

True progress is above ground!

Arguments based on reason



Modern renovated terminus station

© Photo: Gebhard/Roser/Grohe

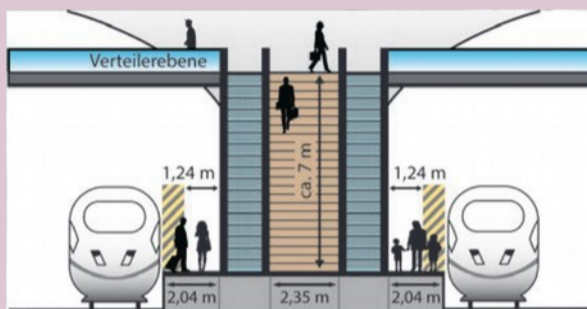
“Stuttgart 21”, despite all the political claims to the contrary, is a step backwards for rail customers and will slow down the growth of the state.

- In the so-called „Schlichtung“ of 2010 serious flaws and minimal engineering benefits of the planned underground train station were identified. „Stuttgart 21“ had been planned for only 32 trains per hour and therefore would be over its limit from the very start. The current terminus station, however, handles 39 trains per hour and can even handle more than 50 trains per hour, and further expansions are possible.
- “Stuttgart 21” only “works” with double seizure, resulting in shorter trains with smaller capacities and unrealistically short stopovers. Its operational quality is significantly worse than that of the current terminus station. There will be no workarounds for delays, as were required in the stress test.
- Compared to “Stuttgart 21”, the “Terminus 21” concept would result in 80% shorter travel times on average according to SMA (*) and would not result in likely delays to S-Bahn service, as is foreseen with “Stuttgart 21”.
- The Stuttgart terminus was one of the most punctual of the major city stations before the work on “Stuttgart 21” started. Now the plans are to replace it with a squeezed too small underground suburban station which cannot be expanded.

Underground Station

Terminus Station

Central Station Stuttgart



© Grafik: Logosax, Tunnelblick

Bottlenecks in the Stuttgart railway junction are pre-programmed with only eight planned tracks. Results in worse regional and suburban railway transport.

Trains cannot wait for other trains: “A station of missed connections”, long wait times = longer travel times. **The integrated train schedule which had been agreed on in the coalition agreements of 2013 and 2018 (CDU/CSU and SPD) would never be realised.**

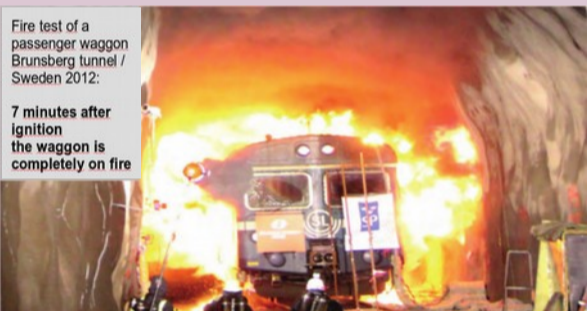


© Photo: R. Oerter/Pro Eltven

High capacity with 17 tracks and significantly higher reserves for commuter traffic. The capacity limit is far from being met.

Trains can wait for other trains: optimal connection options, short waiting times = shorter average travel times. **Integrated train schedule** in the Swiss model **possible** (connections possible from all trains to all other trains).

Safety: Fire Protection & Track Inclination



© Foto: Per Rohlén SP Research Inst. Sweden

The underground train station is inclined as its **platform tracks have a longitudinal slope of 15‰** – which exceeds the 2.5‰ slope permitted in the Ordinance on the Construction and Operation of Railways (EBO) by more than six times! The Federal Railway Authority (EBA) granted an exemption to this rule without having conducted an audit to “prove equivalent safety”

Safety risk: Trains might **inadvertently roll off** and cause **serious damage**. In the case of a fire the underground station would become a trap! The emergency exits via stairs are much too long and would lead right into the layers of toxic smoke. Disabled people and wheelchair users would have to rely on assistance from others.

The **60 km tunnel system** would also become a **mortal trap** in the case of a heavy fire. The emergency paths to the rescue tunnels are up to 500 m long - much too long. People fleeing from the fire would be caught and killed by the lethal smoke. The smoke extraction plan is totally inadequate. After a heavy fire the whole underground station would have to be closed for repairs for several months which would mean that access to Stuttgart by train would be very limited.



© Photo: R. Strum, peet.to.de

The existing terminus station is above ground and **without inclination**. The EBO directives that the longitudinal slope must be less than 2.5‰ are entirely fulfilled. The trains remain in place securely and cannot roll away unintentionally; there is **no safety risk**. The escape options in the terminus station are on **ground level**, the escape routes cannot be filled with smoke, wheelchair users can roll themselves out.

For emergency services, direct access is possible all the way up to the platform. As opposed to the underground station there is a much lower risk of danger in the case of fire in the terminus station above ground.

Fewer and shorter tunnels (Prag tunnel and Rosenstein tunnel), resulting in significantly lower risk and better rescue options.

Train fires are not rare events; according to the Deutsche Bahn there are about 60 fires on passenger trains per year. The longer the tunnel, the higher the probability of a fire. A fire in the open air is usually relatively harmless – but it is a catastrophe in a tunnel!

Environment • Noise • Energy



© Aerial photo: Manfred Grohe

High energy consumption for escalators, elevators, ventilation, lighting and trains (due to slopes and deep location of the station, higher air resistance in the tunnels).

Deterioration of the urban climate

- more than 1,500 trees have already been cut down, more will follow.
- other trees are likely to die due to pumping out of groundwater
- destruction of fresh air corridors by building over railway tracks

The park extension is not in the city centre and is approx. 20 hectares, but approx. 10 hectares near the city centre are being lost. The park extension acreage includes gravel surfaces and grassy roadside verges.

During construction, local residents will experience significant impact by the removal (of approx. 2,400 lorry loads per day) on the B27 between Degerloch and Filderstadt.

Moving the three main sewer lines under the station trough will reduce their max. outflow capacity significantly, which will increase the **flood risk** in the inner city after a **cloudburst**.



© Photo: Klaus Gebhard

Significantly lower energy demand with natural daylight, fresh air, fewer escalators and elevators. Lower energy demand for the trains as there is no difference in altitude and there only two very short tunnels.

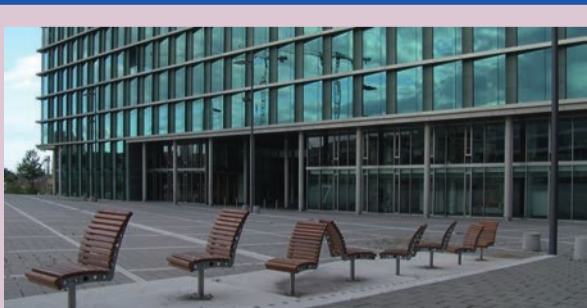
No deterioration of the urban climate.

- **Park areas in the downtown area** are preserved as well as the immensely important fresh air corridors.
- **The modernized railway terminus** as a future-oriented rail concept will shift far more road traffic to rail and relieve commuter traffic in the city centre.

Park areas near the inner city as well as the habitats along the tracks will be preserved. The park could be expanded with an additional 30 hectares from the rail yards that are now larger than needed.

Virtually no impact on residents or added traffic on the streets of Stuttgart. Expansion and modernization of the terminus station can be done without disrupting current operations. The majority of the construction sites will be located on railway land. Building materials would be transported by rail.

Urban Planning



© Photo: Klaus Gebhard

Demolishing the existing tracks as a precondition for development would be possible only after an extensive decommissioning process. This would be possible no sooner than the successful launch of the underground station. A full decommissioning seems questionable because:

- the insufficient capacity of the underground station will require additional tracks
- if the underground station or its access tunnel goes out of service, an alternative will be needed
- the S-Bahn emergency operation must be guaranteed
- private and museum railways will claim use of some of the previous tracks and rail yards

Despite all political claims to the contrary, Stuttgart will not be growing together, because the separation of the north and east sides of the city will remain thanks to the B14 and B27 highways – along with all the noise and massive air pollution.



© Photo: Ulf Fetzner

Reclaiming the land under unused tracks and redevelopment of the 75 hectares made free will only be possible in approx. 15 years. **75% of the area freed up** under “Stuttgart 21” would also be freed up with a modernized terminus station. Without marketing pressure, people-friendly solutions could be implemented.

Modern train technology means minimal noise from rail traffic in the inner city. Car traffic would gradually be shifted to the rails.

Emergency S-Bahn service if the main S-Bahn route (Stuttgart underground) station – Schwabstraße – Stuttgart-Vaihingen) would continue via the Gäu tracks and the Gäu tracks. Likewise, the S-Bahn trains could be turned around in the terminus station.

Underground Station

Terminus Station

Benchmarking for Transport Performance & Added Value

- Travel time savings for all travellers per year: 35,556 days.
- **The economic benefit (**)** for “Stuttgart 21” is **approximately €400m less per year** than for the “Terminus 21” according to SMA (*).

- Travel time savings for all travellers per year: 64,000 days.
- **“Terminus 21” according to SMA (*) saves 28,444 travel days per year** over its useful life compared to “Stuttgart 21”.

In autumn 2010, former minister Tanja Gönner commissioned from SMA (*) a comparative assessment of the traffic benefits of S21 and K21, which she then did not publish before or after the „settlement discussions“. The report looked at 196 stations and 400,000 travellers per day.
 (*) SMA Study “Stuttgart 21 und Kopfbahnhof 21 – Vergleichende Analyse der Reisezeiten”, Version 2.00, dated 26 November 2010, 55 pages; since published by the Ministry of Transport on 14.11.2011.
 (**) The “achievable gross growth in added value” was calculated with the same methodology as in the study of the “Volkswirtschaftlichen Bewertung von S21” / “national-economic valuation of S21”.

Mineral Springs • Groundwater • Geology



Incalculable risks for the mineral springs will be caused by the construction work in a problematic geological zone. **There is a risk that groundwater management will not function properly, risking pollution** of the springs with chemically contaminated groundwater.

The tunnels in the “Stuttgart 21” project pass through anhydrite, which can swell when it comes in contact with water. Consequence: **frequent and expensive repairs** as in the Engelberg tunnel near Leonberg (A81).

During the repairs, the tunnels would need to be closed. Collapse of the system: will mean long-distance trains will pass by Stuttgart.



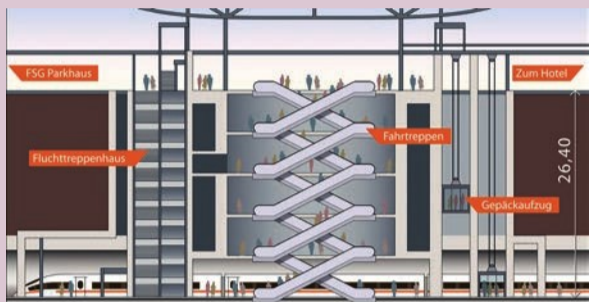
No danger posed to the second largest mineral water springs in Europe.

A modernised terminus station would not endanger the Stuttgart mineral springs, our outstanding urban heritage, the irreplaceable natural treasure.

The connection of the modernised terminus station to the new line could be done with a tunnel between Obertürkheim and Denkendorf. This would avoid impacting **any geologically risky structures**.

Repairs rarely required.
 Little negative impact on long-distance traffic through Stuttgart Hbf and on the Gäu tracks.

Connecting the Airport Station



Approx. 10 min walk from the airport railway station to the terminals. Passengers must climb stairs from a depth of 25 m or use lifts and then have a subsequent walk of 300 m - all with their whole luggage. **This destroys any gain in travelling time!**

The important suburb Stuttgart-Vaihingen will be cut off definitely from regional transport.

DB AG has failed several times since 2002 to get its plans for a route approved. The German minister of transport finally gave a temporary exceptional permission for the mix between local, regional and long-distance trains which will result in train delays and cancelings.



Arrival at S-Bahn station directly under the terminals means short walking distances. Express S-Bahn to the airport via the existing beautiful Gäu route is immediately possible. Journey time 18 mins. The express S-Bahn could run every 15 min.

Stuttgart-Vaihingen would be expanded to a key interchange on the Fildern.

The **real result of the citizens’ vote**, the „Gäubahn“ variant avoids mixing traffic on the Fildern in the future, ensuring the stability of the S-Bahn between Rohr and Filderstadt.

Construction Time

Originally “Stuttgart 21” should have been completed after a construction time of 10 years – that would have been in **2019**. In 2013 the Deutsche Bahn postponed the completion to 2021. In December 2017 the Deutsche Bahn admitted a further delay until **2025**. **And further postponements are most likely.**

Until the modernised terminus station is completely realised, each step in the construction process, for example, modern signalling, **would bring immediately noticeable improvements** in railway operations.

Costs & Economic Feasibility

Initial cost estimates were originally €2.5bn. In January 2018 the Deutsche Bahn AG stated costs of € 8.2 bn. Experts expect the tunnels to have substantial additional cost increases. The cost cap for “Stuttgart 21” has always been pure illusion.

The public and policy makers were both misled about the true cost.

Growth needs good infrastructure. **The underachieving “Stuttgart 21” rail hub will slow down the growth of the Stuttgart region.** There is a lack of money for much more effective projects thanks to the “Stuttgart 21” project.

“Stuttgart 21” only works together with the new Wendlingen - Ulm route. The cost risk increases substantially.

The existing terminal station can be expanded with a **minimal** cost of less than €3m to expand from 50 trains per hour to 56.

A **sustainable centre for business** needs reserve rail capacity for projected growth – this is offered by the existing terminus station.

The modernised terminus station would cost **less than half** the originally projected costs of “Stuttgart 21”.

The **terminus station** would function even without the new line to Ulm.

Station Performance

- “Stuttgart 21” was still being promoted in 2013 boasting a 100% increase in performance – this would be about 100 trains an hour, although only 32 trains were specified in the approved plans.
- The 2009 financing agreements for “Stuttgart 21” said that there would be a 50% increase in performance. The state parliaments gave their consent to these falsified figures.
- Deutsche Bahn ran its stress test with just 49 trains in peak traffic hours.
- WikiReal showed that this simulation was an illusion and only 32 to 38 trains could really pass through the station, which would actually mean a **reduction in performance!**

- The existing terminus station can handle 50 trains in peak hours (Vieregg-Rössler Study, Nov. 2011).
- The regional public transportation authority, Nahverkehrsgesellschaft Baden-Württemberg (NVBW), confirmed these results in a report.
- A minimal expenditure of less than €3m would increase the terminus’ capacity to 56 trains per hour.
- The existing terminus station would thus handle **at least 32% more trains** than “Stuttgart 21” when completed.
- According to “Stiftung Warentest” in February 2011, the existing terminus station was named **the most punctual major station in Germany.**

Summary

An incredible waste of taxpayers’ money for a politically driven property development project – despite conflicting facts! “Stuttgart 21” brings no progress in transport to the city while taking major risks and bringing new disadvantages.

The powerful, fully functional station is being needlessly destroyed.

The more modern, more user-friendly, more economical and more ecological project is the modernised terminus station.

It can already do more than the underground station could ever achieve. Therefore the terminus station is and will remain the better station for Stuttgart.

Therefore: true progress is above ground!

