



**Mobility**

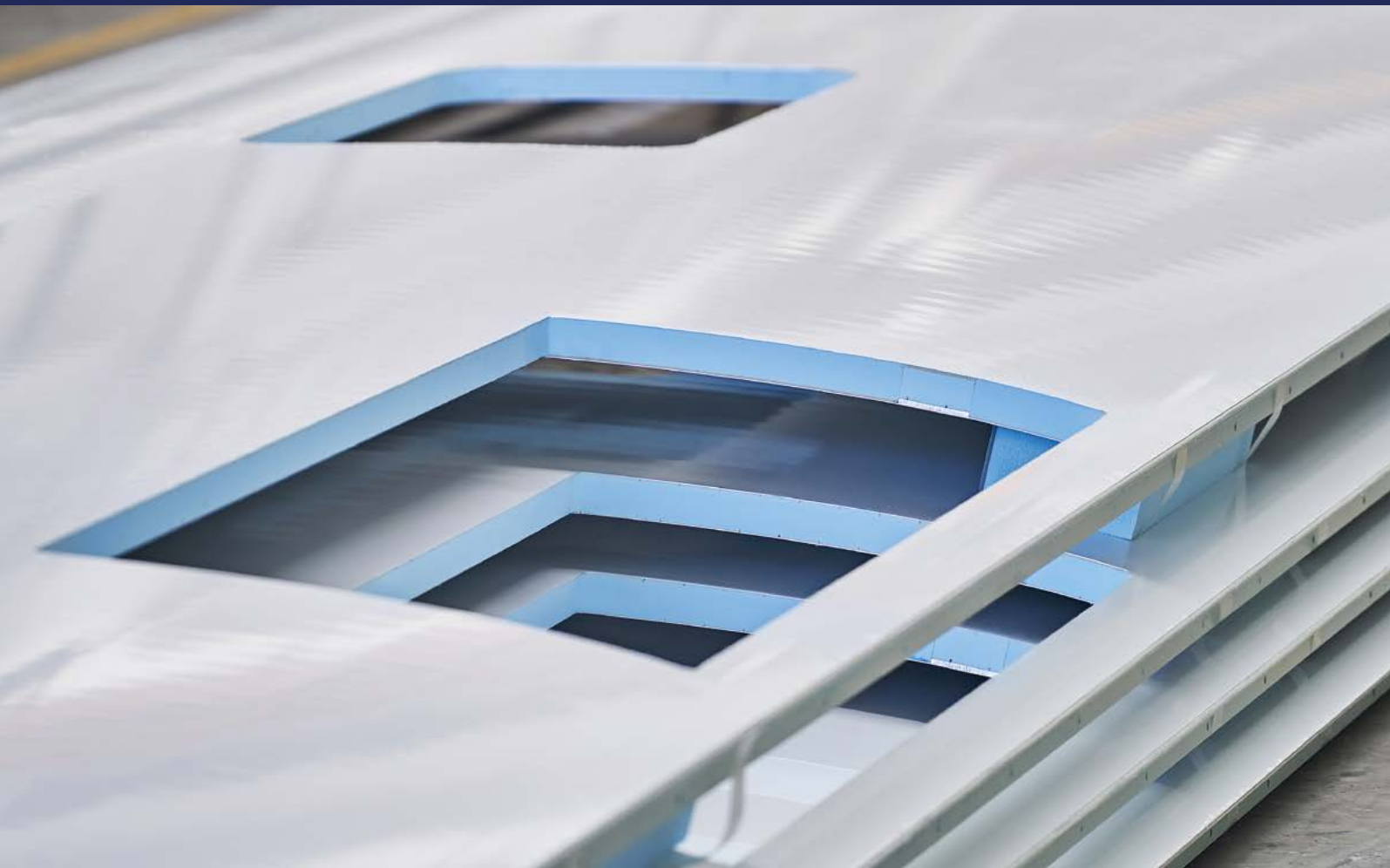
# **XBODY<sup>®</sup>**



Lightweight structural  
components for superior  
vehicle body shells

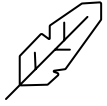
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[www.3acompositesmobility.com](http://www.3acompositesmobility.com)

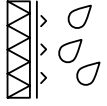


# XBODY®

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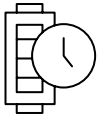
lightweight



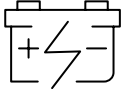
corrosion resistance



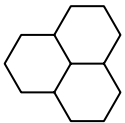
customization



long lifetime



energy efficiency



modularity



safety



energy saving

XBODY® is a family of structural lightweight applications created for rail and road vehicles. Once XBODY® is applied according to customer requirements, the design benefits from modular and structural components with the highest stiffness to weight ratio. XBODY® also functions as an ideal solution for developing body-in-white structures in rail and road vehicles.

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Our solution relies on a qualified and well-established production process, which is verified by the leading manufacturers and operators worldwide.

## Reduced Vehicle Manufacturing Process

XBODY®'s modular construction ensures a significant reduction in assembly time. It is possible to completely pre-assemble and handle the XBODY® parts due to their high stiffness and low weight. Once an XBODY® roof is installed, no additional thermal cladding is required as part of the internal roofing system. The components can be pre-painted to customer specifications before final stages of production and assembly.



# Overview

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XBODY® sandwich parts – such as roofs, floors, side walls and chassis components – offer a high level of strength and durability. It is proven by their reliability over many generations of vehicles.

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XBODY® properties provide increased energy absorption in case of crash, ensuring improved overall vehicle performance.



## XBODY® for Rail

- Rail products meet the structural body building and exterior covering demands. Trams and rail vehicles **are made lighter and stiffer** (in accordance with ISO EN 12663)
- Our composite designs meet EU and **country-specific legally-required fire standards and are designed for the complete product life-cycle**
- **Modular design** allows quick integration and changes with a shortened engineering time
- XBODY® rail exterior products as roof and claddings can also be delivered with **a coil-coating or pre-painted finish** on the exterior and visible interior surfaces, according to rail application demands

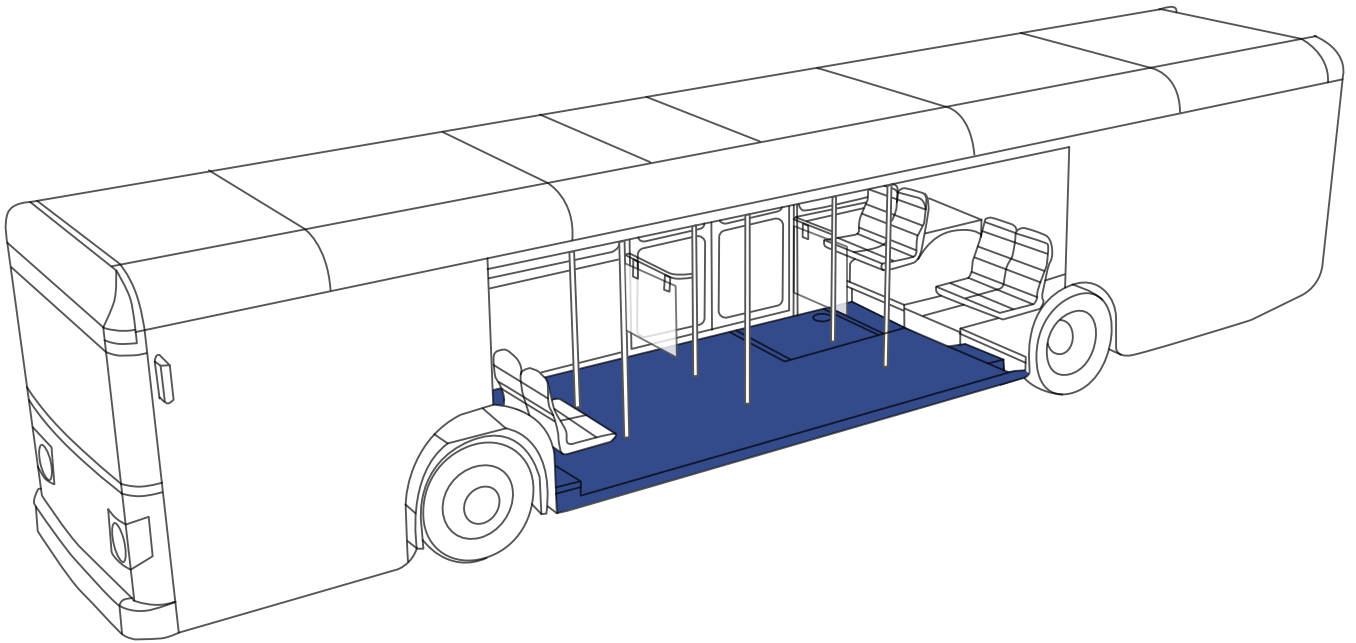


## XBODY® E-Mobility

In order to keep up with the rapidly growing demands of future mobility, both vehicle manufacturers and operators **need to address low CO<sub>2</sub> emissions and fuel consumption, long service life and robustness, along with service and quality.**

XBODY® components have been developed into systems creating the opportunity for new logistics and assembly concepts for modern bus manufacturing and development worldwide. For city buses, coaches and double-decker buses, **XBODY® features a validated and tested design with a system allowing easy integration.**





3A Composites Mobility produces **extremely light and stiff composite chassis floors with integrated functions**. The chassis floors can also be made significantly thinner than the conventional floors due to the high stiffness.



### **XBODY® for Road**

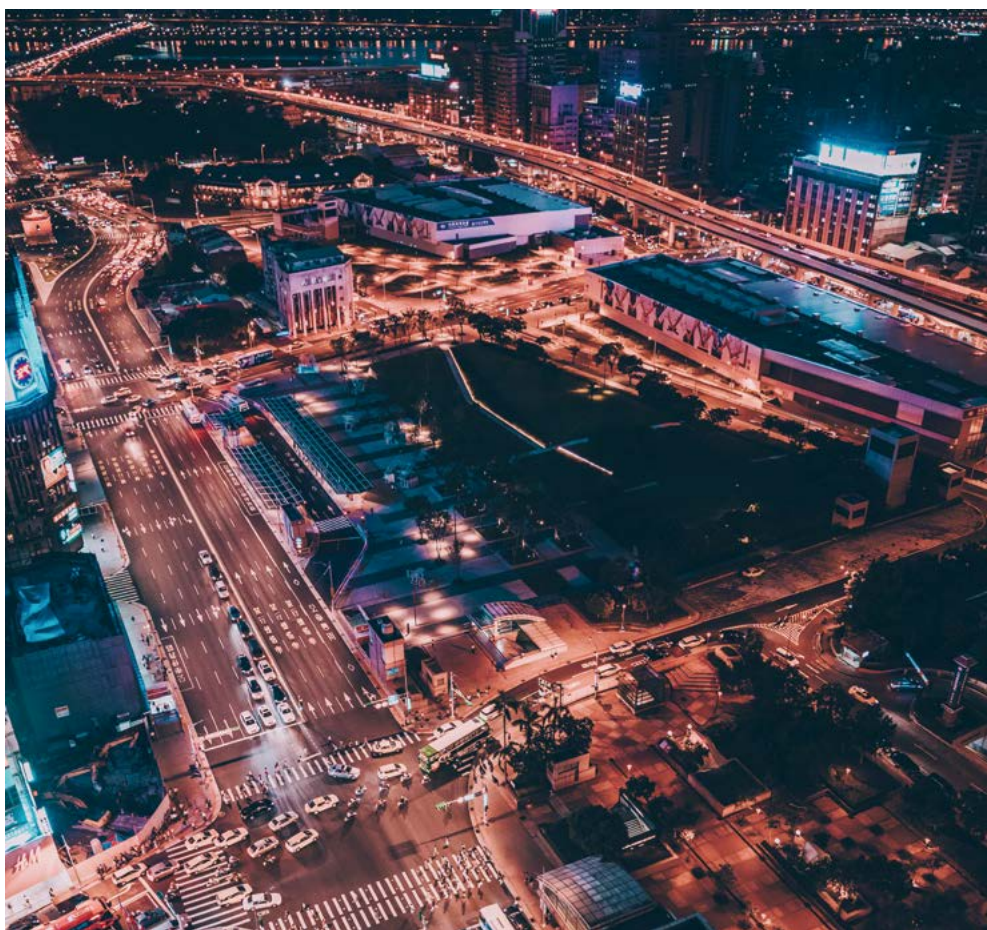
- **Sustainable sandwich solutions** allowing modular production
- **Capable of replacing and improving the stiffness of conventional body-in-white** designs with a significant weight reduction
- Engineered **to bear heavy loads** without additional reinforcements
- **Easy pre-assembly** through enhanced stiffness and low weight
- **Smart integrations** like heating solar and electrical wiring
- Excellent crash behavior, **easy to repair and replace**
- **Just-in-time deliveries**
- Tested in adherence with legislated EU ECE **bus and rail safety regulations and structural integrity standards**

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XBODY® offers a lightweight alternative to solutions currently available in the transport industry. Designable to any vehicle's construction type, XBODY® presents a body-in-white structural component.

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XBODY®'s lightweight nature translates into higher passenger numbers, more payload and more spacious cabins. An overall lower vehicle mass also contributes to increased longevity and durability of the structure as a whole – preserving vehicle tracks, wheels, axles and brakes.



### **XBODY® Extra Advantages**

- **Excellent insulating properties for temperature, noise and vibration** – resulting in greater overall cabin comfort – both rail and bus operators benefit from XBODY®
- **Low environmental impact:** A significant reduction in weight, along with increased life-cycle conditions and long-term service, result in a remarkable reduction of CO<sub>2</sub> emissions and fuel consumption
- **Off-duty service time is minimized** due to an efficient “cold” repair system
- **Coil-coating and anti-graffiti coating finish** options are also available



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