



# Rail4Future

Projekttitel:	<b>Resilient Digital Railway Systems to enhance performance</b>
Projektnummer:	<b>882504</b>
Deliverable:	<b>D1.1.5 OnePage-Implemented and Tested Sub Model Environment</b>

Before the use case implementation into the R4F Platform, railway use cases are defined and concretized due to subsystem (e.g., rail vehicle, turnout) and requirements for condition monitoring and predictive maintenance of a railway infrastructure system. Then, these use cases are to be virtualized to be successfully implemented into the platform. After specifying adapters and interfaces for the implementation, railway assets belonging to these use cases are to be simulated in the platform, which is possible by adapting these assets to the platform through the adapters and interfaces. Besides, it is important to learn about the simulation raw assets of these use cases, because these help to obtain simulation results directly from the default software tool, which are then compared to the results of the adapted version of these use cases for validation purposes. Therefore, the implementation methodology of these raw assets is to be comprehended as well.

This deliverable provides comprehensive insights about what use cases are considered and which of them were implemented, tested, validated and finally released for the R4F project by using the adapters and interfaces (compare mentioned in Deliverable D1.1.4). Besides, the use cases, which were already implemented, are briefly described in this report.

Use-Case	Area	Partner
MKS Lastkollektiv mit Lebensdauer Primärfeder	Area 1.3	Siemens
MKS Co-Simulation mit Matlab/Simulink	Area 1.3	Siemens
MKS Surrogate Model Fahrzeugdynamik	Area 1.3	Siemens
VTI Gleislage	Area 2.1	voest, ÖBB
Verschleiß Gleis (Prof Evo)	Area 2.1	voest, ÖBB
Rissbildung Gleis (Wedge Model)	Area 2.1	voest, ÖBB
Plastizität Herzstück	Area 2.1	voest, ÖBB
Weiche	Area 2.2	voest, ÖBB
RLD Brücke	Area 3.1	Wr. Linien, ÖBB
Tunnel	Area 3.2	ÖBB

