

PROJECT

3D-Planung

3-dimensional traffic infrastructure planning and consideration of driving dynamics aspects and human factors

3-dimensionale Verkehrsinfrastrukturplanung und Berücksichtigung von fahrdynamischen Aspekten und menschlichen Faktoren

Funding: National (Austria)

Duration: Jul 2016 - May 2018

Status: Complete



Background & policy context:

Starting position, difficulty and motivation for implementation the R&D project to take the permanent increasing requirements on both, quality and graphical depiction in traffic infrastructure planning, and the rise on information density into account, 3-dimensional planning seems to be purposeful.

Objectives:

The current research project offers the chance, to develop a future-oriented method for planning infrastructure projects, independently from existing frameworks and to demonstrate advantages obtained from 3-dimensional planning. These advantages can be evaluated, based on a benefit-cost analysis. Aims and innovative content beyond the state of the art / level of knowledge Together in a team a valuable contribution should be developed for VIF2015 with the project focus 2.1.8 "3-dimensional planning as an instrument for quality improvement in complex planning projects": By the company ILF Consulting Engineers GmbH, who has been in charge for the planning of complex infrastructure projects for several decades, actual case examples and possible applications shall be analysed in the scope of this research project. The aim is to identify advantages and requirements for the 3-dimensional planning of traffic infrastructure and traffic internals. In order to guarantee an ideal planning process during 3D-planning, the development of a method for 3D-planning is crucial.

The analysis and definition of interfaces between the 3D-data basis, 3D-street planning and driving dynamics tests as well as define interfaces between installation planers among each other is here the central focal point. Leading partner to carry out this interface analysis is the Vehicle Safety Institute at Graz University of Technology with its renowned experience in processing research projects. In addition to 3-dimensional routing, Reco-Tech will perform driving dynamics tests whereby planning security can be increased in early planning stages and road safety (RSA and RSI) can be improved compared to actual audits. Besides technical parameters, also different human factors potentially influencing driving dynamics are taken into account during this process.

Targeted results and findings according to the overall analysis of both fields, namely infrastructure planning and driving dynamics tests, important synergies can be used to gain new findings for quality improvement and planning security. Additionally, due to a holistic view, these synergies can be used to minimize project costs (including implementation costs) mainly for complex projects. Finally, and on the basis of a benefit-cost analysis a common résumé from the project partner shall be drawn up.

Parent Programmes:

[MOTF - Mobility of the Future](#)

Institute type: Public institution

Institute name: FFG - Die Österreichische Forschungsförderungsgesellschaft

Funding type: Public (national/regional/local)

Other programmes: Mobilität der Zukunft - VIF 2015

Lead Organisation:

Ilf Consulting Engineers Austria Gmbh**Address:**

Feldkreuzstraße 3
6063 Rum/innsbruck
Austria

Partner Organisations:**Reco - Tech Gmbh****Address:**

Feistritz 109
9143 St. Michael
Austria

Technische Universitat Graz Institut Fur Fahrzeugsicherheit**Address:**

Plüddemanngasse 106
8042 Graz
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Technologies:

Infrastructure management
Virtual reality to support planning processes

Development phase: Research/Invention

STRIA Roadmaps: Other specified

Transport mode: Multimodal transport

Transport sectors: Passenger transport, Freight transport
Societal/Economic issues, Deployment planning/Financing/Market roll-

Transport policies: out

Geo-spatial type: Other