

# Planning support and railway simulation for the Rhine Valley Railway



**Since 2008, EBP has provided consulting services relating to railway engineering and operation to the county of Lörrach, the cities of Müllheim and Offenburg, and other municipalities in connection with ongoing approval procedures for the expansion of Rhine Valley Railway between Karlsruhe and Basel.**

Well north of the AlpTransit tunnels in Switzerland, Deutsche Bahn AG is expanding the double-track Karlsruhe-to-Basel stretch to four tracks. The aim of expanding this major European transit artery is to significantly increase the railway's capacity and to shorten travel and transport times.

Deutsche Bahn has drafted and submitted plans for the railway's expansion in a series of approval procedures for the various railway segments. Since 2008, EBP has helped the regional and municipal agencies in Südlicher Oberrhein and Hochrhein to evaluate the plans in light of considerations relating to railway engineering and operation. In its capacity as a technical consultant, EBP played a central role in the drafting of core prerequisites that are geared to protecting the interests of the regions. Moreover, the firm has submitted various expert reviews to the Project Advisory Board that were subsequently taken account of in the German Parliament's unanimous decision as of January 28, 2016 to make the expansion of the Rhine Valley Railway contingent on the protection of various human and environmental interests. This applies in particular to specifications relating to railway freight traffic in Offenburg, a stretch of line running parallel to the highway between Offenburg and Kenzingen, the design of the Buggingen-

## Client

Various clients in the regions of Südlicher Oberrhein and Hochrhein, including Lörrach County, the High Rhine-Lake Constance Regional Association, and the cities of Müllheim and Offenburg

## Facts

Period	2008 - 2015
Project Country	Switzerland

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Hügelheim hub, the lowering of the railway in Müllheim-Auggen and the capacity of the Katzenberg tunnel with its links to existing lines in Schliengen and Haltingen.

EBP's methodological approach to analyzing the capacity of the Katzenberg tunnel and the design of the Buggingen-Hügelheim hub warrants special mention. In particular, the company made use of OpenTrack software to complete a comprehensive simulation of railway operation based on various infrastructure designs and traffic volumes for the entire stretch from Offenburg to Basel Badischer Bahnhof as a means of comparing and evaluating the various designs submitted by Deutsche Bahn to the Project Advisory Board. In light of the anticipated volume of future freight traffic, the simulation enabled us to demonstrate the clear advantages of a split-level design for the Buggingen-Hügelheim hub as opposed to a single-level solution, and a shortening of the block signaling distances in the Katzenberg tunnel.

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