

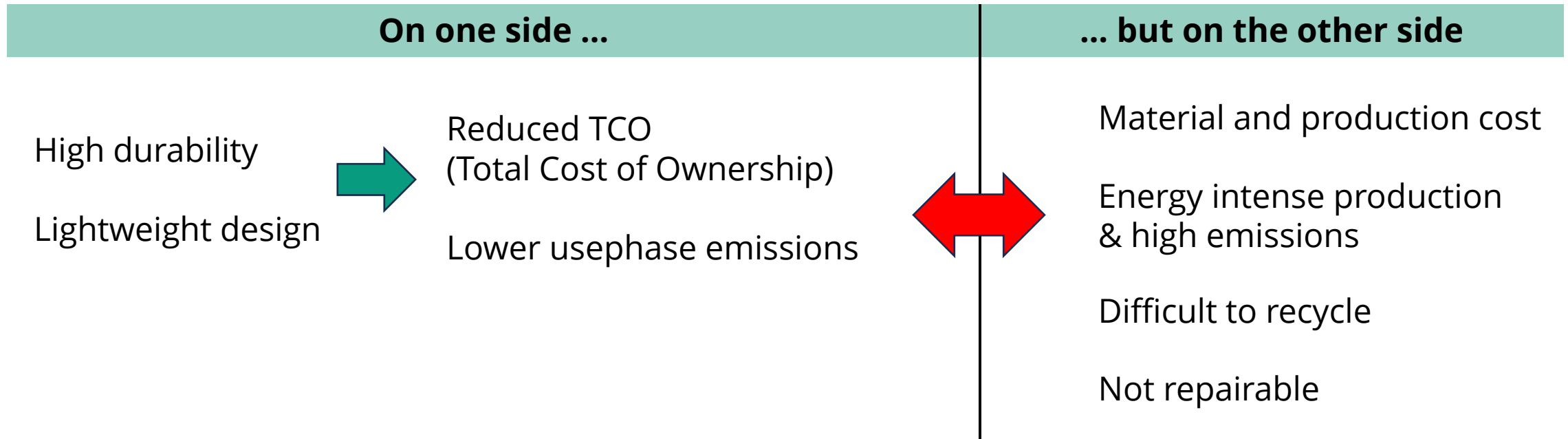
Circular Design for Composites on an Automotive Showcase

April 23, 2026

Stefan Caba



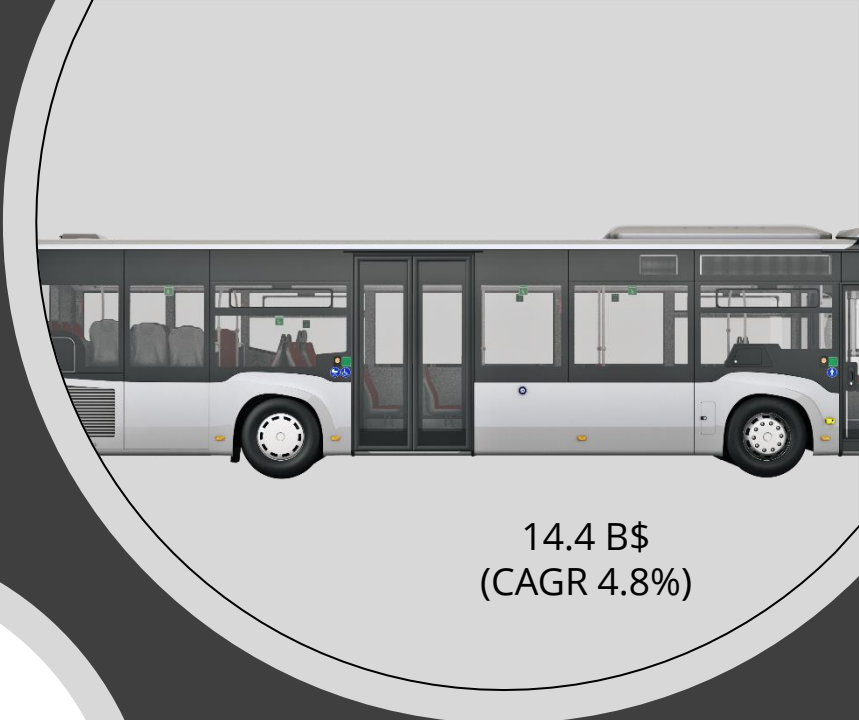
Problem - Use of Composites in Mobility



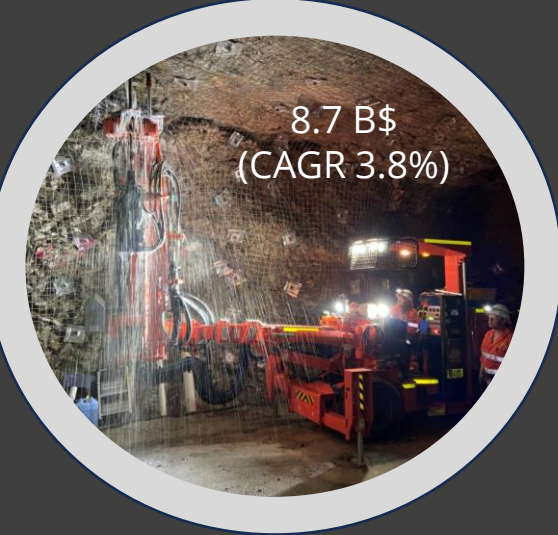
The Result: vehicles for short-term use not monetarizing composite advantages

33.0 B\$
(CAGR 4.8%)

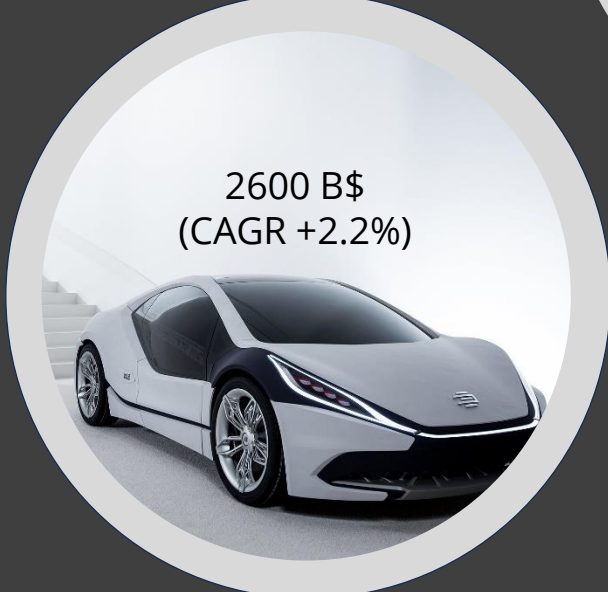
Which industrial sectors are affected?



14.4 B\$
(CAGR 4.8%)



8.7 B\$
(CAGR 3.8%)



2600 B\$
(CAGR +2.2%)



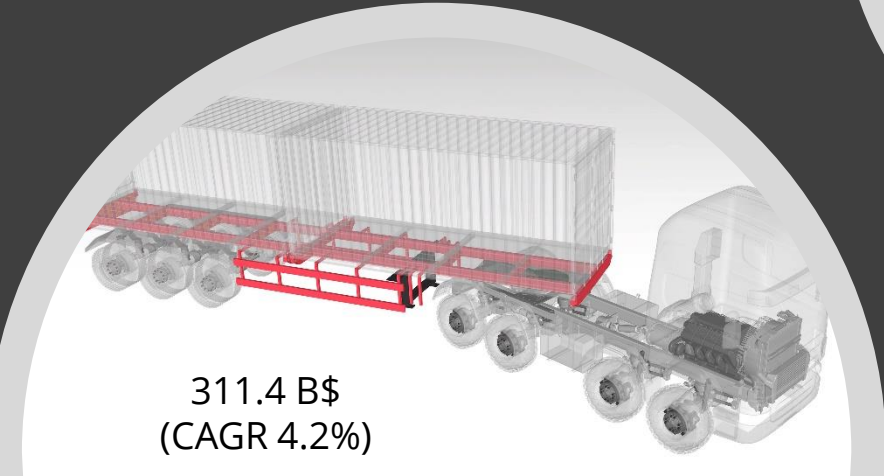
89.9 B\$
(CAGR +7.9%)



2.7 B\$
(CAGR +24.4%)



New opportunities



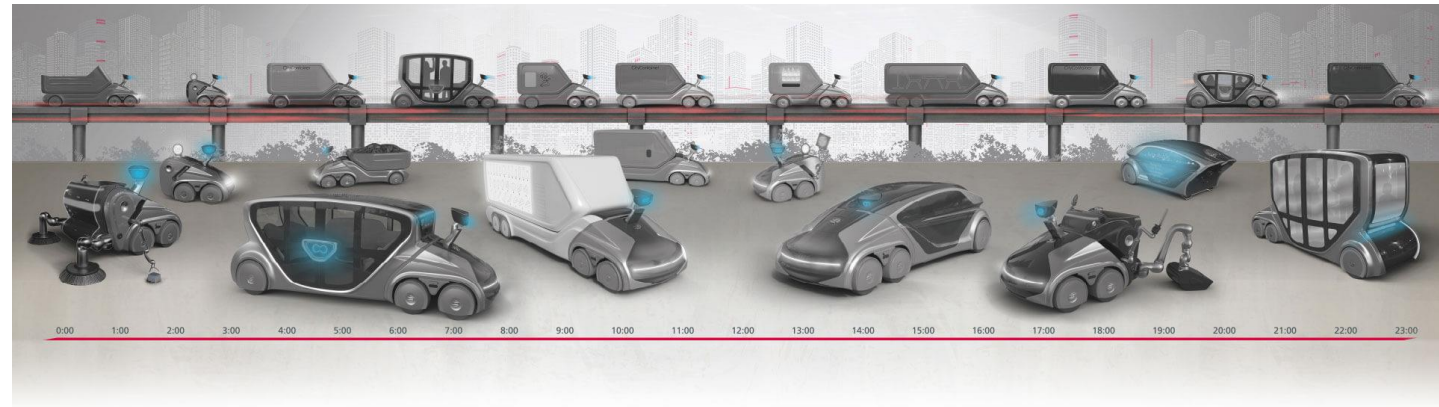
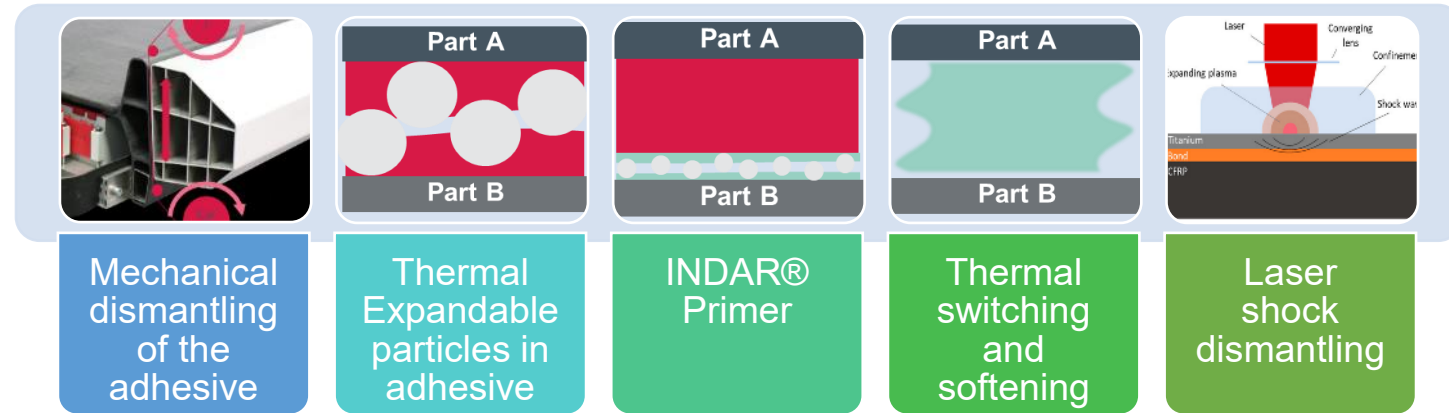
311.4 B\$
(CAGR 4.2%)

How to tackle the problem?

Non-detachable joining is preventing effective recovery parts

Component and product design must be adapted to circularity

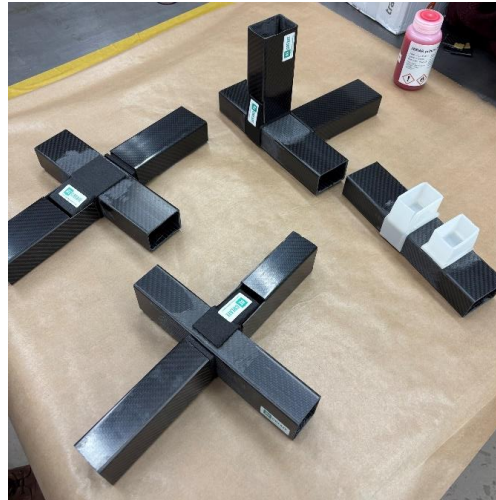
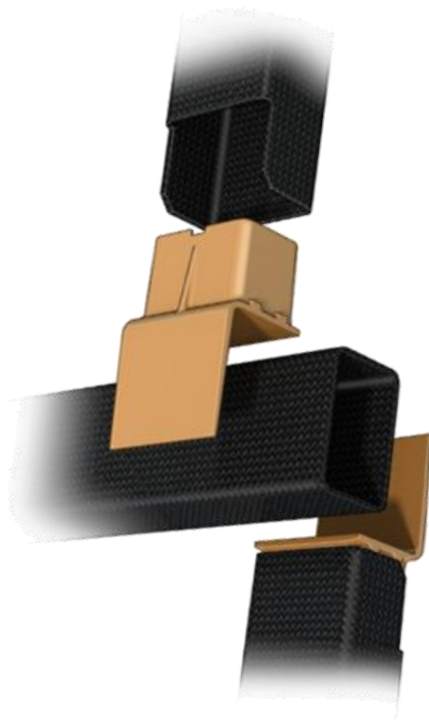
Demo-cases for utilization of benefits are necessary



The Concept

- Debondable adhesives
- Detachable joining elements
- Design concepts for utilizing composite advantages

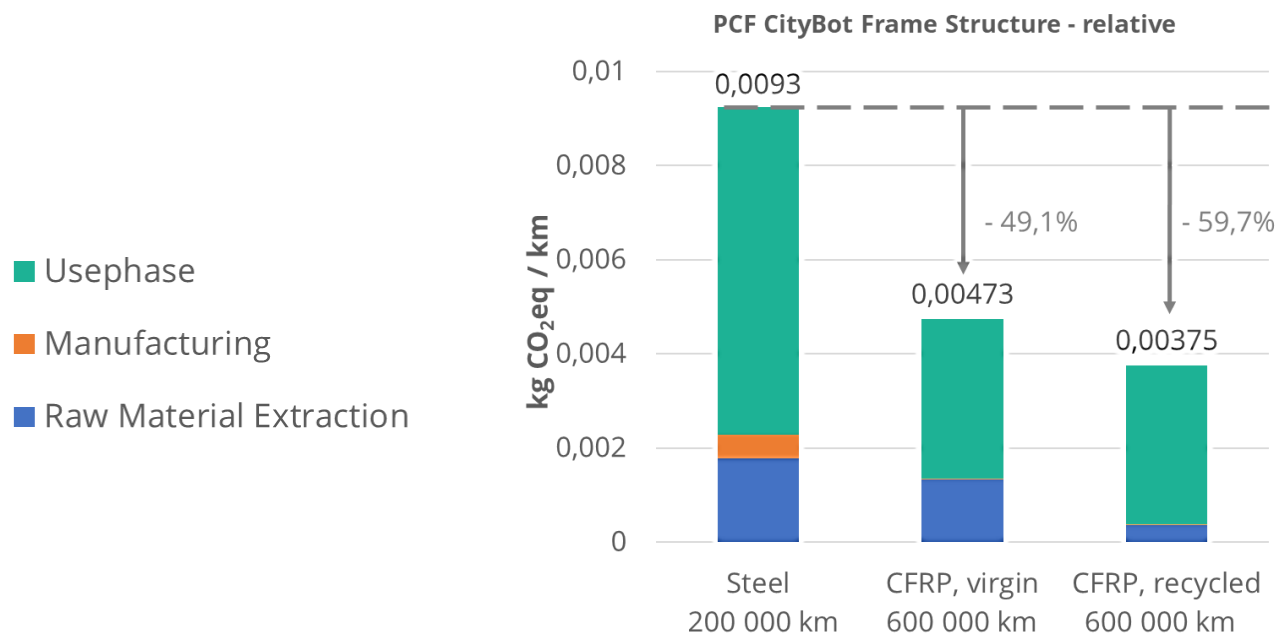
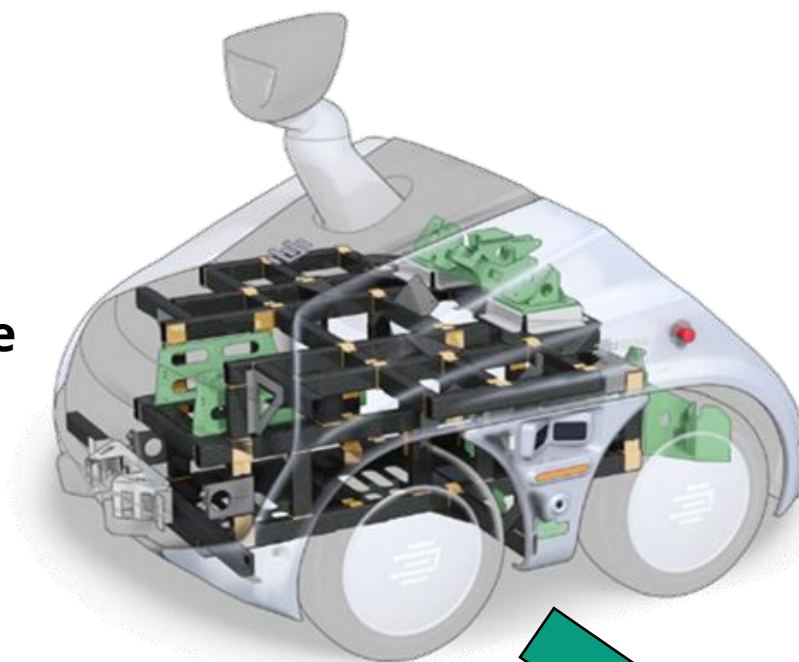
Testing conditions	Indar Primer 170	TEPs in Adhesive	Testing
Room Temperature	●	●	ISO 4587
At 80°C	◐	●	ISO 4587
After climate ageing	●	◐	Alternating conditions -40° to 80°C/ 80%r.H./1000h
Vibration Resistance	◐	●	Up to 5 Mio. cycles at 35% σ_{max}



The Solution

Re-Designed circular structure

- Weight reduction by 52%
- Higher stiffness, fatigue strength
- Improved repairability
- Improved reusability
- Lower climate and cost impact over lifetime



Our offer to you

B2B services to create **your** products

- more lightweight,
- more durable,
- more circular,
- improved repairability
- Innovative solutions



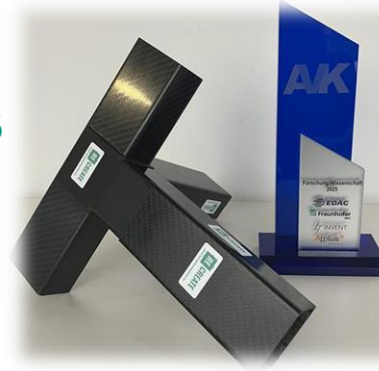
Your Benefits

AVK Innovation Award 2025
1st Place Research / Science

- Experienced team
- One-stop-shop
- Universal, modular structures
- Use of detachable joinings
- durable, lightweight design



Circularity for Composites enabled!

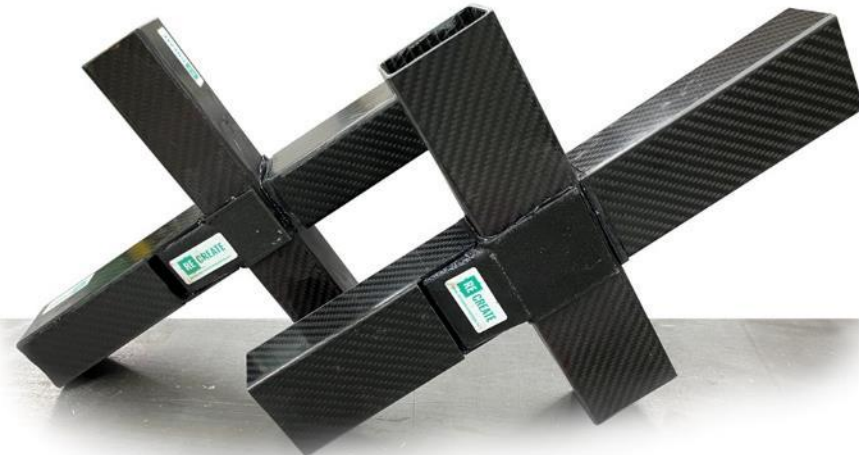


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Funded by
the European Union

Questions?

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