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Title of presentation	Institution
Paving the way for reinforcing	German Centre for Rail Traffic Research (DZSF)
safety culture	
Please highlight workshop topic(s) your paper is relevant for ☐ Ergonomics and Usability of advisory and assistance systems ☐ Automation, Train control systems ☐ Fatigue, monotony, mental workload ☐ Risk, Human error and Human reliability ☐ Situation awareness ☐ Incident investigation ☑ Safety culture ☐ Human Factors Integration (e.g., in organizational processes) ☐ Rules and Standards ☐ others	

Abstract

Reinforcing the safety culture is crucial for rail safety considering the influence of human factors in the daily work routine. The issue has become even more important under the 4th Railway Package of the European Commission, as part of the safety management system. At the same time, it has also led to some uncertainty among rail transport and infrastructure companies, as there seems so far no extensive knowledge about the concept of safety culture and how it can be measured, assessed and, possibly, improved. In particular, the continuous enhancement of safety culture might be challenging but necessary for companies in rail transport.

In addition to a common understanding of safety culture in rail transport, it is, from our point of view decisive to know the adjusting levers with which positive impulses can be set to strengthen the safety culture. Taking up this circumstance, this presentation refers to a theory-based, cross-industry framework for safety culture (Bisbey et al., 2021). Within this framework, the consideration of enabling factors is vital to effectively establishing targeted interventions at organisational, group or individual levels. The effectiveness of such measures can be observed in the enacting factors, such as communication, teamwork, incident reporting or fair rewards and punishments. These factors are shaped by the prevailing safety culture and are proposed to influence safety outcomes.

For an in-depth examination of the safety culture framework in the context of rail transport we analysed interview data with people from different professional profiles, from operational business to management in the rail freight sector in Germany. The aim of the guided interview study was to identify the strengths, weaknesses and possible starting points for concrete measures to promote a positive safety culture. Using the qualitative interview data, we exemplary illustrate important enabling and enacting factors of the safety culture framework in the context of rail transport. Taking into account existing scientific findings in safety culture in rail transport and the guidelines of the European Union Agency for Railways,

specific challenges of safety culture for companies in rail transport are presented and discussed.
discussed. Bisbey, T. M., Kilcullen, M. P., Thomas, E. J., Ottosen, M. J., Tsao, K., & Salas, E. (2021). Safety Culture: An Integration of Existing Models and a Framework for Understanding Its Development. <i>Human Factors</i> , 63(1), 88–110. https://doi.org/10.1177/0018720819868878