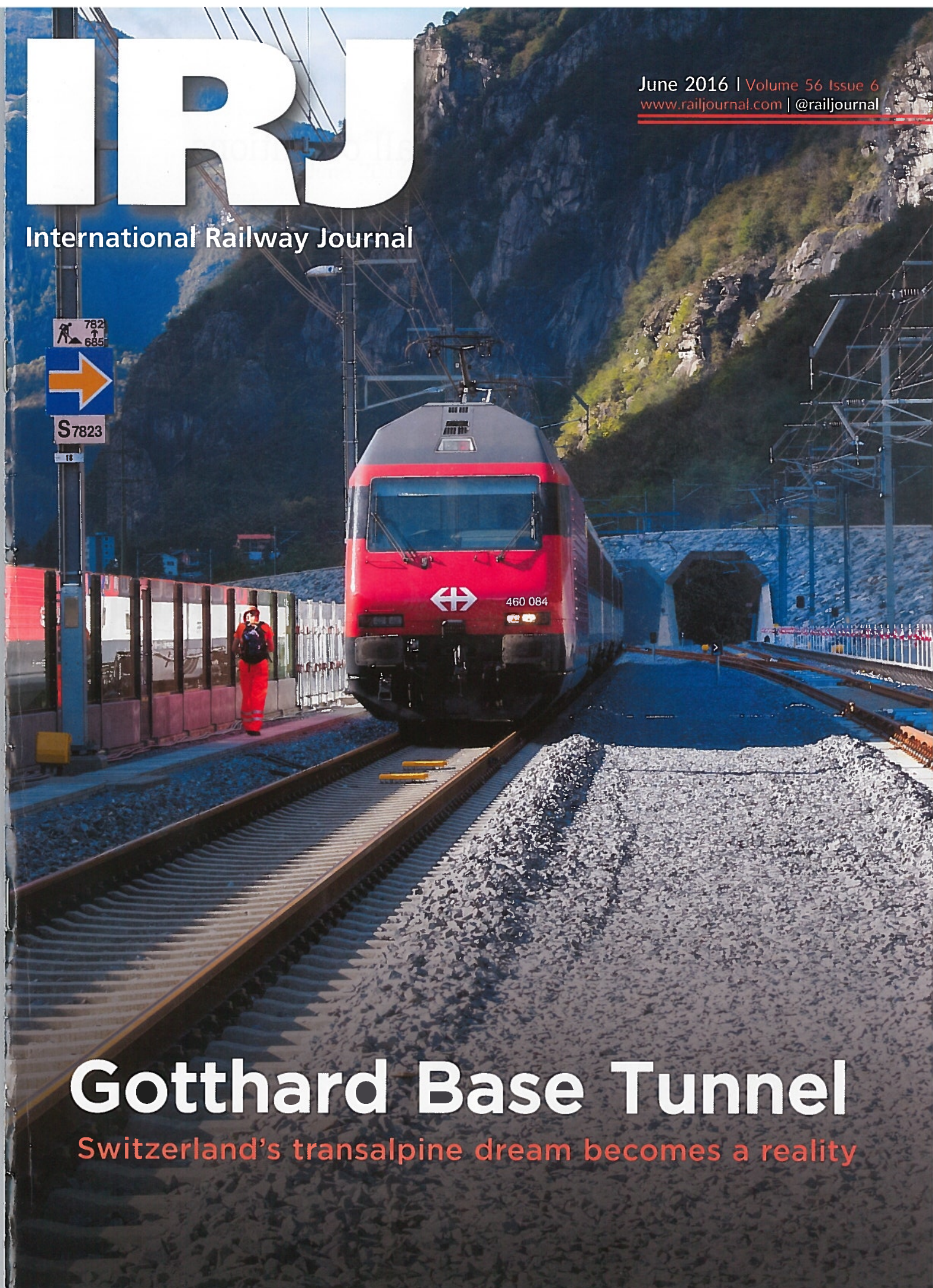


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## Gotthard Base Tunnel

Switzerland's transalpine dream becomes a reality



## Infrastructure investment alone will not guarantee success

THIS month sees the handover of the 57km Gotthard Base Tunnel from AlpTransit to Swiss Federal Railways (SBB) for trial operation in preparation for the launch of commercial services on December 11 (page 20). The Gotthard Base Tunnel may not be the longest railway tunnel in the world as there are longer tunnels on the Beijing and Guangzhou metros, but it is has a much larger diameter than a metro tunnel to cope with high-cube container and high-corner-height piggyback freight trains and it is undoubtedly one of the world's great feats of railway engineering.

The Gotthard Base Tunnel will allow the operation of much longer and heavier freight trains and faster passenger trains than are currently permitted as trains will no longer have to wind their way up the steep gradients and through the spirals on the existing line.

When it opens in December, the new tunnel will provide capacity for up to 210 freight trains and 52 passenger services per day on this important corridor linking Germany with Italy. The Zürich - Milan passenger journey time will be cut by 30 minutes to 3h 30min.

The tunnel forms part of a larger project to upgrade the Gotthard main line which includes the construction of the 15.4km Ceneri Base Tunnel which will open in 2020 creating an almost level rail corridor through the Alps, and shaving another 30 minutes off the Zürich - Milan journey time. The project is also part of Switzerland's long-term policy to switch as much trans-Alpine freight from road to rail to reduce pollution and congestion on Alpine highways.

The Gotthard Base Tunnel is the second such tunnel to be constructed in Switzerland - the first being the 34.6km Lötschberg Base Tunnel which opened in 2007. To reduce costs, only a single track was installed on the 21km northern section, while the 14km central section of the second running



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tunnel was completed but not fitted out, and the 7km northern section of the second running tunnel was not bored.

As the tunnel is now operating at capacity, BLS has launched a project to install the second track on the single-track section with an option to build the missing second bore. All three base tunnels are part of Switzerland's New Railway Link Across the Alps (Neat) programme, and BLS says expansion of capacity on the Lötschberg Base Tunnel is essential for Switzerland's Alpine modal shift policy.

Construction is underway of the 64km Brenner Base Tunnel linking Innsbruck, Austria with Fortezza in northern Italy on the Munich - Verona trans-Alpine axis. When it opens in 2025 it will give a major boost to the Scandinavia - Mediterranean TEN-T corridor. Further east, the 27.3km Semmering Base Tunnel in eastern Austria will improve the rail link between Vienna, southern Austria and Italy when it opens in 2024.

Finally, preparatory works are expected to start next year for a new 140km line linking

Turin, Italy, with Lyon, France, with 87km of tunnels under the western Alps, including a 57km twin-bore base tunnel.

The line is expected to open in 2028 or 2029 and will allow longer and heavier freight trains, while the Turin - Lyon journey time for passengers will be halved to 1h 27min.

While these huge projects will be of great benefit to Europe's TEN-T network by increasing capacity and cutting transit times, and Switzerland has had success in encouraging a switch from road to rail, unfortunately investment like this is not sufficient on its own to boost

rail's market share of freight traffic as a report by the European Court of Auditors makes clear (page 8).

Despite the European Union (EU) contributing €28bn to rail projects between 2007 and 2013 and a concerted effort since the early 1990s to encourage a shift of freight to rail from road, rail's market share of EU freight traffic has fallen since 2011, although some countries have managed to buck the trend.

The court says rail has failed to encourage road users to make the switch because of the overall unsatisfactory performance of rail, with very low average speeds on many international routes, which results in many freight shippers favouring road over rail. While the Fourth Railway Package will help to create a single market for rail, there

is still a long way to go to remove barriers between countries, align pricing for rail and road more closely, and improve train path allocation and the management of train operations.

Sweden is an example of a country where the infrastructure manager is ignoring the needs of international rail freight. Thankfully the Association of Swedish Train Operating Companies has produced its *Vision for Freight 2050* (page 50) which identifies 10 steps to make rail freight more responsive to customer needs. The association says increasing the reliability of infrastructure and operations and improving utilisation have the ability to make rail freight profitable, and its case appears to have caught the attention of the transport ministry.

There is no point in governments investing vast sums in railway infrastructure projects if train operators and infrastructure managers are unable or unwilling to create the conditions for rail freight to thrive. Railways need to up their game and listen to the needs of their existing and potential customers.

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