

18.-22.11.2024 | GAB Portugal Spanien  
Stefan Becher



RAIL SOLUTIONS

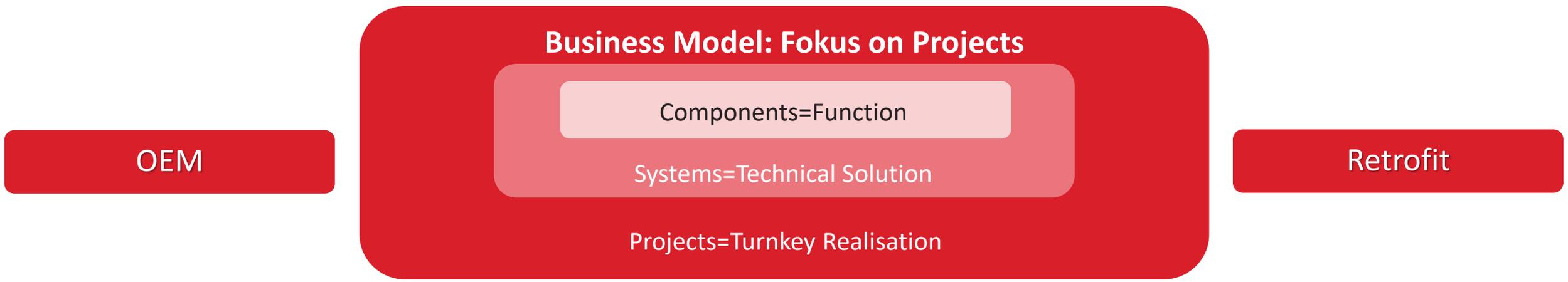
„Elektrische Zugausrüstung für Bestands- und Neufahrzeuge“



**Gesellschaft für  
Elektrische Zugausrüstung  
Rail Solutions**

# GEZ RS - Project and Turnkey Partner

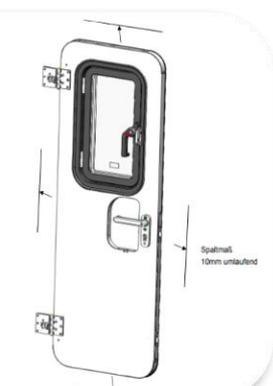
## Railway equipping passionate since 1905



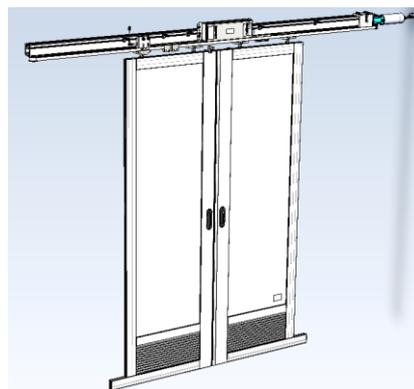
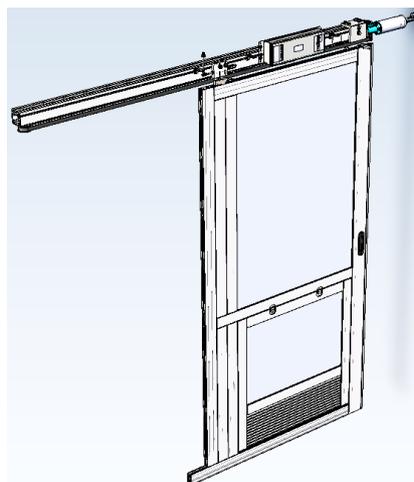
Inquiry	Concept	Prototyping/Commissioning (Debo, Nobo, Asbo)	Homologation	Supervising Subcontractors
<ul style="list-style-type: none"> <li>Consulting</li> <li>Calculation</li> </ul>	<ul style="list-style-type: none"> <li>Feasibility studies</li> <li>Evaluation</li> <li>Validation</li> </ul>	<ul style="list-style-type: none"> <li>Verification</li> <li>Qualification</li> </ul>	<ul style="list-style-type: none"> <li>Type approval?</li> </ul>	<ul style="list-style-type: none"> <li>Workshop</li> <li>Contracts</li> <li>After Sale Service</li> </ul>

# Doorsystems and Components

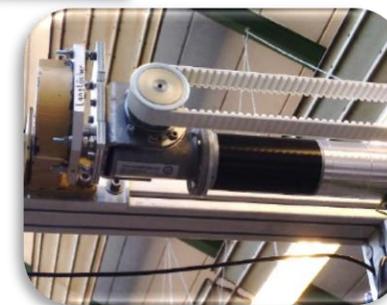
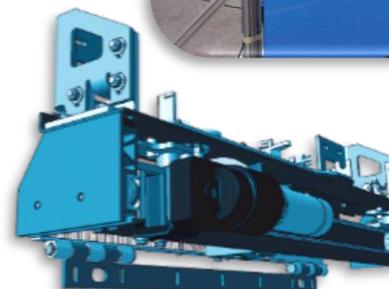
## Cabin



## Vestibule-Fire protection



## Retrofit Passenger Metro, LRV, Tram



## Control Units

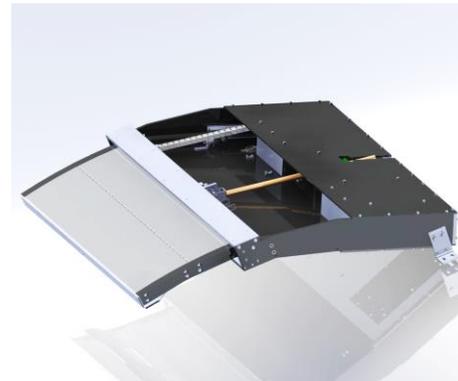


# Boarding Aid Systems and Components



## OEM and Refurbishment

- Safety relevant
- Barrier free
- Various type of platform level
- Customized and modular plug and play solutions
- Electronic or pneumatic

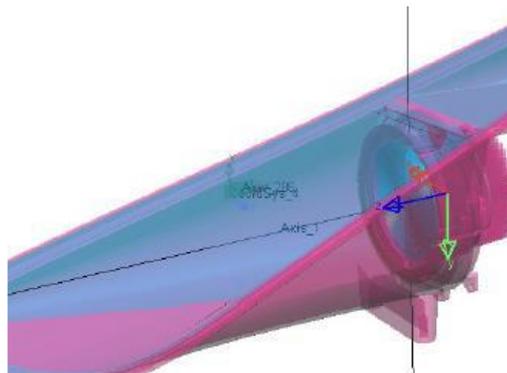
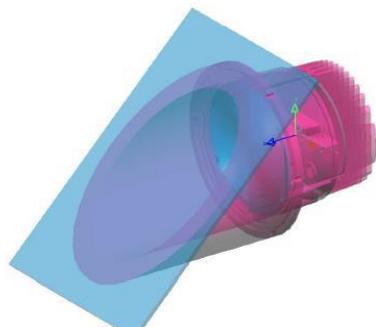
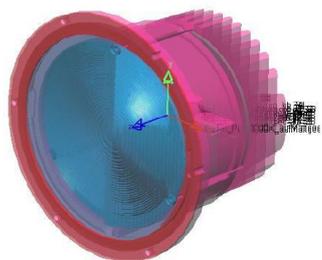


# Exterior lights

## Standard fit and tailor made

5 in 1

TSI Loc Pas EN15153-1 in each position

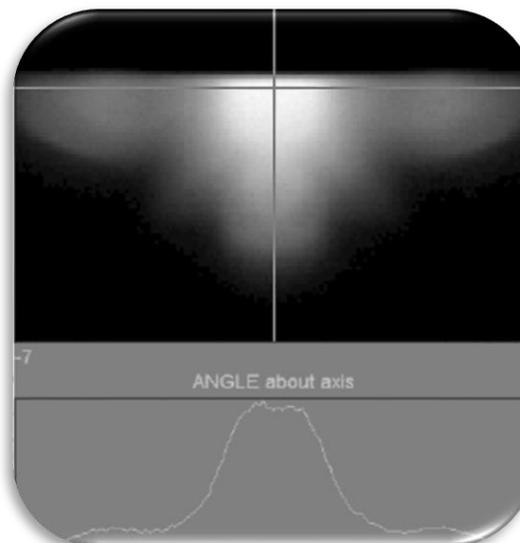


Custom Design

LRV to Highspeed  
TSI compliant



Real Cut-off



# EVA AUX and BC

Passenger Coaches



Locomotive



OEM and Refurbishment



# References in Refurbishment

## Upcycling

Full Modernisation of Subway  
for 2nd life operation

750 VDC → 1500 VDC

- # Traction
- # own ATP design based on PZB
- # Brake
- # own TCMS
- # AUX, doors, lights
- # drivers desk

## ETCS Refit

- # Reverse Engineering
- # Documentation
- # Commissioning
- # Homologation
- # Training
- # After Sales-Service



## Conceptual Design

- # Diesel vs. Electric Drive mode
- # Cost efficiency study Diesel → Electric
- # Redesign and OEM





**RAIL SOLUTIONS**

**Thank you for your attention.**

GEZ Rail Solutions GmbH

Hünxer Straße 149 | 46537 Dinslaken

[www.gez-rs.com](http://www.gez-rs.com)