

25 YEARS PUBLIC TRANSPORT EXPERTS





Dear clients, dear partners, dear readers,

25 YEARS

For over 25 years now, TTK has been a specialist partner in all tasks in the fields of transportation and mobility planning: from feasibility studies to implementation planning; from vehicle to passenger; from operation to communication – for bus, municipal rail and railway.

During this time, TTK has developed from a small engineering and consultation office into a renowned player in both Germany and France, and this year will be working on projects in Europe, Africa and the Middle East with around 50 employees at four locations.

In order to guarantee project success, we have changed several courses in recent years:

In order to be closer to our clients, we have opened new offices in Paris and Strasbourg.

In order to provide our customers the complete range of technical services, we have founded the planning office B.E.P. GmbH – emphasising the aspects of electricity and energy provision and signalling – together with the well-known BLIC-Group.

And in order to provide our employees with an excellent working environment, we expanded our offices in Lyon and moved our headquarters in Karlsruhe from Gerwigstraße to Durlacher Allee. There we have moved into newly constructed office areas in TuDu, the new buildings of AVG. This short outline shows that TTK is continuously developing with its customers in mind, even after 25 years, and is always adapting to changing requirements. Not even the current pandemic has prevented us from following this path.

In this brief timeline we review and recall several important milestones and maybe you will remember the one or the other of these projects and events, too. The timeline does not attempt to be complete and also reflects personal significant memories. We hope you enjoy reading it and look forward to working together in the future.

Dr. Rainer Schwarzmann & Christian Höglmeier





Foundation, partners: PTV System GmbH and AVG GmbH at 50% each, entry into the commercial register on 10 September 1996 under HRB 7550, headquarters in Karlsruhe, Gerwigstraße 53, rental of 2 office floors covering an overall area of 430 m².

Number of employees: 6 (of which 3 are still employed by TTK after 25 years), already 10 employees by the end of 1996. Managing director Udo Sparmann.

Sample projects (already acquired in advance): local transportation plan for roundabout at Bergstraße, StadtRegionalBahn Salzburg, Austria.

Participation in the UITP congress at Stuttgart (joint stand with INIT and PTV System) as well as a trip to demonstrate Karlsruhe's two-system urban rail vehicle between Stuttgart and Böblingen.

Closure of feasibility study of the Karlsruhe model for Ljubljana (Slovenia) as well as for Hamm, Kiel (StadtRegionalBahn and transport association tariffs) and Kassel (NVV).

Revenues at 77% domestic and 23% abroad. 16 employees, employee exchange with BR Research in Derby (GB) for one month in each country.

1998

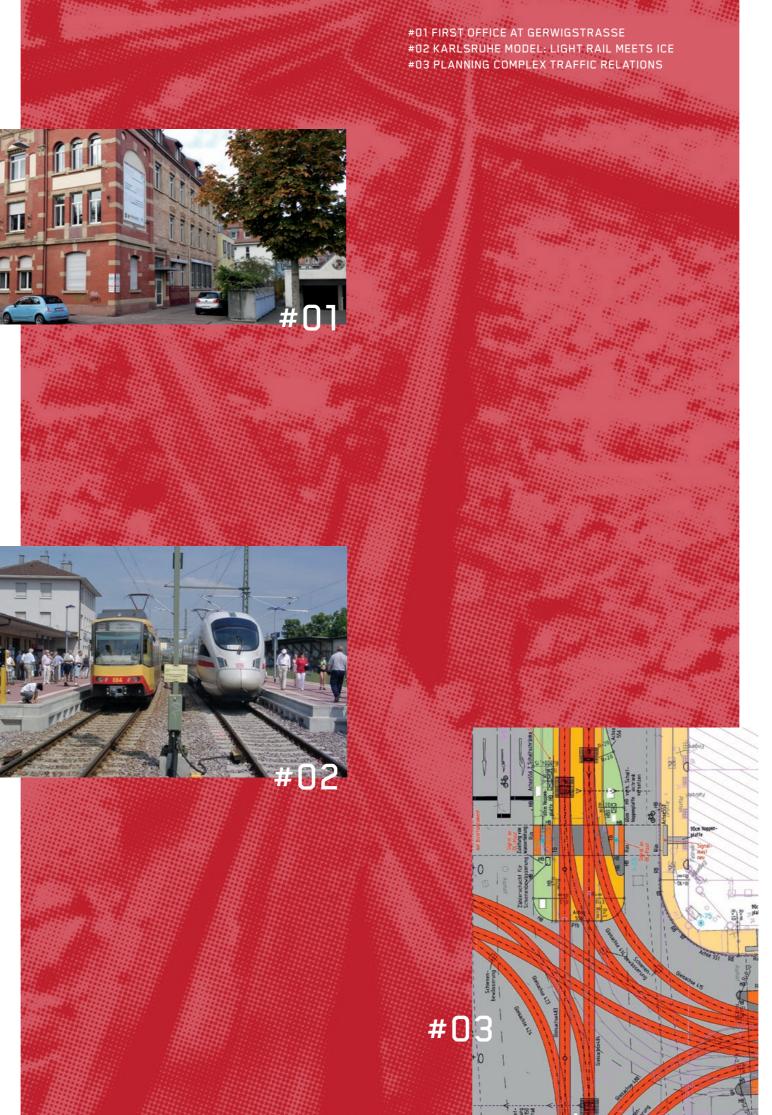
TTK becomes member of FGSV, UITP and VDV. Closure of tariff work for the Western Palatinate Transport Association (WVV) and the Rhein-Nahe local transport association (RNN) in cooperation with VRN.



AVG boss Dieter Ludwig invited all TTK employees to a special excursion including the opportunity to sit at the controls of a municipal railway tram and the day was rounded off with an evening meal.



Closure of the feasibility study Regio StadtBahn Braunschweig; ZGB wanted to implement the project, however it ultimately failed due to the high railway line costs for the use of German Rail routes **VDV** (AVG leased German Rail routes such as Heilbronn, Bad Wildbad and Freudenstadt).



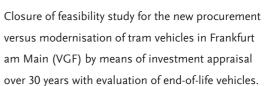
Change in shares of the business: PTV AG 51% AVG 44%, managing director Udo Sparmann 5%.



Closure of product specifications document for a French two-system vehicle commissioned by SNCF (Paris).



Closure of updating of basic principles of the expansion of the Heilbronn municipal railway in cooperation with DE-Consult and PTV.



New orders to the value of 3.5 million German Marks are commissioned. (VRS, AVG/VBK, City of Trier, EU, City of Ljubljana, CTS Strasbourg, Transdev, Mulhouse, VRN, Town of Heilbronn).

25 employees, international exchange via combined operation in Rotterdam as part of the EU Crossrail project.

2000

Closure of planning of tram route Heidelberg Kirchheim.

Domain name 'TTK.de' is secured, from 1 August 2000, online at www.ttk.de.

HOAI projects achieve over 60% and feasibility studies, which initially had the largest share, drop to below 10% of revenues, further segments are: consultation, tariffs and research.

Closure of audit and optimisation of the state support mechanisms with the aim of a more objective distribution of the financial means for 21 routes in the 10 private railways in Austria in cooperation with PTV.

On 21 July, commissioning of StadtBahn Heilbronn city centre municipal railway route.

In September, the PROSPER congress was held in Karlsruhe by TTK on behalf of the EU (hybrid drive technologies) as well as test trips with the ULEV-TAP prototype vehicle in Reichshoffen (Alsace).

Closure of EU CROSSRAIL project:

integration of local and regional rail transport (Tram-Train) with particular consideration of cross-border aspects.

For the first time, a gross performance of 4 million German marks/year was achieved with a foreign share of 40%.

2002

Foundation of the Lyon subsidiary with entry into the French commercial register.

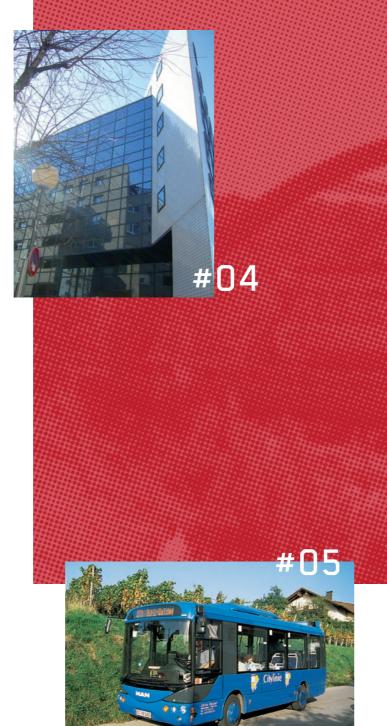
Changes to personnel in divisional management and reorganisation of the divisions lay the foundation for further positive development.

Introduction of the euro simplifies and boosts business, particularly with France.

Plans for double-track expansion of the municipal railway route Renningen - Malmsheim (S6), based on analysis of operating concept to eliminate delays, are carried out in record time.

Closure of work for CUS on the 2010 tram network in Strasbourg (detailed feasibility studies for 7 route expansions).

Closure of plans for TramTrain Stavanger (N) with new city centre routes and rail connection to the airport.





In cooperation with AVG, vehicle studies were completed for the planned west regional bypass (RTW) in the Frankfurt/Main area.

By the end of the year, the volume of orders reaches a total of € 3 m.

International TramTrain congress in Karlsruhe on the occasion of the 10-year anniversary of the two-system municipal railway operation between Karlsruhe and Bretten with more than 300 guests from 12 countries.

Growth requires more office space. Extension is built at the Karlsruhe site in only 7 months providing TTK with an additional 130 m², i.e. + 30%.

On 31 May 2003, commissioning of 2nd track with a new platform for the S6 in Malmsheim (elimination of bottleneck in the Stuttgart municipal railway network after short planning and construction period).

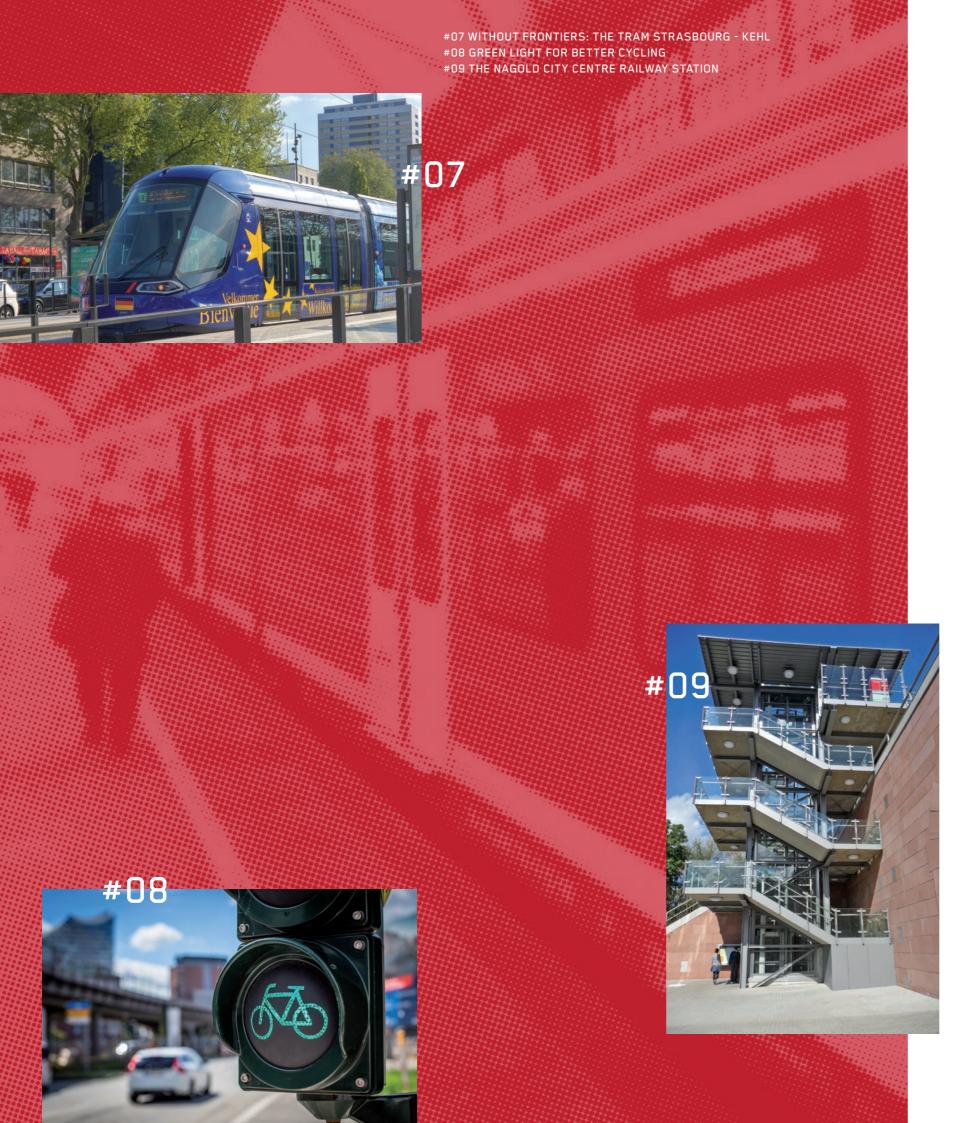
Start of series of evening presentations 'TTK Project Information Evening' concerning the metro/municipal railway combined operation in Helsinki (Finland) as communication platform with colleagues from PTV and AVG.

#04 LYON OFFICE

#05 MINIBUSES IN INTERMODAL TRANSPORT #06 KARLSRUHE BEFORE THE 'KOMBILÖSUNG'

Company outing with contrasts: visit to the Heilbronn city-centre thoroughfare construction site and subsequent tour of production at the Audi plant in Neckarsulm.

Difficult year due to lack of HOAI projects and reduction of number of employees to 24 persons at the end of the year as well as downsizing of the organisation to only 2 divisions.



Closure of plans and consultation for the town of Mulhouse as well as the French network association RFF (Réseau Ferré de France) for 2 tram lines and 1 regional municipal line on the railway line to Kruth.

Closure of plans for the Karlsruhe Nordstadt/Heide tram (3 km long double-track tram route with 6 stops including new design of the road space as well as coordination of the rerouting of cables with planning of outdoor installations as part of the design planning).

Closure of EU research project LibeRTiN (Light Rail Thematic Network), in which TTK led the thematic network for the standardisation of technical norms.

Closure of the support of RMV's vehicle procurement company (fahma) in the purchase of 22 diesel railcars for operation on the Odenwald railway.

In June 2005 the 10th general meeting took place, held by Dieter Ludwig/AVG, Thomas Schwerdtfeger/ PTV and Udo Sparmann/TTK.

50% of revenues come from abroad (overall 40% France and 10% Great Britain), Start of work on the reactivation of the Calw – Weil der Stadt railway line (Stuttgart municipal railway), whose implementation is currently in progress – after 15 years.

Visit to Karlsruhe from a team of 15 persons from a company in Great Britain with whom TTK cooperated on the Cross River Tram project.

For the purpose of internal training, 18 blocks were defined as 'basic knowledge' for TTK (this is to ensure that all employees have the same basic knowledge and always advise TTK customers based on state-of-the-art technology – the most up-to-date knowledge). This serves to improve and ensure quality.

Lease of 3 office rooms in London close to Victoria

Station and the Transport for London customer.

Closure of feasibility study on the expansion of the

Rennes underground network.

A TTK employee was appointed to a professorship at the Technical University of Munich.

Walter Casazza succeeds Dieter Ludwig as head of AVG and in the TTK general meeting.

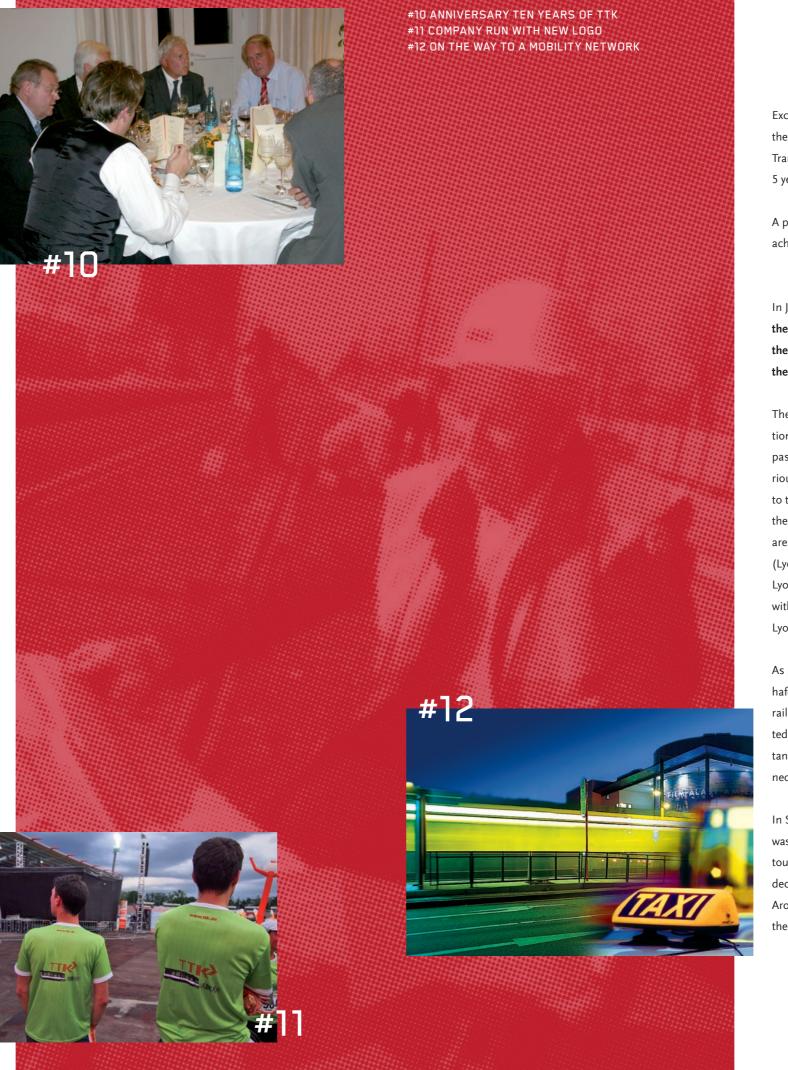


On the occasion of the 10-year anniversary there was a redesign of the corporate logo with new design of all external and internal documents (mandatory definition in a style guide) as well as new template for the online presence with update of display of the portfolio (9 business fields).

Around 100 participants from home and abroad took part in the two-day event on the occasion of the 10th anniversary of TTK in September – with technical symposium as well as festive dinner at Karlsruhe Castle. The second day took participants to Bad Wildbad on a train chartered by AVG to visit the extension of the railway line in the town centre to the spa gardens (for which TTK implemented all planning phases (HOAI Lph. 1-8)).

For the first time in 10 years, TTK exceeds revenue targets and can show a significant annual surplus.

Since then, this has been regularly repeated: the new logo has brought TTK lots of luck!



Exchange of experiences with representatives of the Greater Lille area in Karlsruhe concerning the TramTrain projects which have been carried out for 5 years.

A peak value of a 58% foreign share of revenues is achieved.

In July, the topping out ceremony was celebrated for the new depot in the east of Karlsruhe. All plans for the transportation facilities were created by TTK from the initial idea right up to implementation.

2007

The year marks a milestone in a number of investigations on the public passenger transport and local rail passenger transport in the Greater Lyon region, various railway lines, an express TramTrain connection to the Lyon-St.-Exupéry airport as well as a study on the organisation of the surrounding railway station area and connection of transport modes in Part-Dieu (Lyon). Overall, the statistics report 27 projects for Lyon until 2018 – most recently an operating study with modelling of the western municipal railway in Lyon using OpenTrack.

As part of the line network optimisation for Ludwigshafen/Rhine, it is recommended that a longer city rail tunnel is decommissioned (line was only operated during the two rush hours, low demand due to tangential location and replacement by new bus connection). The suggestion was implemented in 2008.

In September, the British railway minister Tom Harris was a guest at TTK with a small delegation for a guided tour of the Karlsruhe model. This was specifically declared a 'private visit'.

Around 20% of the volume of orders at the end of the year originated from Great Britain.

In February, groundbreaking ceremony for the second construction section of the S60 (expansion of Sindelfingen station and double-track expansion of the 5 km long route). TTK carried out the planning of all transport and structural systems as well as the tendering and awarding of the measures.

Closure of projects in the Greater London area (feasibility study of Oxford Street tram as well as consultation on Croydon Tramlink).

In October, punctual reopening of the Böblingen – Sindelfingen – Renningen line after upgrade of the single-track freight train route to double-track municipal railway line.

2009

TTK was commended with an article in the AVG employee journal: 'Skilful balancing act between home and abroad'.

In April, the 12th TTK seminar in Lyon was held.

TTK sees itself as German/French company; so the awareness of life and work in both countries is important for all TTK employees and creates a team spirit. The crisis on the financial market only has a negative effect for TTK on the market in Great Britain.

Leasing of new office space in Lyon in Rue Maurice Flandin (Le PHENIX) near to the former location at Gare Part-Dieu. TTK shares the whole space with PTV France as subtenant.

Closure of experts' report for the regionalisation of ÖBB narrow gauge lines: Mariazeller railway, Ybbstal railway, Waldviertler narrow gauge railways (calculation of maintenances costs for 15 years for an overall line length of 231 km including almost 300 switches, 100 bridges and 24 tunnels as well as 450 constructive passageways).



2010

Closure of examination of structural feasibility of the Tübingen city centre line for RegionalStadtBahn Neckar-Alb.

The major success on the French market can be seen by the extent of the 11 framework contracts which were won and run partly until 2013.

Closure of Urban Track (EU research project in the sixth framework programme on the standardisation of the form of tram and municipal railway upper structures and maintenance methods) with a significant share of the work by TTK.

Foreign share of revenues evens out at 55%, whereby the shares from Germany and France are equal.

For the first time since 2002, i.e. after 8 years, the number of employees reaches 30 people again.

In September the company outing on the occasion of the 15th anniversary of TTK went to the two-system project in France in Mulhouse with an insight into the project process between Sitram/Solea and RFF/SNCF (operator vs. infrastructure) as well as a trip with a two-system vehicle to Thann.

Closure of the plans to extend the D line from Strasbourg to Kehl via the Rhine on behalf of CUS.

Start of the project for the European Bank for Reconstruction and Development (EBRD) on the optimisation of public passenger transport in Chisineau (Moldavia) together with a Romanian Partner.





#13 STILL UNDER CONSTRUCTION: KARLSRUHE LIGHT RAIL TUNNEL #14 TTK AT THE PUBLIC TRANSPORT FAIR IN PARIS #15 READY TO GO EVEN IN WINTER: RENTAL BIKES IN LYON



municipal railway expansions and a newly constructed line.

In June, during a visit by the regional transport company (NVBW) to TTK, the result of the feasibility study on the expansion of the Hohenlohe railway (electrification and reactivation at Künzelsau) was commended.

In September, grand opening of the new Saarbahn depot in Brebach. TTK, together with Werkgemeinschaft Karlsruhe, covered all planning services from the initial idea up to execution.

Also in September: opening of the south-east tram in Karlsruhe (2.2 km in length, 5 stops, €30 million construction costs, 19 months construction time).

from the free state of Bavaria and from Thüringen, TTK presented the positive result of the feasibility calculation of the gap closure for the Werra railway at the German Chamber of Industry and Commerce (IHK) in Coburg. It has not yet been implemented as the association rejected admission into the Federal Transport Plan (BVWP) (there was no long-distance transportation there on the reference date).

In December, opening of the 14 km long municipal railway line between Renningen and Böblingen (S60) with construction costs of € 150 million. TTK carried out the plans up until planning permission as well as the implementation planning for the middle section.

OPENTRACK

Completion of the two-system municipal railway storage sidings and depot in Saarbrücken Brebach (design, approval and implementation planning of the storage sidings with depot workshop for the two-system municipal railway vehicles belonging to Stadtbahn Saar GmbH). When the space at Brebach railway station became free, it was possible to realise a plan without spatial separation from the storage sidings and workshop for the two-system vehicles in Saarbrücken.

Ingenieurgemeinschaft Schönbuchbahn (INGE) is founded together with architecture firm basicc (KA) and ELBAS (Dresden) today _Signon: double-track expansion and electrification of the Schönbuch railway.

At the start of April, PTV Transport Consult GmbH is launched and holds 51% of shares of TTK.

In September, TTK holds the OpenTrack workshop. The current level of experience was discussed with many representatives from transport companies from Germany and abroad and the further development of the operational simulation tool, which was originally developed for the railway, to include municipal railways and trams was commended.

The share of the French projects drops with revenue at the lowest level of only 27%.

Completion of operational studies for Tram Avignon as part of implementation for the first two lines.

In December was the opening of the municipal railway Heilbronn Nord. TTK, as part of the ARGE municipal railway Heilbronn Nord, was responsible for the planning of the city centre section (redesign of the street into a promenade).

The year put everyone to the test. Several employees resigned in a concerted action, but were able to be completely replaced within a short amount of time. This 'consolidation' created a positive space for the further development of TTK.

Closure of the plans for the regional railway at Trier (new construction of 7 stops, expansion of 6 existing stops).

Various plans and studies were carried out for the Chemnitz regional municipal railway from 2002 to 2014 – most recently an operational simulation for the commissioning of stage 2 of the Chemnitz model with analysis of the impact on the operational process at the central stop and the introduction of additional two-system lines.

2015

With the completion of the standardised assessment Calw – Weil der Stadt, TTK achieved an important precondition for its reactivation. The expertise is important for further consultation projects, for example the tram line to the Hubland district in Würzburg.

TTK was represented with its own stand at the passenger transport trade fair in Lyon in autumn. It was also visited by the prime minister. Many contacts were considered positive overall.

Closure of the operating cost study (analysis and comparison of operating TramTrain costs between AVG and SNCF) shows fundamental differences.

Feasibility study for the Marseille underground railway (expansion of Line 2) is completed.

After the 'crisis year' of 2014 in which a positive result was still achieved, TTK delivered respectable profits as usual again in 2015.



#20 WORKS OUTING AT THE KARLSRUHE TRANSPORT AUTHORITY #21 TTK NEW WEBSITE

#22 CHRISTIAN HÖGLMEIER (RIGHT) BECOMES MANAGING DIRECTOR #23 TTK AT THE UITP SUMMIT IN MONTREAL



#23

2016

On 1 September, Christian Höglmeier is appointed additional managing director and the succession plan for long-standing managing director Udo Sparmann is introduced. Höglmeier remains member of the AVG and VBK managing board. The event is celebrated with internal festivities for the 20th anniversary of TTK.

Sales targets are significantly exceeded. Shares of sales are divided almost equally between Germany and France.

Line network optimisation after commissioning of the Karlsruhe 'Kombilösung' is presented – managed in cooperation with PTV-TC and the Zuse-Institut Berlin (ZIB).

Number of employees rises to over 30 again.

The TTK seminar in Dresden/Radebeul brings together the many colleagues from France and also from the east of Germany.

TTK launches a new online presence for its 20th anniversary.

Udo Sparmann retires and on 1 July Rainer Schwarzmann becomes managing director (previously at PTV Transport Consult).

TTK wins its first project for the World Bank and creates a tram operation benchmarking for the city of Antalya.

An additional exciting project abroad is the multimodal study for Luxembourg, which is planning an express connection Esch-Belval for buses and cyclists.

With the reform of the administrative areas in France, TTK is commissioned with the regional development plan for the 'Region South' in 2030 (Provence-Alpes Côte d'Azur).

TTK is no less active in Baden-Württemberg and manages the planning of the pilot hybrid overhead line for trucks as construction developer on behalf of the Ministry of Transport.



TTK takes part in IT-Trans as part of its commitment to the technology region of Karlsruhe and presents itself for the 6th time at the RNTP trade fair in Paris.

The 18th corporate seminar takes place in Odilienberg in Alsace. All projects, both national and international, are very diverse.

First talks are held in Israel on the topic of tram projects and tram operation. In the district of Neustadt a.d. Aisch/Bad-Windsheim, an on-demand service is developed for rural areas. The topic of track reactivation also gains interest, TTK examines the feasibility of Bottwartal rail (Marbach-Heilbronn).

As part of the stop reconstruction programme by the town of Karlsruhe, TTK manages the local monitoring of construction and thus offers a new range of services in the field of infrastructure planning.

TTK's own contribution rises above \in 3 million for the first time.

2019

TTK is constantly growing and reaches a total number of 40 employees. Two subsidiaries are opened in Paris and Strasbourg and thus strengthen the company's presence on the French market.

In France, TTK was able to qualify for the CATP (Central Procurement Office for Public Transport) as service provider and win many new contracts.

The company seminar takes place this year in Esslingen and offers employees the opportunity to visit the reconstruction of the Schönbuch railway before it is commissioned.

The Schönbuch railway goes into operation in December and thus finalises the company's hitherto largest project.

TTK obtains a record number of orders of over € 5 million.

2020

Restrictions caused by the coronavirus impact on the company throughout the year and demand a new organisation of work which, luckily however, hardly has any effect on project work.

TTK has the opportunity to research innovative transportation systems and launches the TSB project (feasibility study for the suitability of magnetic levitation technology of the transport system Bögl in local rail passenger transport or public passenger transport).

The first electric bus project for the Munich transport association (operational planning for electric buses) also enables specialist knowledge to be broadened.

Abroad, the project Red Team Tel-Aviv light rail (internal evaluation of a provider for the municipal railway in Tel-Aviv) continues in cooperation with AVG.

TTK develops a national mobility plan 2035 for Luxembourg

The infrastructure planning in the region continues, for example with the regional municipal railway Neckar-Alb, in which TTK manages the planning services between Tübingen and Metzingen as general planner.

In Ludwigsburg, TTK is involved with the planning of the local public transport cycle route in cooperation with the Bernard Gruppe ZT GmbH, from the Weststadt district and along the L 1140 in the direction of Neckargröningen. This year, TTK celebrates '25 years of success', can look back proudly on these past years and plan the future with confidence.

TTK leaves its offices in Gerwigstraße and obtains larger premises in Durlacher Allee 73.

Moving in with them is B.E:P (a subsidiary company founded together with our partner BLIC) which commenced operations in June.

TTK is particularly proud of a new major research project for DZSF to reactivate rail lines.

As part of the Mobipamina study, TTK, as German-French company, develops a cross-border mobility action plan 2030-2040 together with its partners for Eurodistrikt PAMINA (Rhineland-Palatinate, Baden-Württemberg and the Grand Est region).

For their parent company, TTK carried out the planning of the outdoor areas of the new central vehicle repair workshop and the bus depot for VBK and AVG, the construction of which started in September.

For the metropolitan region of Frankfurt Rhein-Main, TTK creates the design and approval planning for the plan approval section South 2 of the West regional bypass.

TTK celebrates its 25th anniversary in a relaxed atmosphere at Urspelt Castle in Luxembourg with 50 employees!



PUBLIC TRANSPORT EXPERTS



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