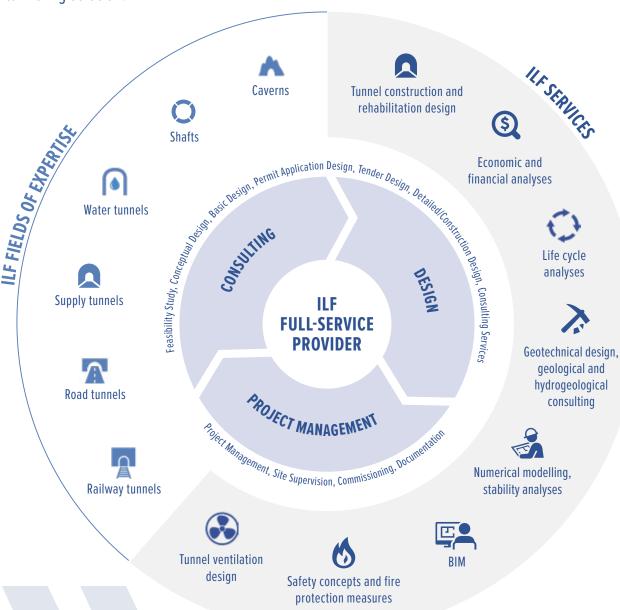




## TUNNELS AND CAVERNS

The densification of our built environment, and the need to sustainably protect our living space, make it necessary for more traffic routes and industrial facilities to be located underground. Choosing technically safe construction methods, while at the same time striving for the greatest possible economic efficiency, is thus of particular importance when responding to this necessity. To rise to this challenge, ILF provides the technical know-how and the relevant experience to help clients find the optimum tunneling solution.





For more than 45 years, ILF has been rendering engineering services for prominent tunnel projects, planning more than 1,000 km of tunnels worldwide. Tunnel planning and design at ILF focuses not only on the implementation of technically challenging construction projects, but also on the renewal and rehabilitation of old railway and road tunnels.

The use of BIM in projects, for example for the  $2^{nd}$  S-Bahn main line in Munich, is of pivotal importance in ILF's planning activities. Consistent "in-house" development ensures that the incorporation of BIM in project processing, and thus design quality, are continuously optimized.

ILF's portfolio includes the planning of technical equipment, the preparation of safety concepts and the performance of risk analyses, as well as the design of civil engineering facilities. By offering this comprehensive package, and by adopting a one-stop-shop approach, ILF is capable of providing the complete range of planning and design services required for tunneling projects.



"The focus is on implementing projects in the best possible way from a technical, economic and qualitative point of view, to meet clients' requirements."

Kajetan Matt, Department Manager Tunnel Engineering



## Rail

- Tunnel on the 2<sup>nd</sup> S-Bahn Main Line in Munich (7.3 km), Germany
- Tunnels on the New Wendlingen—Ulm High-Speed Line (21.8 km), Germany
- Tunnels on the New Ebensfeld—Erfurt High-Speed Line (37.8 km), Germany
- Tunnels on the Hanau—Nantenbach Railway Line (4.4 km), Germany
- Brenner Base Tunnel (55 km), Austria/Italy
- Angerberg Tunnel Northern Feeder Line of the BBT (7.6 km), Austria
- Eppenberg Tunnel (2.6 km), Switzerland

## Road

- B 2, Oberau Tunnel (3.0 km), Germany
- B 23, Kramer Tunnel (3.6 km), Germany
- A 26 Linz Western Ring Road, Freinberg Tunnel (4.3 km), Austria
- A 9, Bosruck Tunnel (5.4 km), Austria
- A 2, Gotthard Road Tunnel 2<sup>nd</sup> Tube (17 km), Switzerland

## **Hydropower**

Niagara Water Diversion Tunnel (10.4 km), Canada









