



ELISA

Enabling **Linux** in
Safety Applications

The new Railways SIG

Henrik Brändle

ELISA Workshop: London, UK

June 9-11, 2026

Co-hosted with Canonical

Presenting the Railways SIG

- Special interest group founded in April 2026
- Representing the needs of safety critical systems in the railway industry
- Representatives of diverse stakeholders:
 - Rolling stock manufacturers
 - Signaling systems manufacturers
 - Railway operators
 - Certification bodies & consultants
 - Universities



About me

- Henrik Brändle, M.Sc.
- Chair of the Railways SIG
- Research assistant at the
Institute for rail vehicles at RWTH Aachen University
- Research focused on software development processes for safety critical software in the railway industry



History of the Railways SIG

- Idea was first presented at FOSDEM 2025
- Employee of Red Hat proposed representation in ELISA
- Red Hat was involved in a large German research project at that time
- Had good experience in other WGs



History of the Railways SIG

- Throughout the next year we got in touch with companies in the field
- Came up with a joint vision and mission statement
- No sufficient community could be found by the end of 2025
- Last recruitment effort at FOSDEM 2026
- Enough interest to formally found SIG



What do we want to achieve?

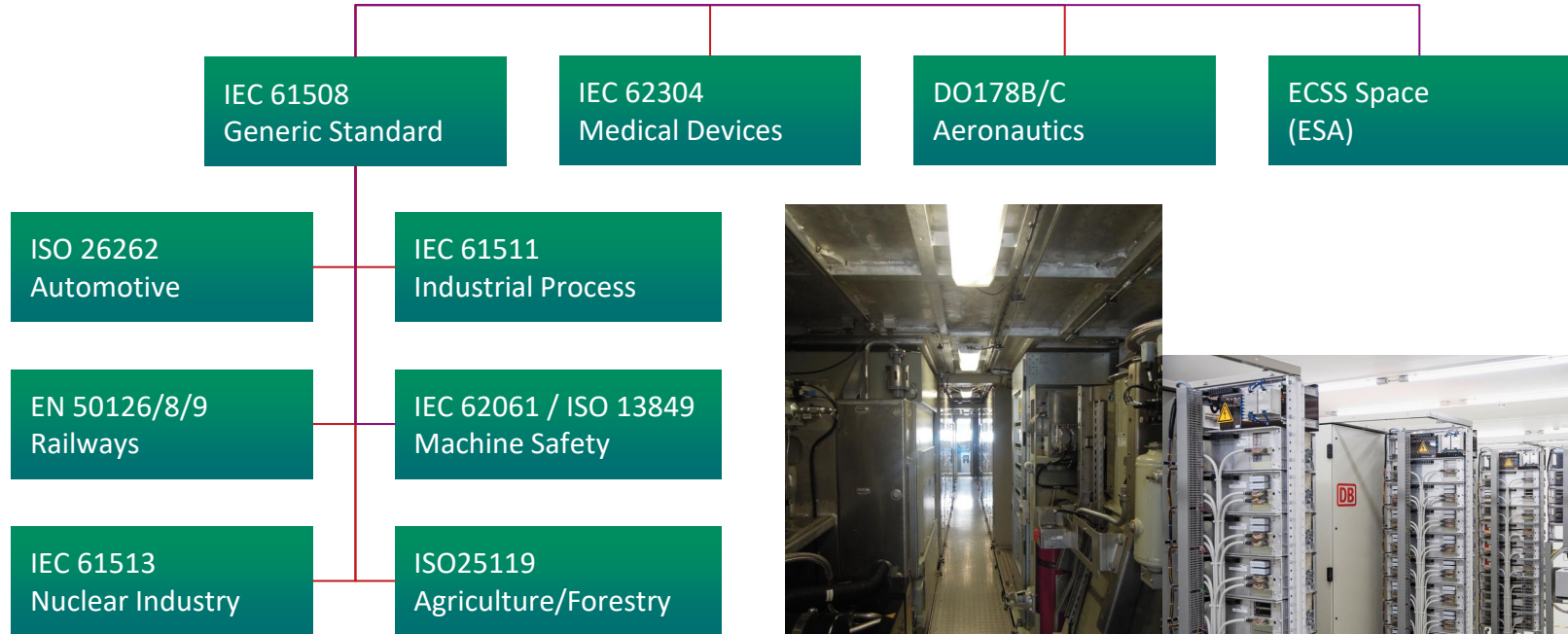
- Act as a contact point for other groups/projects
- Create awareness for the specific requirements towards safe software in our industry
- Make sure that ongoing developments are in line with our set of requirements
- Create awareness in the industry that open-source can do cool things
- Figure out how to integrate those things into the industry



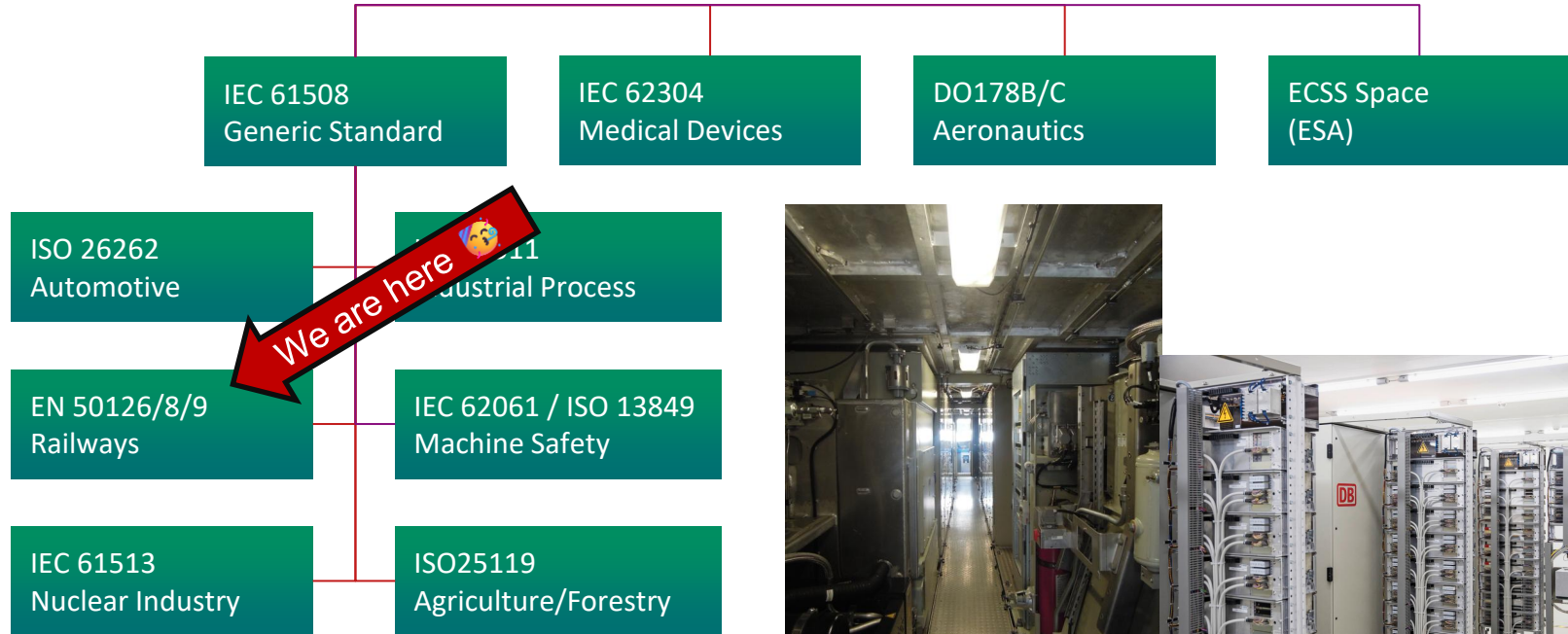
Awareness: Hi, trains exist!



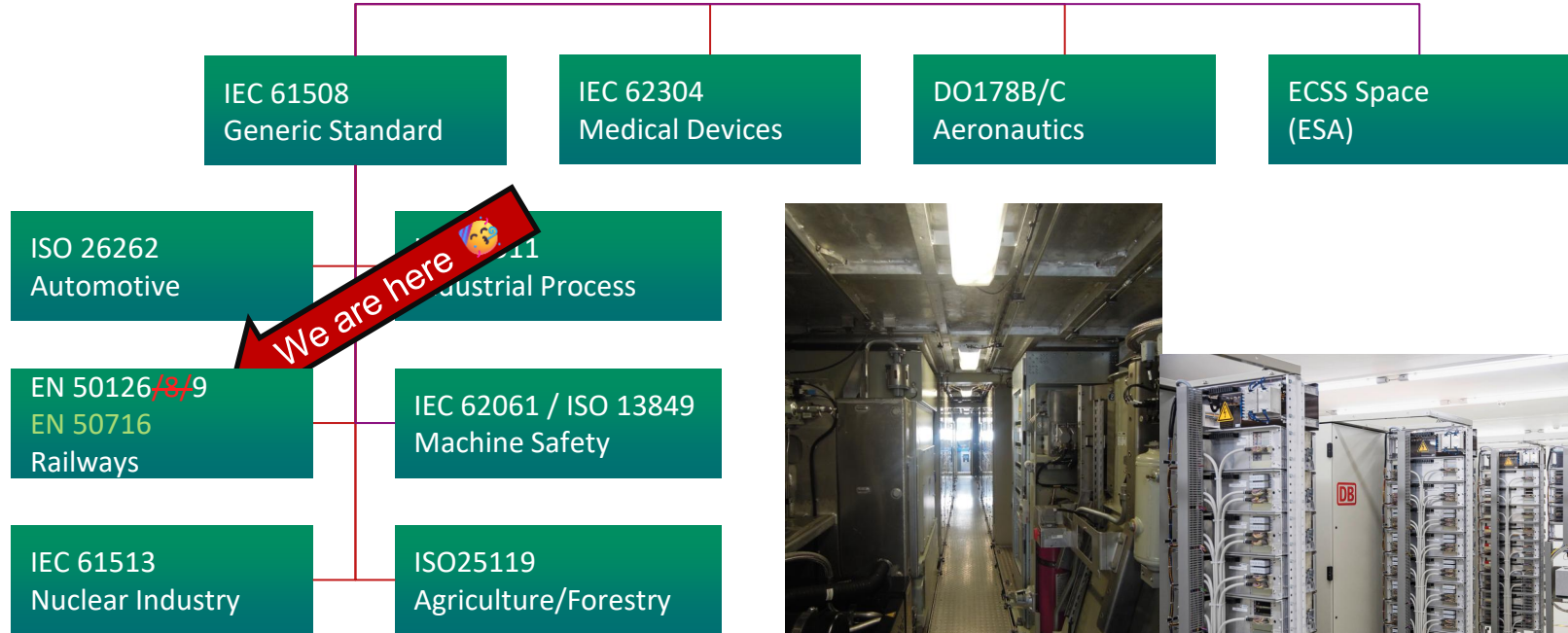
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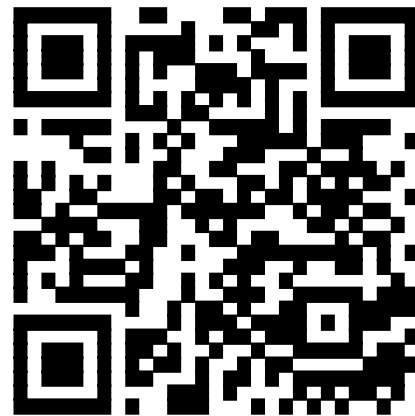
Which ideas do we have in mind?

- Collection of applicable requirements
 - Creation of a central repository of sources of FuSa requirements in the railway industry
 - Work with other groups to compare requirements and identify differences
- Create a public proof-of-concept project
 - Using available tools and established processes
 - Show safety-artifacts that can be created
 - Provide guidelines on how to start using this tools in accordance with the standards
 - Gather interest for utilizing open-source software
 - Maybe in cooperation with Systems WG?



How can you help?

- Get in touch via the mailing list or our GitHub repository
- Tell us how you approach functional safety in your industry
- Connect us with potentially interested parties
- Attend the monthly SIG meetings
 - 3rd Tuesday of the month, 2 pm CE(S)T
 - Next Tuesday!



<https://lists.elisa.tech/g/railways>



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Thanks for your attention!

Henrik Brändle

elisa@hbraendle.de

<https://github.com/elisa-tech/railways>

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