

Projects - Prof. Dr Christoph Walther

- **Investigation on possible optimizations of premises and methods regarding the rail sector in the context of the federal transport infrastructure plan**, on behalf of the German research center for rail transport (DZSF), 2024-2025
- **Evaluation of the national bicycle traffic plan**, on behalf of Federal Ministry of Digital Affairs and Transport (BMDV), 2024-2025
- **Quantification and scientific evaluation of the benefit of “Building Information Modelling (BIM)”-applications**, on behalf of Federal Highway Research Institute (BAST), 2024-2025
- **Revision of the guideline for the planning decision “Tunnel versus Mountain Cutting”**, on behalf of Federal Highway Research Institute (BAST), 2024-2025
- **Assessment procedure for measures of the national funding programme “future-oriented stations”**, on behalf of German Railways – DB Stations AG, 2023-2024
- **Scientific monitoring and support of the “Expert Board on Climate Friendly Mobility (EKM)”**
parts: management team, freight transport, railway strategies, digitalization in the transport sector; on behalf of Federal Ministry of Digital Affairs and Transport (BMDV), 2023-2025
- **BCA for a Bicycle Parking Garage (BPG) in Hamburg-Hamburg**, on behalf of P+R-Betriebsgesellschaft Hamburg, 2022
- **Scientific support and impact calculations regarding climate protection measures in the transport sector**, on behalf of Ministry of Transport of the Land Baden-Wuerttemberg, 2020-2021
- **Possible advancements of the assessment methodology of the Federal Transport Infrastructure Plan 2030**, on behalf of Ministry of Transport of the Land Baden-Wuerttemberg, 2020-2021
- **Advancements and updates of selected methodological aspects and procedural steps of the Federal Transport Infrastructure Plan 2030**, on behalf of Federal Ministry of Digital Affairs and Transport (BMDV), 2020-2024
- **Scientific monitoring and support of the Federal Ministry of Transport and Digital Infrastructure (BMVI) during the mobility and fuel strategy (MKS)**
parts: member of coordinators’ team, railway strategy and detailed railway studies (electrification, digitalization (European Train Control System ETCS), reactivation of railway links and the European night train network etc.), evaluation of cycling funding programmes for cycling (infrastructure), avoidance costs and efficiency indicators in the context of greenhouse gas reduction; on behalf of Federal Ministry of Transport and Digital Infrastructure (BMVI) or Federal Ministry of Digital Affairs and Transport (BMDV), respectively, 2015-2023

- **CoEXist:**
“AV-Ready” transport models and road infrastructure for the coexistence of automated and conventional vehicles; part: AV-ready microscopic and macroscopic modelling tools, EU Horizon 2020 Work Programme, 2017-2020
- **Methodology for optimized planning of modernization and/or reconstruction of important bridges in partial networks (Part 2):**
lessons learned, methodological adaptations, and prototype implementation; on behalf of Federal Highway Research Institute (BASt), 2017-2020
- **FLOW – Furthering Less Congestion by Creating Opportunities for more Walking and Cycling** Development of a Congestion Busting Assessment Methodology for cities; part: impact assessment tool for evaluating walking and cycling measures; EU Horizon 2020 Work Programme MG-5.3-2014: Tackling urban road congestion, 2015-2018
- **Coordination of the processes for the German Federal Transport Infrastructure Plan (FTIP) 2030**
Support for the entire process of drawing up the traffic forecast 2030, developing an evaluation methodology at international scientific level, and assessment of about 2.000 projects under consideration; on behalf of Federal Ministry of Transport and Digital Infrastructure, 2010-2016
- **Methodology for optimized planning of modernization and/or reconstruction of important bridges in partial networks (Part 1)**
on behalf of Federal Highway Research Institute (BASt), 2015-2016
- **Prioritizing combined projects (including interdependent partial projects for road section and civil engineering structure) with respect to maintenance as well as to extension**
on behalf of Federal Ministry of Transport and Digital Infrastructure, 2014-2016
- **Intermodal e-mobility management (leMM)**
project of the top cluster "Electric Mobility South-West - Road to Global Market", tasks: consortium management, transport demand, services for user information, on behalf of Federal Ministry of Research and Education, 2012-2015
- **eMERGE**
Balancing requirements of different sectors and groups: energy, transport, automotive industry, and users of electric vehicles – fleet tests in the Rhine-Ruhr region and Berlin, on behalf of Federal Ministry for Transport, Housing, and Urban Development, 2011-2014
- **SKRIBT^{PLUS} Protection of critical road bridges and tunnels**
part: analysis of criticality and macro-economic assessment tool, on behalf of Federal Ministry of Research and Education, 2011-2014
- **Benefit Cost-Analysis (BCA) for traffic control systems with respect to their entire service life (life cycle-assessment)**
on behalf of German Federal Highway Research Institute (BASt), 2012-2013

- **metropol-E: Electric mobility in the Rhine-Ruhr region**
part: planning of the charging infrastructure with respect to existing settlement and population structure,
on behalf of Federal Ministry for Transport, Housing, and Urban Development, 2011-2014
- **Scientific support, coordination, and evaluation of measures for the two sectors “buildings” and “transport” for the elaboration of the national “Energy and Climate Concept (EnK)**
part: “transport sector”, on behalf of Federal Ministry for Transport, Housing, and Urban Development, 2011-2012
- **SeRoN: Security of Road Transport Networks**
theme 10: “Security“, within 7th Framework Programme
on behalf of European Commission, 2009-2012
- **CO₂ reduction due to improved traffic flow conditions**
on behalf of Forschungsvereinigung Automobiltechnik (Research Association of German Automotive Industry), 2008-2009
- **Climate and energy in a complex transition process towards sustainable Hyderabad**
part: Sustainable traffic and transport concepts in the Indian context,
programme: "research for the sustainable development of the mega cities of tomorrow",
on behalf of Federal Ministry of Research and Education, 2008-2013
- **LogoTakt: Technologies and processes for robust and synchronised logistics networks**
part: multi-modal time schedule and operation of the logistics platform,
on behalf of Federal Ministry of Economics and Technology, 2008-2010
- **MOSAIQUE: Central German initiative for a strategic inter-modal traffic management network with focus on quality assurance and efficiency improvement**
on behalf of Federal Ministry of Economics and Technology, 2008-2010
- **SKRIBT: Protection of critical road tunnels and bridges**
part: impact and macro-economic assessment,
on behalf of Federal Ministry of Research and Education, 2008-2011
- **Macro-economic assessment procedure for infrastructure projects in Vienna (subway and tram projects)**
on behalf of the City of Vienna, 2008-2009
- **High speed rail systems for Mumbai conurbation**
prefeasibility study on behalf of Mumbai Metropolitan Region (MMR), subcontractor to Vössing Engineers, Munich, 2008-2009
- **Perspectives for the railway line Zweisimmen - Lenk (narrow-gauge railway) in the Berner Oberland (Switzerland),**
on behalf of department for public transport, Canton of Bern (CH), 2007-2008

- **Operation of Galileo in the field of traffic management,**
work packages “mobility services” and “assessment”
on behalf of Ministry for State Development and Transport of Saxony-Anhalt, 2007-2008
- **Benefit Cost-Analysis (BCA) for assessing the efficiency of measures for improving urban cycling**
on behalf of Federal Ministry for Transport, Housing and Urban Development, 2007-2008
- **Mobility concepts for assuring services of public interest in regions of disperse and minor demand** – compendium for planning demand responsive transport services
on behalf of Federal Office for Building and Regional Planning, 2006-2008
- **“Mobility master plan for the region of Frankfurt - Rhein Main”**
on behalf of ivm GmbH (Integriertes Verkehrsmanagement Region Frankfurt Rhein Main), 2006-2008
- **Information on detours as base for socio-economic assessment procedures within the framework bridge management systems**
on behalf of German Federal Highway Research Institute (BASt), 2006-2007
- **Improving methods for forecasting traffic volumes as assessment basis for road capacity design,**
on behalf of German Federal Highway Research Institute (BASt), 2005-2007
- **Hyderabad as a megacity of tomorrow: Employing domestic knowledge generation for achieving a sustainable urban food provision and environmental management system,**
programme: "research for the sustainable development of the mega cities of tomorrow",
on behalf of Federal Ministry of Research and Education, 2005-2007
- **SHAKTI: Sustainable Holistic Approach & Know-how Tailored to India (Hyderabad),**
part: transport infrastructures; programme: "research for the sustainable development of the mega cities of tomorrow", on behalf of Federal Ministry of Research and Education, 2005-2007
- **Simulation of non-constructional measures for widening the highway capacity on single links**
on behalf of the Federal Ministry of Transport and Housing, 2005-2006
- **TRANSIT: An inter-modal transport information management system for mega-events**
part: inter-modal routing service including the "last mile",
on behalf of Federal Ministry of Research and Education, 2005-2006
- **The impact of transport infrastructure investment on economic growth**
on behalf of German Federal Ministry of Finance, 2004-2005
- **Macro-economic assessment of transport systems at municipal level**
(design, implementation, and application to selected cities)
on behalf of Federal Ministry of Transport and Housing, 2004-2006

- **Traffic demand and infrastructure supply in Germany – scenarios and capacity analysis for road and rail**
literature research, on behalf of German Academy for Technical Sciences and Engineering (acatech), 2004-2005
- **Road traffic in Germany: Implementation of a simulation tool with focus on highways and national roads in Germany**
concept study, analysis 2002, and base scenario 2020;
on behalf of Volkswagen AG, Wolfsburg, 2003-2005
- **OVID: „Strengthening the ability of self-organisation in the transport sector by means of I&C-based services**
work packages „scenarios“, and „freight transport modelling“,
on behalf of Federal Ministry of Research and Education, 2003-2005
- **Revision of the guidelines for road construction, part: socio-economic assessment**
(concept study, 2nd round),
on behalf of Federal Ministry of Transport and Housing, 2003-2004
- **Model for the optimisation of maintenance programmes for road bridges at network level – prototype implementation and first applications**
on behalf of the German Federal Highway Research Institute (BASt),
2003-2004
- **Feeder track to a cement plant in the Land of Salzburg, Austria,**
(feasibility study), on behalf of Salzburger Lokalbahn, 2003
- **Development of a model for calculating the costs of measurements for maintaining road bridges,**
on behalf of German Federal Highway Research Institute (BASt), 2002-2003
- **Integrated transport master plan for the Land Nordrhein-Westfalen – part: socio-economic assessment of road and railway projects,**
on behalf of Ministry for Economic Affairs, Energy and Transport of the Land Nordrhein-Westfalen, 2001- 2006
- **Objectives, indicators, and comparative assessment of projects within the strategy “high performance roads”,**
on behalf of the Canton of Zurich, 2000-2003
- **Development of a model for the evaluation of scenarios and strategies for the maintenance of road bridges,**
on behalf of German Federal Highway Research Institute (BASt), 2001-2003
- **AMABLE: Alternative public transport service options for sub networks connected with regular services – models and invitation to tender**
(acc. to EC regulations), on behalf of Federal Ministry of Research and Education, 2001-2006
- **A study on the cost of transport in the European Union to estimate and assess the marginal costs of the use of transport,**
on behalf of the European Commission, DG VII Energy and Transport, 2001-2002

- **Scientific and strategic support to the cantonal management of the transport master plan for the economic area of Zurich,**
on behalf of Canton of Zurich, 2001-2003
- **Optimisation of maintenance programmes for road bridges at network level**
(concept study),
on behalf of German Federal Highway Research Agency (BASt), 2000-2001
- **BCA for a tunnel project in Rapperswil/Jona (Switzerland)**
on behalf of the City of Rapperswil, 2000
- **Criteria for granting financial support for infrastructure investments (incl. maintenance) to private railway companies**
on behalf of Austrian Federal Ministry of Transport, Vienna, 2000-2001
- **EVENTS: New transport systems and traffic concepts for leisure events –WP:**
Economic evaluation,
on behalf of Federal Ministry of Research and Education, 2000-2004
- **Concept for an internet-based trip planner for dangerous goods,**
on behalf of Federal Ministry of Transport and Housing, 2000
- **Guideline and economic assessment supporting the decision "repair vs. renewal" for road bridges,** on behalf of Federal Ministry of Transport, 2000
- **Air Cargo Railing for Luxembourg**
work package: economic assessment, study within the framework of the EC's INTERREG II-programme, Luxemburg, 2000
- **Least Cost Transportation Planning (LCTP) – Possible cost reductions in the transport sector by transport planning,**
on behalf of German Environmental Agency, 2000
- **Private financing schemes for the interconnection of the A1 and A7 motorways crossing the harbour area in Hamburg,** work package: transport modelling and revenue forecast, on behalf of City of Hamburg, 1999
- **Speed limits – calculation of travel times, and greenhouse gas emissions based on the German guidelines for road construction,**
part: socio-economic assessment (EWS 97), on behalf of German Federal Highway Research Agency (BASt), 1999
- **Economic evaluation of a possible new light rail system in the north of Zurich (Glattalbahn),**
on behalf of Verkehrsbetriebe Glattal VBG, Glattbrugg, Switzerland, 1999
- **Update of the guidelines for determining the costs of maintenance for bridges, roads, tracks, and other relevant parts of the infrastructure,**
on behalf of Federal Ministry of Transport, 1998-1999

- **Stagnation of rail traffic demand – a sensitivity analysis to the Socio-economic impact evaluation for the New Alpine Transit Routes (NEAT)**, on behalf of Swiss Federal Office for Transport, Bern, 1998
- **Socio-economic impact evaluation for the New Alpine Transit Routes (NEAT)**, on behalf of Swiss Federal Office for Transport, Bern, 1997-1998
- **Demand forecast for a possible light rail line connecting the airport and the city centre of Hamburg**, on behalf of City of Hamburg, 1997-1998
- **Impact of liberalisation in European transport markets on the economic viability of planned infrastructure projects (road, rail, inland waterways)**, on behalf of Federal Ministry of Transport, 1997-1998
- **Economic and environmental evaluation of alternative alignments for the interconnection of the A1 and A7 motorways crossing the harbour area in Hamburg**, on behalf of City of Hamburg, 1997-1998
- **Modernisation of the Nilgiri Mountain Railway:**
incl. a three-week on-site mission,
on behalf of Federal Office for Foreign Economic Affairs of Switzerland, 1996
- **Warnow river fixed crossing in Rostock:**
traffic and revenue forecast for a tolling project (review), on behalf of Bouygues, 1996
- **Reshaping German railway statistics**
on behalf of Federal Ministry of Transport, 1995-1996
- **Climate protection concept for the City of Freiburg**, 1995
- **Environmental impact of Road Traffic Information Systems (RTIS)**
on behalf of Federal Environmental Agency Berlin, 1995-1998
- **Survey on travel behaviour in the Dukedom of Luxembourg**
on behalf of Ministère des Transports du Grand-Duché de Luxembourg, 1995-1996
- **Revision of the guidelines for road construction, part: socio-economic assessment (RAS-W)**, on behalf of Federal Ministry of Transport, 1994-1996
- **Interconnection of the Cologne/Bonn Region with its airport by a railway link – regional economic assessment**,
on behalf of Ministry of Transport and Urban Development for the land Nordrhein-Westfalen, 1994-1995
- **Socio-economic evaluation for the „Mersch-Foires“-section of the Route du Nord**,
on behalf of Ministre de l'Aménagement du Territoire and Ministre de l'Environnement, Grand-Duché de Luxembourg, 1994
- **Rijeka-Zagreb Motorway and Zagreb-Gorican Motorway (Croatia), traffic and revenue forecasts and preliminary socio-economic project impact evaluation**, on behalf of Bouygues, 1994

- **Preliminary impact evaluation of Istrian Motorways (Croatia)**, on behalf of Bouygues, 1994
- **Introduction of a light rail transit system for the Saarbrücken region, review of a feasibility study**, on behalf of Stadtbahn Saar GmbH, 1993
- **Service capacity of the NEAT (New alpine transit routes) feeder lines (preliminary study)**, on behalf of Federal Ministry of Transport, 1993
- **Integrated Transport Development Plan for Hamburg and its region:**
 - Base case and status quo forecast, 1991-1993
 - Formulation of scenarios, 1992-1994
 - Transport assignment to detailed networks, 1992-1994
 - Socio-economic impact evaluation of different scenarios, 1995-1996
 - Calculation of pollutant emissions from road transport, 1995-1996
- **Forecast of the macro-economic database for the Federal Transport Infrastructure Plan 1991**, on behalf of Federal Ministry of Transport, 1990
- **Extended procedure for dynamic investment planning of transport projects, and pre-evaluation of its application for the Federal Transport Infrastructure Plan (BVWP '90)**, on behalf of the Federal Ministry of Transport, 1990