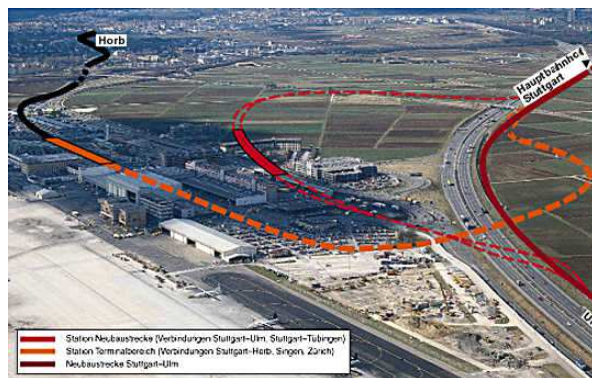


Schematic view of the project



Overall aerial view from the air

Stuttgart 21, PFA 1.3 - Filder Station  
Evacuation routes in case of fire

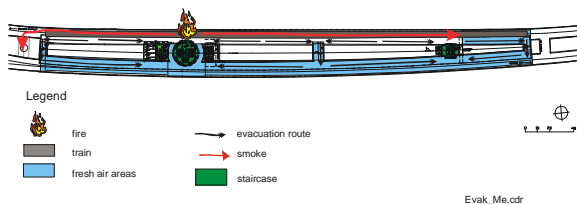


Illustration of the evacuation routes in the event of a fire

## Description

With the new Filder Station the planned high-speed line Stuttgart-Ulm-Munich will be linked with Stuttgart airport. Two tunnels which branch off from the new high-speed line connect to the underground station.

The station is situated approximately 20 m below surface and has two separate platforms, which are accessible via a cylindrical entrance building. The entrance building contains commercial areas and a service centre of Deutsche Bahn. A direct underground link to the airport terminal and a luggage tunnel which leads from the platform to the airport are further elements of the new station.

## Services

HBI Haerter Consulting Engineers provided the following services:

- Development of a concept for smoke extraction from both underground platforms and the central entrance building
- Definition of an escape and rescue concept in agreement with the civil engineers, the architects and the rescue services
- Determination of the minimum required airflow rates for sufficient smoke extraction
- Undertaking aerodynamic simulations for determining the expected air flow velocities and recommendation of maximum flow velocities in the area of the platforms
- Planning of measures (draught relief shafts) to reduce the air velocities in the area of the platforms
- Verification of the planned measures by means of specialized computer codes
- Preliminary design of the required mechanical and civil components (ventilation station, draught relief shafts, supply / exhaust shafts)