRLA).

We can celebrate today with joy. In the Gotthard Base Tunnel, we have a construction that will benefit both ourselves and future generations. Here in the centre of Europe, we are create the basis for a successful transport future.

The common ground created by the Gotthard forms the heart of today's ceremony: north and south move a little closer together. I wish you a fantastic celebration. Enjoy your journey through the longest railway tunnel in the world, today and in the future.

Johann N. Schneider-Ammann,
President of the Swiss Confederation

M. Schneider



Opening staging

In the north, 350 performers present the spectacle: choirs from the Uri region, international acrobats and aerialists, various professional musicians and ensembles from the Swiss Army. They perform in the “concrete hall” of Rynächt, where the audience sits close to the performers alongside the railway tracks.

In the south, 240 performers are on stage: acrobats and aerialists, alphorn players, choirs, the Swiss Army Band. The open-air performance takes place on a meadow next to the Polleggio information centre in front of a large circle for video projections.



1. Sacre del Gottardo

“Sacre del Gottardo” is the title of the first part of the supporting artistic programme directed by Volker Hesse. The French word “sacre” can be translated as “rite” or “consecration”, calling to mind rituals and ceremonies. The ceremony for the project of the century – the Gotthard Base Tunnel – calls for grand gestures, fulfilling pathos, holy earnestness. The word “sacre” also has other associations, such as “sacrifice” or “sacred”. This is the case for Igor Stravinsky’s world-famous ballet “Le sacre du printemps”, which is about a ritual human sacrifice – archaic, wild and cruel.

Tunnels are impressive witnesses of human ingenuity and collective performance, but also of curses and ordeals. The tunnels constructed in the Alps in the 19th century were linked to destruction and human drudgery. Many workers paid with their lives for penetrating the interior of the mountains. Today’s tunnels continue to show how dangerous it is for humans to battle with the enormous masses of stone. The tunnel builders know about the unpredictability of nature, and the recklessness of their activity.

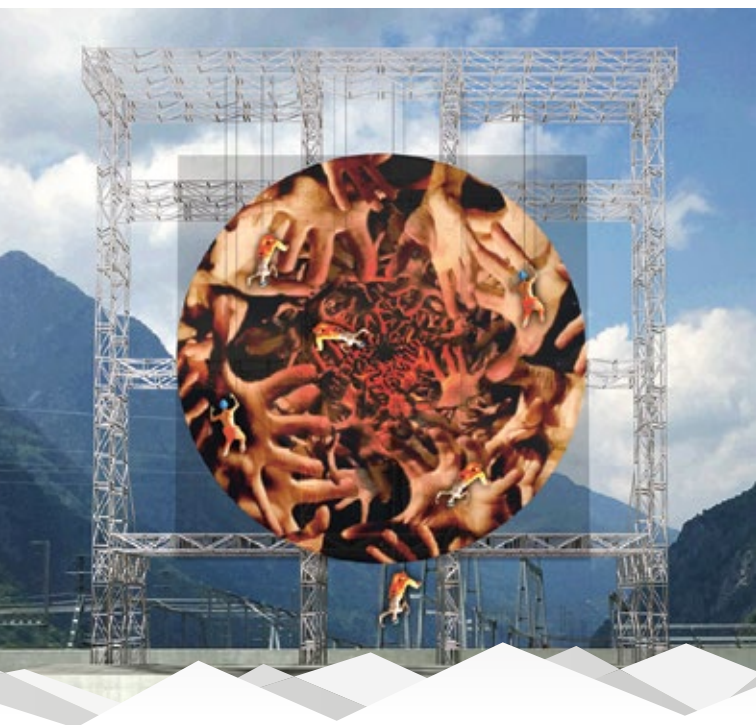
The artistic staging is based on the two meanings of the word “sacre”. Indeed, beside the huge, modern machines that eat away at the rock, the little lamp continues to burn at the feet of the statue of Saint Barbara, patron saint of miners.



2. Mountain spirits

People who live and work in the mountains are familiar with dangers: rocks suddenly plunge downwards, avalanches of snow or mud can destroy houses, villages and landscapes in a very short time. Raging storms shake people up.

The artistic staging displays how the Alpine culture reflects the experience of being at the mercy of nature. It banishes the threats and terrors of the outside world into its own interior. Tales are told of evil mountain goblins, pictures are painted of demons and spooky beings, eerie sounds and rhythms are created. Fervently, out of a deeply melancholic soul, the sustained notes of the yodellers from the staging resound through hills and valleys. Art celebrates the beauty of the alpine glow, the night sky in the mountains, the yearning for security in the village community.





3. Exuberance and joy

In the third part, the very first trains are approaching their destination, the spirits are fading away or becoming comical creatures. Now the technical tour de force and the political and economic achievements are being celebrated.

North and south approach each other; the Mediterranean encounters the industrial landscapes of Central Europe, Fellini figures meet austere service providers, Monteverdi meets Bach, Tarantella meets Alpine folk dances, Montanara meets Gloria.

And Saint Barbara blesses train passengers as well as representatives at the tunnel's entrances, so that these opening trains will usher in a good era.

