

Global. Agile. Digital.

RLE INTERNATIONAL Group



RLE INTERNATIONAL

System Development and Digitalization for the Railway Sector

Together with our partners, we're shaping the railway systems of tomorrow – efficient, connected, and forward-thinking.



Digital technologies are fundamentally reshaping the rail industry. Modern trains are complex, integrated systems whose efficiency, safety, and maintainability depend heavily on well-designed electronic architectures and intelligent data management.

RLE supports manufacturers, suppliers, and operators in developing future-ready railway solutions – from dynamic vehicle optimization to the digitalization of maintenance processes. Our interdisciplinary engineering approach combines electrical system integration, simulation, and sustainable vehicle design into innovative solutions for rail-based mobility.



Sustainability & energy efficiency

Efficient vehicle concepts, alternative propulsion systems, and weight-optimized components reduce energy consumption and make a vital contribution to sustainable rail transport.



Digitalization & smart maintenance

Digital twins and AI-powered diagnostics enable condition-based maintenance strategies, minimize downtime, and extend the service life of rolling stock.



Capacity management & logistics

Optimized interior layouts, intelligent control systems, and connected trains enhance transport capacity and ensure efficient use of existing rail infrastructure.



Safety & cyber security

We develop secure control systems and cyber security concepts to ensure reliable operation – even in highly connected system architectures.

Vehicle Systems for the Railway Industry – Future-Ready Mobility through Simulation, Digitalization, and System Integration

Developing modern rail vehicles requires the seamless interaction of mechanics, electronics, and software – all while meeting the highest standards for efficiency, safety, and sustainability.

RLE combines decades of engineering expertise with data-driven development methods to create intelligent and adaptable vehicle systems.

Continuous system architectures, virtual validation using digital twins, and AI-supported analytics form the basis for stable, maintenance-optimized solutions. Integrated onboard power and control systems enable flexible adaptation to a wide range of operational profiles – from high-speed trains to heavy-duty freight cars.

With our interdisciplinary know-how, we support railway manufacturers in developing efficient, connected, and future-proof vehicle platforms – technically advanced and practical throughout the entire lifecycle.



“Future-proof rail vehicles don’t emerge from new technologies alone – they’re the result of precise integration into complex systems. Our goal is to combine modular architectures, intelligent control solutions, and digital development methods in a way that enhances efficiency, safety, and maintainability alike.”

Marco Thömmes
Business Unit Leiter Electrics/Electronics
RLE International

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