

Swiss inaugurate \$12 billion rail tunnel, world's longest

June 1 2016, by Jamey Keaten



Swiss Federal Councillor Didier Burkhalter, right, walks next to German Chancellor Angela Merkel, Italian Prime Minister Matteo Renzi and Austrian Chancellor Christian Kern, from right to left, on the opening day of the Gotthard rail tunnel, at the fairground Rynaecht at the northern portal in Erstfeld, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. After the official opening on June 1, the commercial operation will commence on December 2016. (Peter Klaunzer/Pool Photo via AP)



Just like Hannibal in ancient times, Swiss engineers have conquered the Alps.

More than 2,200 years after the commander from the ancient North African civilization of Carthage led his army of elephants and troops over Europe's highest mountain chain, the Swiss have completed another gargantuan task: Burrowing the world's longest railway tunnel under the Swiss Alps to improve European trade and travel.

European dignitaries on Wednesday inaugurated the 57-kilometer (35.4-mile) Gotthard Railway Tunnel, a major engineering achievement deep under the Alps' snow-capped peaks. It took 17 years to build at a cost of 12.2 billion Swiss francs (\$12 billion)—but workers kept to a key Swiss tradition and brought the massive project in on time and on budget.

Many tunnels crisscross the Swiss Alps. The Gotthard Pass itself already has two—the first, also for trains, was built in 1882. But the Gotthard base tunnel is a record-setter eclipsing Japan's 53.8-kilometer (33.4-mile) Seikan Tunnel as the world's longest—and it also bores deeper than any other tunnel, running about 2.3 kilometers (1.4 miles) underground at its maximum depth.





In this Oct. 8, 2015 file photo, a test train drives close to the northern gate of the Gotthard Base Tunnel near Erstfeld, Switzerland. Just like Hannibal in ancient times, Swiss engineers have conquered the Alps burrowing the world's longest railway tunnel to ease trade and congestion in European trade and travel. (Urs Flueeler/Keystone via AP, file)

The tube bores through the Gotthard massif that includes the 2,500-meter (8,200-foot) Piz Vatgira on the way to Italy. It is part of a broader, multi-tunnel project to shift the haulage of goods from roads to rails amid concerns that heavy trucks are destroying Switzerland's pristine Alpine landscape.

The tunnel's impact will be felt across Europe for decades.

The thoroughfare aims to cut travel times, ease roadway traffic and reduce the air pollution spewed from trucks traveling between Europe's north and south. Set to open for commercial service in December, the



two-way tunnel can handle up to 260 freight trains and 65 passenger trains per day.

Swiss planners have dreamt of such a tunnel for decades, and Gotthard's 17 years of construction don't include the many years spent to scope out suitable paths.



In this Oct. 31, 2013 file photo construction workers are busy in the NEAT Gotthard Base Tunnel between Biasca and Amsteg, Switzerland. The celebrations of the opening of the Gotthard Base Tunnel will start on June 1, 2016. With a length of 57 km (35 miles) crossing the Alps, the Gotthard Base tunnel is world's longest train tunnel.. (Karl Mathis/Keystone via AP, file)

Switzerland pulled out all the stops for Wednesday's inauguration.



Chancellor Angela Merkel of Germany, President Francois Hollande of France and Italian Prime Minister Matteo Renzi all came to southern Switzerland for an upbeat, glitzy celebration featuring musical bands, dancers and even a theme song for the tunnel.

Under purple neon lights, performers dressed in orange miners' suits and protective helmets danced atop a moving rail car, while others in skimpy outfits feigned wrestling and trapeze artists hung from chains or ropes.

The tunnel runs between the German-speaking Swiss town of Erstfeld in the north to the Italian-speaking town of Bodio in the south, cutting through central Switzerland. The tunnel journey takes about 20 minutes for passenger trains.

Split-screen TV images Wednesday showed two trains in opposite directions entering and leaving the tunnel entrances nearly simultaneously.





In this June 16, 2009 file photo minors watch the tunnel drilling machine "Gabi" breaking through the last section of the AlpTransit "New Railway Link through the Alps" (NRLA) tunnel between Erstfeld and Amsteg, Switzerland. The celebrations of the opening of the Gotthard Base Tunnel will start on June 1, 2016. With a length of 57 km (35 miles) crossing the Alps, the Gotthard Base tunnel is world's longest train tunnel. (Sigi Tischler/Keystone via AP, file)

The project, funded in part by Swiss taxpayers and fees on trucks, received financial support and industrial know-how from around the European Union. Although Switzerland isn't one of the bloc's 28 members, the EU railway network gets a big boost from this shortcut through the Alps, notably on the route from Germany to Italy.

"The new tunnel fits into the European railway freight corridor, which links Rotterdam and Genoa"—key ports in the Netherlands and Italy, said Swiss President Johann Schneider-Ammann. "Aside from saving time, more merchandise can be carried through the Alps."

A test run by the EU leaders on Wednesday turned into a sort of minisummit beneath real Alpine summits: Merkel, Renzi, Hollande and Schneider-Ammann sat face-to-face for a ride in first class through the tunnel. A band played Rossini's "William Tell Overture" after they arrived.

Merkel said it was a "wonderful feeling" to be on the train. Though "more than 2,000 meters of rocks" were above, she said she felt a "feeling of security, because I believe in the security of the Swiss civil engineers."





Italian Prime Minister Matteo Renzi, Austrian Chancellor Christian Kern, French President Francois Hollande, German Chancellor Angela Merkel and Swiss Federal President Johann Schneider-Ammann, from left to right, arrive at the southern portal after they drove by train through the Gotthard from north to south, on the opening day of the Gotthard rail tunnel, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Gabriele Putzu/Keystone, Ti-Press via AP)

She congratulated the punctual Swiss and noted how costs were kept within targets.

"That's something Germany still needs to strive for," she added

Hollande, host of the U.N. climate change summit held in Paris last year, pointed to the tunnel's environmental benefits.



"You have created a great European infrastructure," Hollande said at the tunnel's southern exit. "It will be able to reduce greenhouse gas emissions, redirect traffic from the road to rail and move passengers and goods faster."



In this Sept. 6, 2006 file photo miners celebrate a breakthrough in the NEAT Gotthard base tunnel in Faido, Switzerland. The celebrations of the opening of the NEAT Gotthard Base Tunnel will start on June 1, 2016. With a length of 57 km (35 miles) crossing the Alps, the Gotthard Base tunnel is the world's longest train tunnel. (Karl Mathis/Keystone via AP, file)

He also used the chance to remind Britons of the unity that the tunnel under the English Channel has brought between Britain and the continent—comments that came just weeks before Britons vote June 23 on whether to stay in the EU or leave.

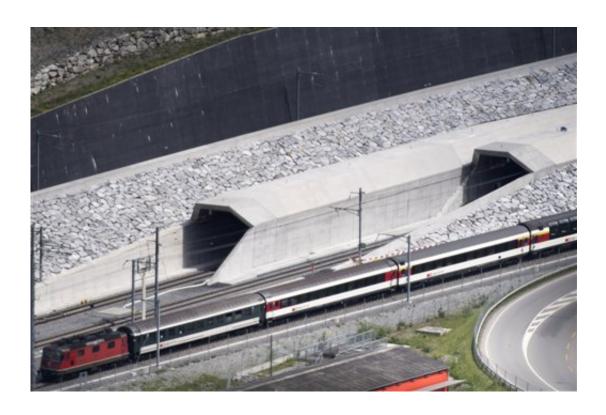


"More than 20 years ago, a construction was completed between France and the United Kingdom: The Channel Tunnel," Hollande said. "Since then, we are united like never before, and I hope the British remember that when the time comes."

Renzi echoed that connective symbolism, despite the current discord in the EU over how to best handle a surge of migrants from the Middle East, Africa and Asia.

"At a time when some are thinking about building walls ... today Switzerland gives us a beautiful signal about building a tunnel, connecting, and making chances for meeting," Renzi said.

Swiss forces took no chances with security for the inauguration. Almost 2,000 additional Swiss troops were called, helicopters buzzed overhead and air space restrictions were put over the tunnel area.



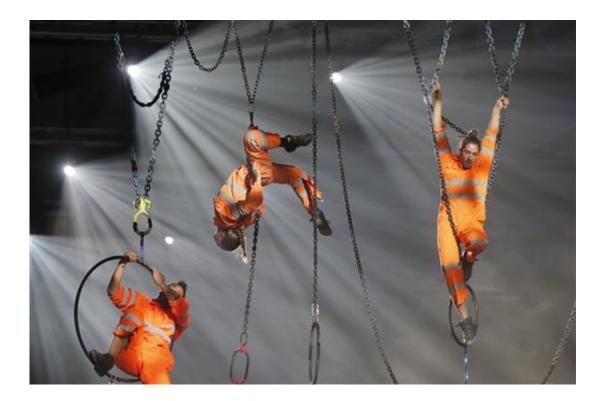


In this Tuesday, May 31, 2016 file photo, a train passes in front of the northern portal of the Gotthard Base Tunnel on the eve of its inauguration, in Erstfeld, Canton of Uri, Switzerland. Just like Hannibal in ancient times, Swiss engineers have conquered the Alps burrowing the world's longest railway tunnel to ease trade and congestion in European trade and travel. (Laurent Gillieron/Keystone via AP)



Italian Prime Minister Matteo Renzi, left, Swiss Federal President Johann Schneider-Ammann, second left, French President Francois Hollande, right, and German Chancellor Angela Merckel, sit in the VIP-train driving through the Gotthard from north to south, on the opening day of the Gotthard rail tunnel, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. After the official opening on June 1, the commercial operation will begin in December 2016. (Ruben Sprich/Pool Photo via AP)





Artists perform during the opening show directed by german director Volker Hesse, on the opening day of the Gotthard rail tunnel, at the fairground Rynaecht at the northern portal in Erstfeld, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. After the official opening on June 1, the commercial operation will start in December 2016. (Peter Klaunzer/Pool Photo via AP)





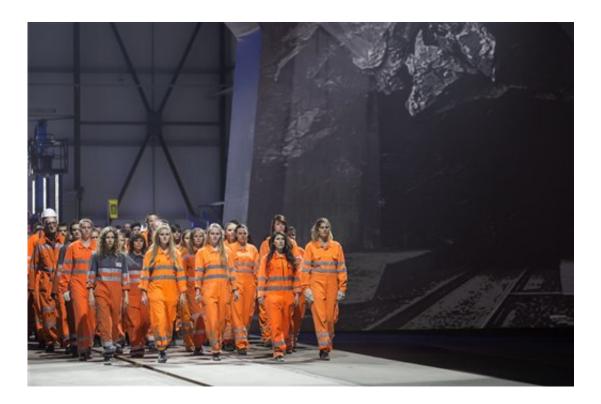
Italian Prime Minister Matteo Renzi, Swiss Federal President Johann Schneider-Ammann, German Chancellor Angela Merkel, and French President Francois Hollande, from left to right, sit in the VIP-train driving through the Gotthard from north to south, on the opening day of the Gotthard rail tunnel, between Erstfeld and Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. After the official opening on June 1, the commercial operation will start in December 2016. (Peter Klaunzer/ Pool Photo via AP)





Artists perform during the opening show directed by German director Volker Hesse, on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the fairground Rynaecht at the northern portal in Erstfeld, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





Artists perform during the opening show directed by German director Volker Hesse, on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the fairground Rynaecht at the northern portal in Erstfeld, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





German Chancellor Angela Merkel is pictured on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





Artists perform during the opening show directed by German director Volker Hesse, on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the fairground Rynaecht at the northern portal in Erstfeld, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





Swiss President Johann Schneider-Ammann, center, cuts the ribbon on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Gabriele Putzu/Keystone, Ti-Press via AP)





Swiss Federal Councillor Doris Leuthard, left, and Renzo Simoni, President AlpTransit Gotthard, right, attend a ceremony on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the fairground at the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. (Samuel Golay/Keystone, Ti-Press via AP))





Swiss Federal President Johann Schneider-Ammann delivers a speech on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





The Patrouille Suisse performs on the opening day of the Gotthard rail tunnel, at the fairground at the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Samuel Golay/Keystone, Ti-Press via AP)





German Chancellor Angela Merkel delivers a speech on the opening day of the Gotthard rail tunnel, t at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Pablo Gianinazzi/Keystone,Ti-Press via AP)





Italian Prime Minister Matteo Renzi, German Chancellor Angela Merkel and Swiss Federal President Johann Schneider-Ammann, from left, arrive at the southern portal on the opening day of the Gotthard rail tunnel, the longest tunnel in the world, at the fairground at the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Samuel Golay/Keystone,Ti-Press via AP)





Performance of members of the theatre Dimitri on the opening day of the Gotthard rail tunnel, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Pablo Gianinazzi/Keystone, Ti-Press via AP))





French President Francois Hollande, Swiss federal Councillor Ueli Maurer and German Chancellor Angela Merkel, from left, are pictured on the opening day of the Gotthard rail tunnel, at the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





French President Francois Hollande delivers a speech on the opening day of the Gotthard rail tunnel, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Pablo Gianinazzi/Keystone, Ti-Press via AP))





German chancellor Angela Merkel delivers a speech on the opening day of the Gotthard rail tunnel, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Pablo Gianinazzi/Keystone, Ti-Press via AP))





The Patrouille Suisse performs on the opening day of the Gotthard rail tunnel, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Gabriele Putzu/Keystone, Ti-Press via AP)





German Chancellor Angela Merkel arrives at the southern portal after she and other officials and special guests drove by train through the Gotthard from north to south, on the opening day of the Gotthard rail tunnel, at the fairground in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Gabriele Putzu/Keystone, Ti-Press via AP))





Artists perform during the opening show directed by German director Volker Hesse, on the opening day of the Gotthard rail tunnel, at the fairground Rynaecht at the northern portal in Erstfeld, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)





Swiss Federal President Johann Schneider-Amman, left, and French President Francois Hollande, talk on the opening day of the Gotthard rail tunnel, tat the southern portal in Pollegio, Switzerland, Wednesday, June 1, 2016. The construction of the 57 kilometer long tunnel began in 1999, the breakthrough was in 2010. (Alexandra Wey/Keystone via AP)

© 2016 The Associated Press. All rights reserved.

Citation: Swiss inaugurate \$12 billion rail tunnel, world's longest (2016, June 1) retrieved 26 June 2024 from https://phys.org/news/2016-06-swiss-inaugurate-billion-rail-tunnel.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.