

REALISTIC DRIVER SIMULATION WITH BIOMETRIC PARAMETER ACQUISITION



Nervtech's state-of-the-art driving simulator allows us to get driver responses and capture driver's experience as true as in real environment, with the safety of the virtual world.

GAZE DETECTION



Using eye-tracking, we capture the driver's gaze, can monitor in real time everything drivers see or fail to notice.

MOST COMMON IMPROVEMENTS

- Additional lanes
- Vertical traffic signalization changes
- Additional road markings
- Road illumination improvements
- Increased visibility of traffic signalization
- Removal of side road distractors
- Pedestrians, cyclists and public transportation infrastructure adaptation



W: PNZ.SI

E: PNZ@PNZ.SI

T: +386 1 589 65 14

 **nervtech**™

the human factor in
artificial intelligence

W: NERVTECH.COM

E: INFO@NERVTECH.COM

T: +386 1 810 91 44

VISE

Virtual Infrastructure
Simulation & Evaluation



 **nervtech**™

the human factor in
artificial intelligence

NO MORE CRITICAL ROAD SECTIONS AND EXPENSIVE ROAD MODIFICATIONS

Too often, a poor road design is discovered only after a high number of accidents happen on a certain section. Sometimes a road might have a lower traffic capacity than expected or the road markings may not be clear enough. In such cases, drivers are endangered, operational costs are high and additional unplanned modification costs appear.

ROAD EVALUATION DURING ROAD DESIGN

VISE offers road section evaluation with »human in the loop« procedure already in the design phase. Real drivers test and evaluate the newly designed section in a safe, yet equally engaging environment in a driving simulator. An important part of our solution is the digitalisation and virtualization of new road sections using BIM. What makes our approach unique is the use of a state-of-the-art driving simulator, equipped with a number of biometric sensors, that enable road and driving experience evaluation. This allows us to:

- Detect and avoid creating dangerous sections of road in the design stage
- Increase road capacity
- Increase safety of autonomous vehicles integration

Our solution is not only limited to new projects, it can also be used to analyse and improve the existing roads.

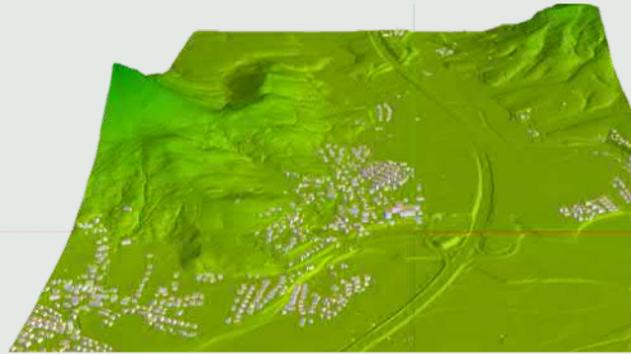
VISE BENEFITS

- Saves time and money for investor / customers
- Includes the end user during the design phase
- Simulations of critical situations
- Mobile simulator allows driving evaluation anywhere and with local population
- Reduces internal and external operational costs



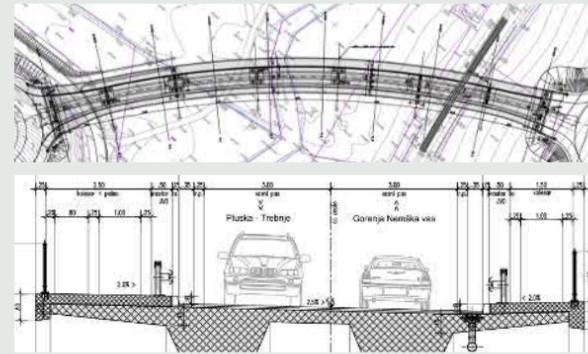
StageOne

Project scope definition and 3D terrain modelling



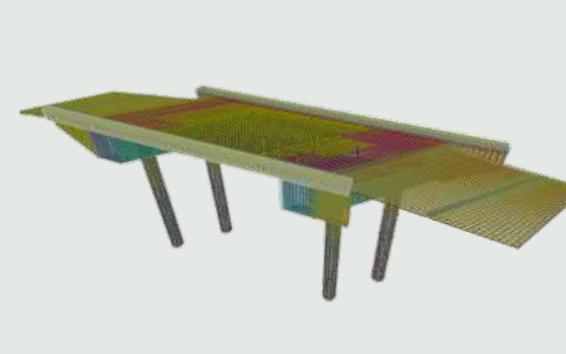
StageTwo

2D infrastructure design



StageThree

BIM 3D modelling



StageFour

Visualization finalization



StageEight

Improvement suggestions based on analysis of simulation results



StageSeven

Analysis and improvement suggestions

If analysis shows weaknesses and there is room for improvements, the project goes back to stage two.



If there are no improvements needed, the project gets a green light.

StageSix

Driving sessions



StageFive

Definition of simulation traffic rules in simulation

