

RAMS



Infrastructure and rolling stock must fulfil demanding safety requirements and minimise failure rates. But the liberalisation of the railway sector and other factors have increased financial pressure to maximise the effectiveness and the efficiency of employed resources. Rail sector players have therefore been expressing a growing need for techniques to improve reliability, availability, maintainability and safety (RAMS) as well as to predict life cycle cost (LCC) together with reliability growth programs. PROSE is not linked to any third-parties, which means you can trust us to perform customised analyses in your interest – not someone else's.



- RAMS
- Life-cycle cost (LCC) analysis
- Reliability growth programs

Contact us

RAMS

By means of RAMS analysis, PROSE supports you in controlling RAMS parameters and optimising both the economic efficiency and the safety of a system. PROSE will assign to your project a team of engineers from different fields of expertise with knowledge of rail systems and consultants with methodological competence and operational experience. For electronic, mechanical, pneumatic and electrical systems, we can develop – at system, sub-system and component level – any of the following kinds of RAM and safety analyses and programs:

- Reliability prediction
- Availability analysis
- Maintainability analysis
- Fault tree analysis
- Hardware and software FMEA, FMECA and FMEDA

- Design of experiments for component reliability evaluation
- Reliability growth programs
- Safety case development
- Risk analysis
- Hazard and preliminary hazard analysis
- Safety integrity level evaluation

We perform such services in-line with international standards such as EN50126, IEC61508, MIL-STD and SAE-ARP-4754/61.

Life-cycle cost (LCC) analysis

The initial investment cost or purchase price is only part of the cost of a railway vehicle, project or process. Substantial additional costs arise in the course of the ensuing lifetime of the product, project or process. Accordingly, PROSE does not limit its evaluation to investment costs. PROSE's LCC analysis helps predict initial cost, but also keeps an eye on total cost by including ongoing expenses like energy consumption and maintenance. For example, an LCC analysis from PROSE can help you evaluate the business case for modernising existing vehicles instead of buying new ones.

Reliability growth programs

A reliability growth program enables an organisation to improve the reliability of its products throughout their life cycle by means of changes in design, manufacturing or maintenance. PROSE assists you in developing reliability growth programs for both the design phase and for fielded systems through organisational support and appropriate tools and techniques. Such programs aim to optimise reliability growth and to maximise the financial return and safety of the rolling-stock asset or system components.

