„Analysis of the impact of Platform Barriers on the introduction of autonomous driving in railway applications”

This thesis aims to examine the potential impact of platform barriers on the implementation of autonomous operations within the German railway system. Initially, the advantages and disadvantages of various platform barrier configurations shall be systematically analysed, including an assessment of their current applications in automated railway systems.

Subsequently, the prevailing technical, operational, and regulatory challenges associated with the implementation of autonomous railway operations in Germany must be identified and examined. These challenges have to be systematically compared with the functional characteristics of the respective platform barrier variants in order to determine their suitability and potential contribution to overcoming identified constraints.

In a further step, the network-wide implications of implementing platform screen doors in the context of autonomous railway operations must be evaluated. Potential cost reductions and procedural simplifications achievable through the use of platform screen doors shall be identified and assessed. Furthermore, the impact on the overall network capacity and operational performance has to be assessed.