

BENTELER 
makes it happen



BENTELER Electric Drive System

Platform Technology for People Mover

Content

04 About BENTELER	18 We think in platforms
06 We are the core of the vehicle	20 Skateboard solution
08 About BENTELER E-mobility	22 Integral power modules solution
10 BENTELER goes People Mover	24 Flexible integral body solutions designed for different mover applications
12 Innovative BENTELER chassis technology for maximum comfort	26 ADAS integration
14 BENTELER battery system technology-high range with safety and security	28 Track record
16 BENTELER crash management technology for intelligent cabin structure	30 Our Management Team





About BENTELER

BENTELER is a global, family-owned company serving customers in automotive technology, the energy sector and mechanical engineering. As metal processing specialists, we develop, produce and distribute safety-related products, systems and services worldwide.

Our portfolio encompasses components and modules for the automotive industry, in the areas of chassis, body, engine and exhaust systems as well as system solutions for electric vehicles. In addition, we develop technical equipment and plant for leading automotive suppliers and for the glass-processing industry.

Also, based on more than 140 years of experience in steel, we develop seamless and welded quality steel tubes – from material development to tube applications.

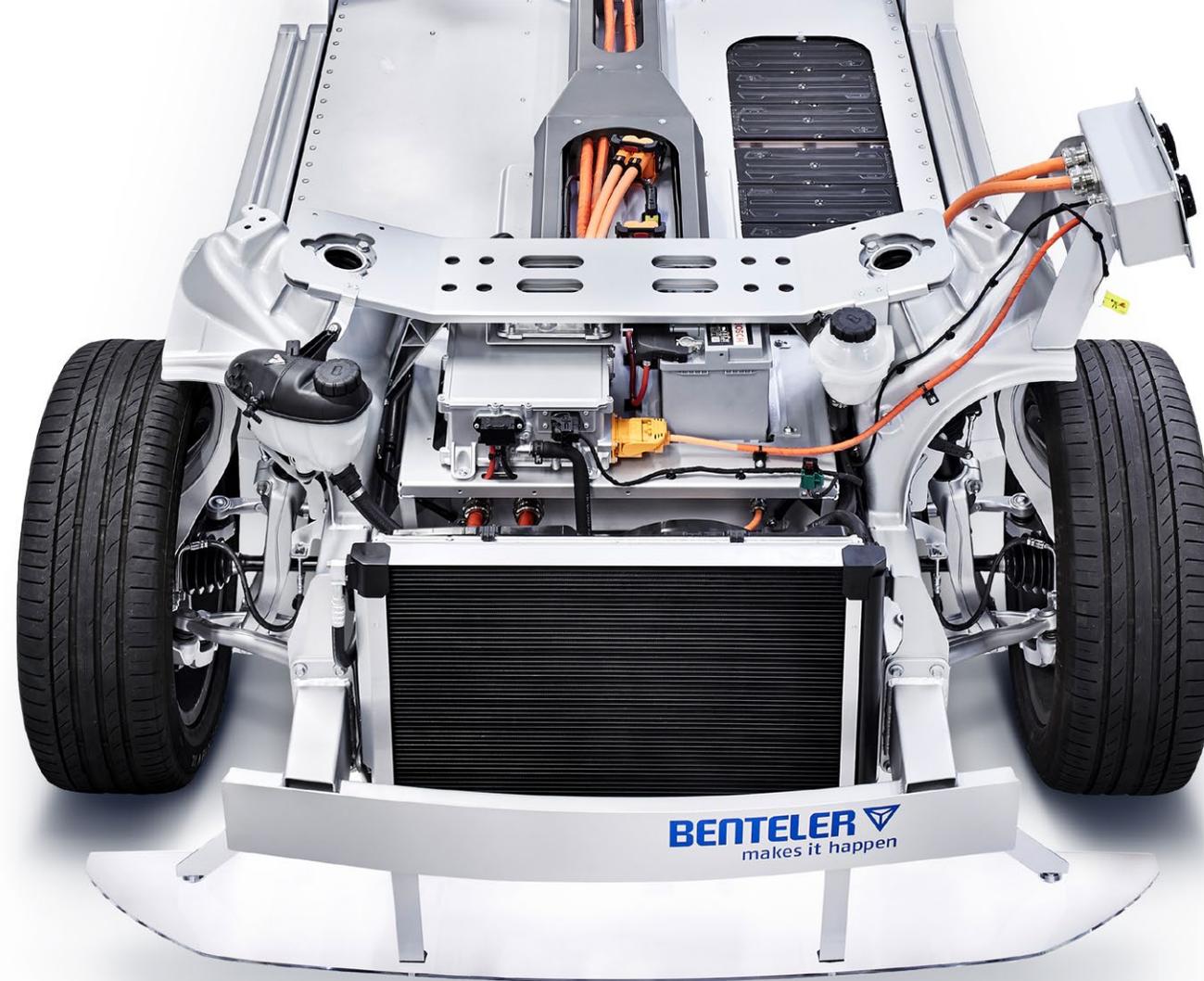
Under the management of the strategic holding BENTELER International AG, headquartered in Salzburg, Austria, our around 27,000 employees at 98 locations in 28 countries offer first-class manufacturing and sales competence – all dedicated to delivering a first-class service wherever our customers need us. In the 2020 financial year, Group revenues were €6.358 billion.

BENTELER. The family of driven professionals. Since 1876.

We are the core of the vehicle

As a leading global partner to the automotive industry, BENTELER offers first class engineering as well as metal forming and processing expertise. Customers benefit from our comprehensive vehicle know-how along the entire value chain, from development and production through to assembly. Core technological capabilities include tube manufacturing, forming, joining, extrusion, assembly and logistics. BENTELER products can be found in almost every car worldwide. The portfolio ranges from tubes for airbags and axles, for example, as well as components and modules for chassis, body-in-white and engine and exhaust applications, to modular future technologies. Such as the BENTELER Electric Drive System: A scalable platform solution for electric vehicles. And a showcase for our entire technological competence.

In collaboration with a broad network of strategic partners we provide our customers with the expertise they need to deliver their projects on time, in quality and in cost. We enable them to develop safe and eco-friendly mobility solutions that accelerate their business.



Key facts about BENTELER automotive

23,000 employees worldwide

more than **70** plants in **25** countries

locations in all major markets around the world

working with almost every global car manufacturer

About BENTELER E-Mobility

»With e-mobility, we are not only changing our cars, we end up with existing automotive paradigm.

We see e-mobility as a huge chance. With our existing portfolio we already have a perfect basis to support and design e-mobility solutions.

Our BENTELER Electric Drive System is the enabler for intelligent and efficient battery electric vehicles, securing a fast time to market.«

MARCO KOLLMEIER
Vice President
Business Unit Electro-Mobility





ANYWHERE
OUR DREAMS TAKE US

VIACOMCBS

PlayStation
THEATER

SCHEDULE
COMING SOON!

FOR MORE INFORMATION
CALL (212) 496-7490

BENTELER goes People Mover

Leading automotive competence for the new mobility

The automotive world has experienced a significant change – our awareness about environment and sustainability has brought us to new mobility solutions – one of them is the People Mover with the ability to drive autonomously.

But People Movers are not only another form of electric vehicles. Even though it may seem easy to construct an EV, producing it on time, in quality and in cost is a lot, just not easy.

The technical requirements for People Movers are completely different to passenger cars. 24/7 on duty afford high robustness, transportation of people standing or sitting in all directions need high comfortable chassis technology.

Weight management for optimized load capacity and cost efficiency are key for profitable deployment. Most important, a low entry height with an automatic ramp for handicapped people.

BENTELER as a leading automotive supplier has already launched with its BENTELER Electric Drive System a scalable and modular platform for electric vehicles. It has proven its performance in the market. Now, BENTELER also offers platform solutions for People Movers. First class engineering and excellent global manufacturing for the mobility of the future.

Feeling good in a vehicle, this is the task of the chassis system. If you are looking for high driving dynamics for best handling and track speed or whether you need a comfortable driving behavior for stressless traveling, BENTELER is one of the leading experts in chassis technology.

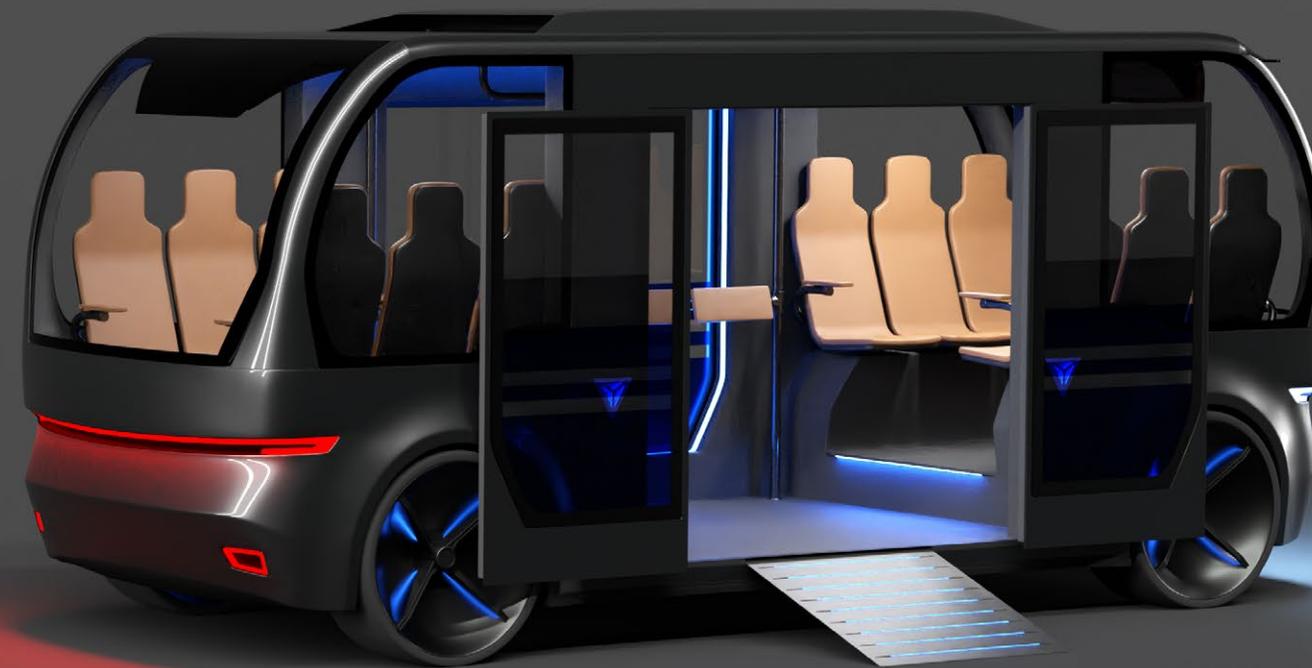
How important is that for a People Mover, running mostly at a speed below 50 km/h? It is not easy to imagine, but especially for a mover

the requirements to a chassis are quite ambitious. Maximum comfort with minimum roll at a mover weight > 3 tons, that is the target of a mover chassis, otherwise your passengers take the risk of getting the so called mover seasickness.

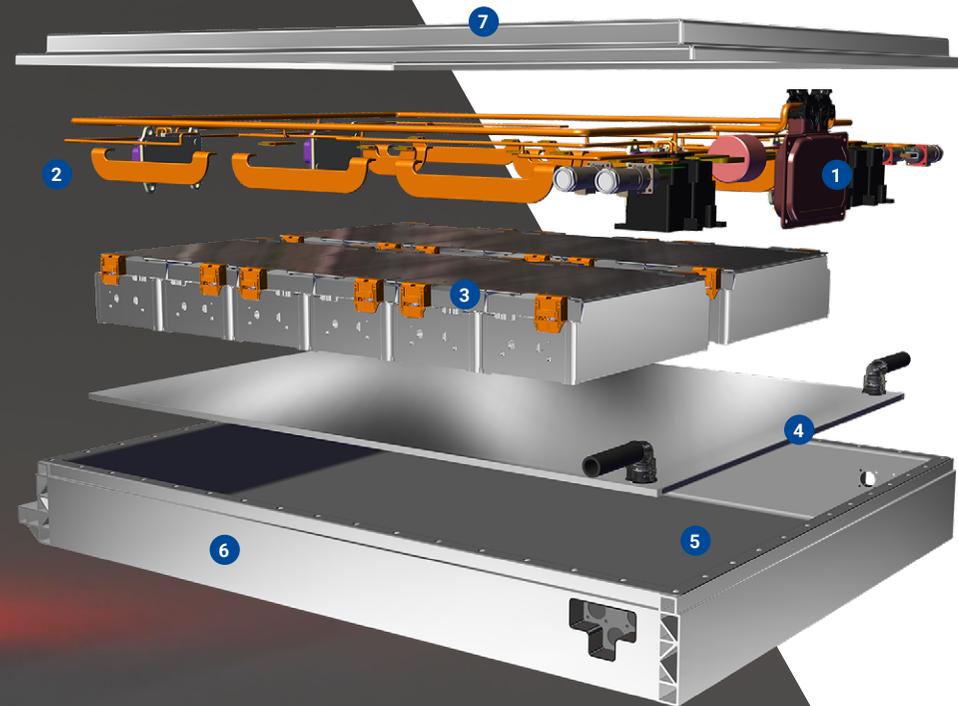
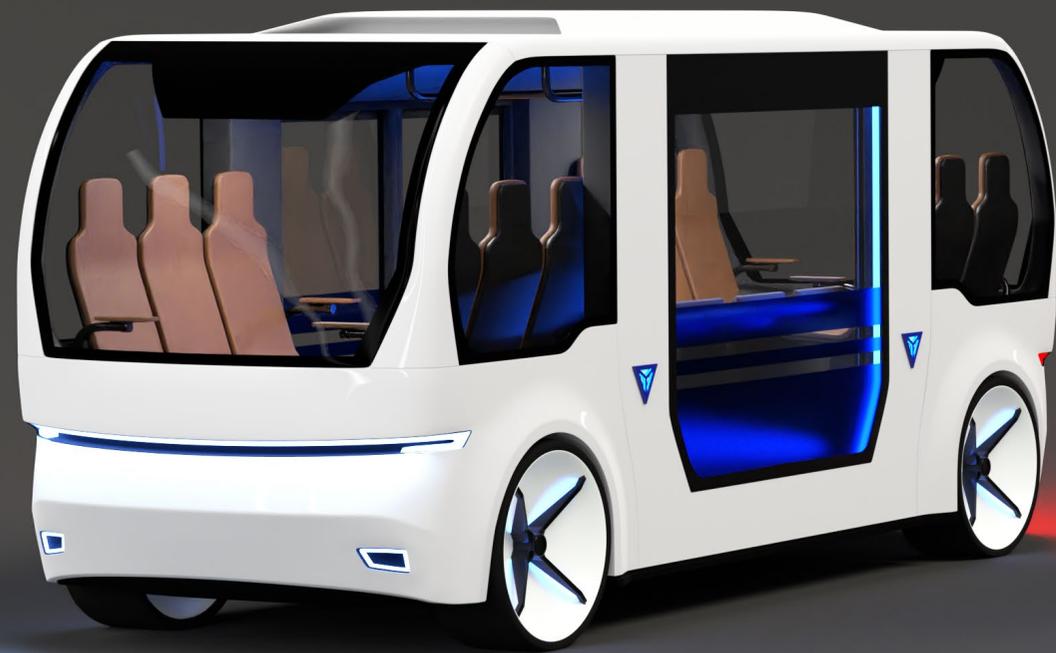
BENTELER is able to define and engineer any profile of every chassis application. There are only few vehicles on the streets without the BENTELER technology.



Innovative BENTELER chassis technology for maximum comfort



BENTELER battery system technology— high range with safety and security



The heart of every electrified vehicle is the battery pack. As BENTELER is one of the leading suppliers for battery tray and battery cooling we take also care of the full system: The battery pack.

Safety, robustness, fast charging ability, removable for maintenance and a high capacity density of the pack are only a few requirements to be met. BENTELER is a full service supplier for this technology.

- 1 Battery Management System
- 2 Battery Distribution Unit
- 3 Battery Modules
- 4 Integrated Cooling Plate
- 5 Battery Tray
- 6 Battery Frame
- 7 Cover

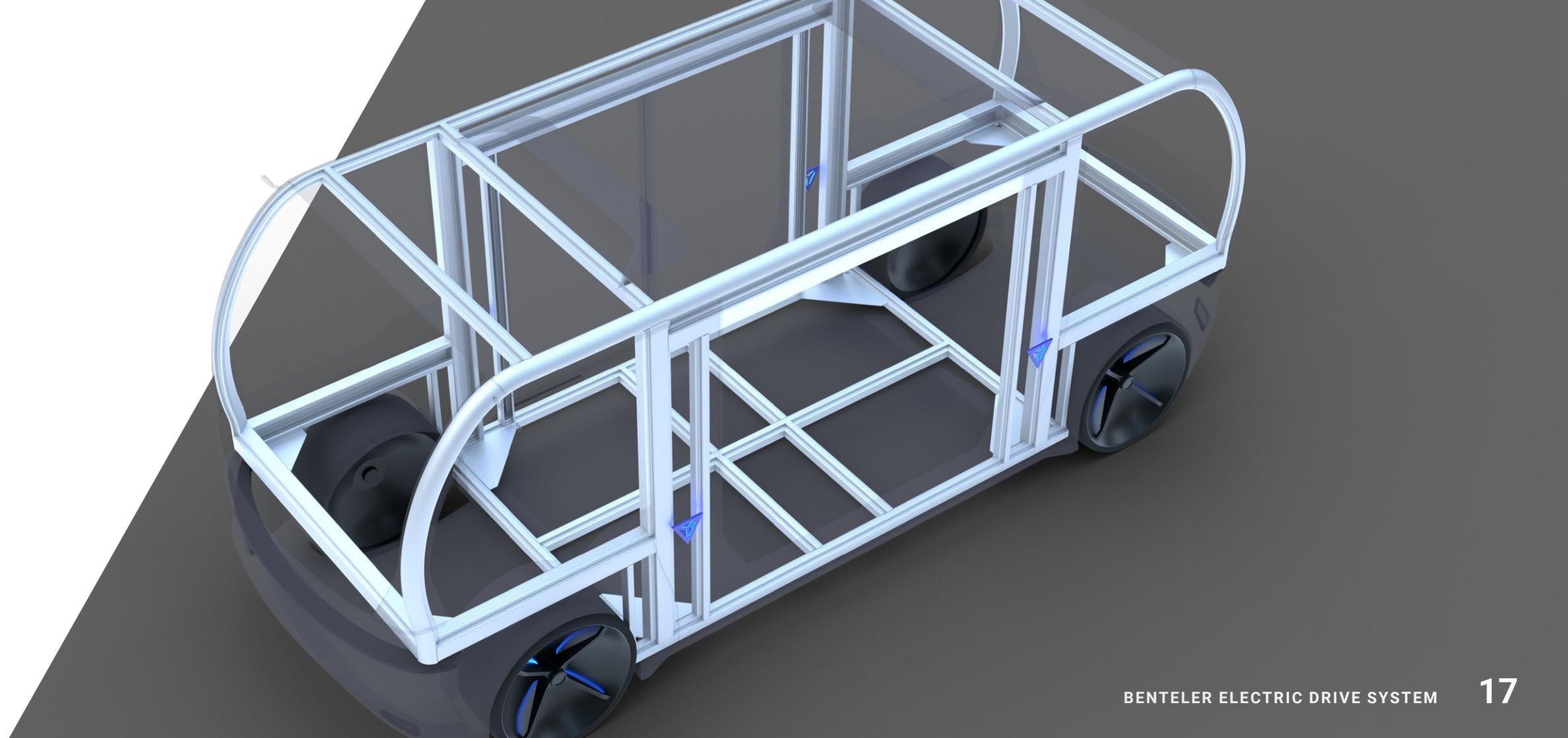
BENTELEER crash management technology for intelligent cabin structure

Our BENTELEER cabin structure reflects our long-term automotive expertise.

It is made up of an intelligent tubular light-weight design and shows excellent crash management properties. Together with our cost-efficient production technology, our cabin fulfills the requirements for safety and longevity.

The low-floor concept with integrated automatic ramp allows easy access for wheelchairs, buggies and suitcases and provides extra comfort to the passengers. The symmetrical construction creates a homogeneous design of the front and rear segment.

Sticking to our scalable engineering philosophy, our cabin structure can be easily customized to your individual needs.



We think
in platforms

BENTELER 
makes it happen

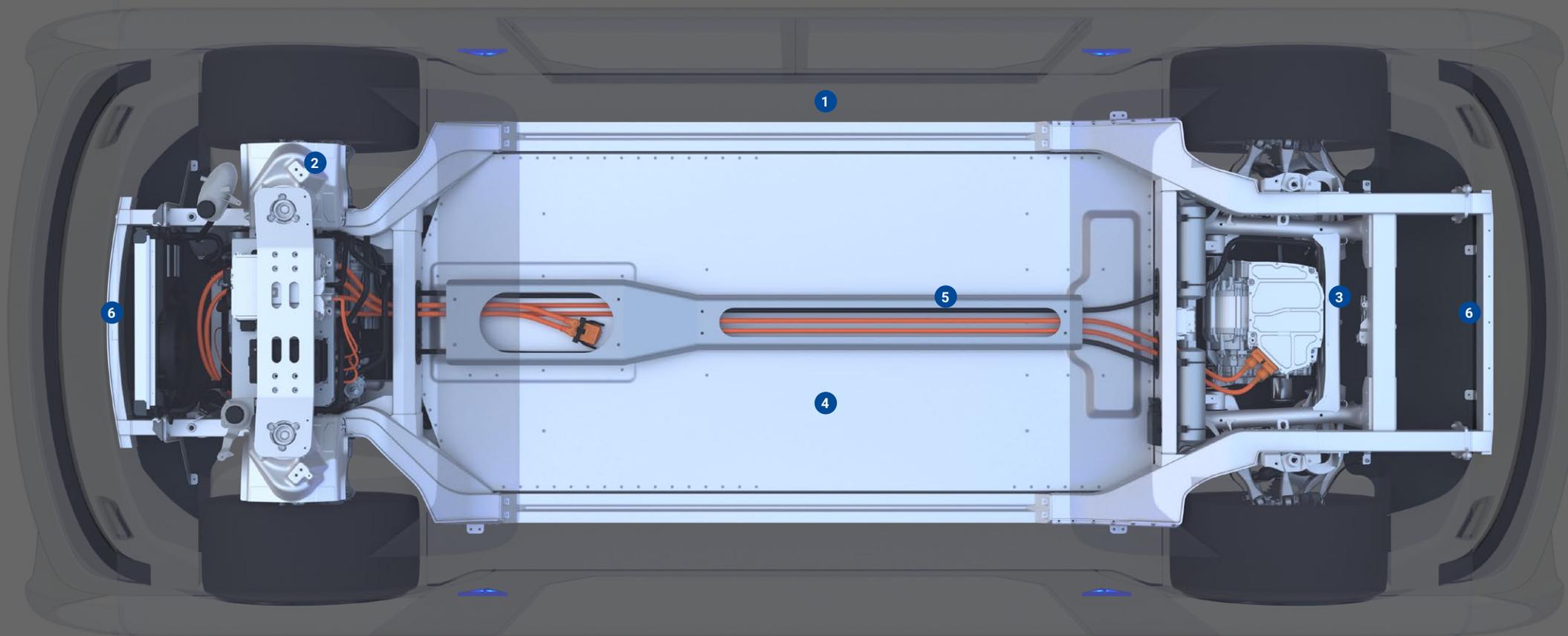


Skateboard solution

Integrated Power Module solution

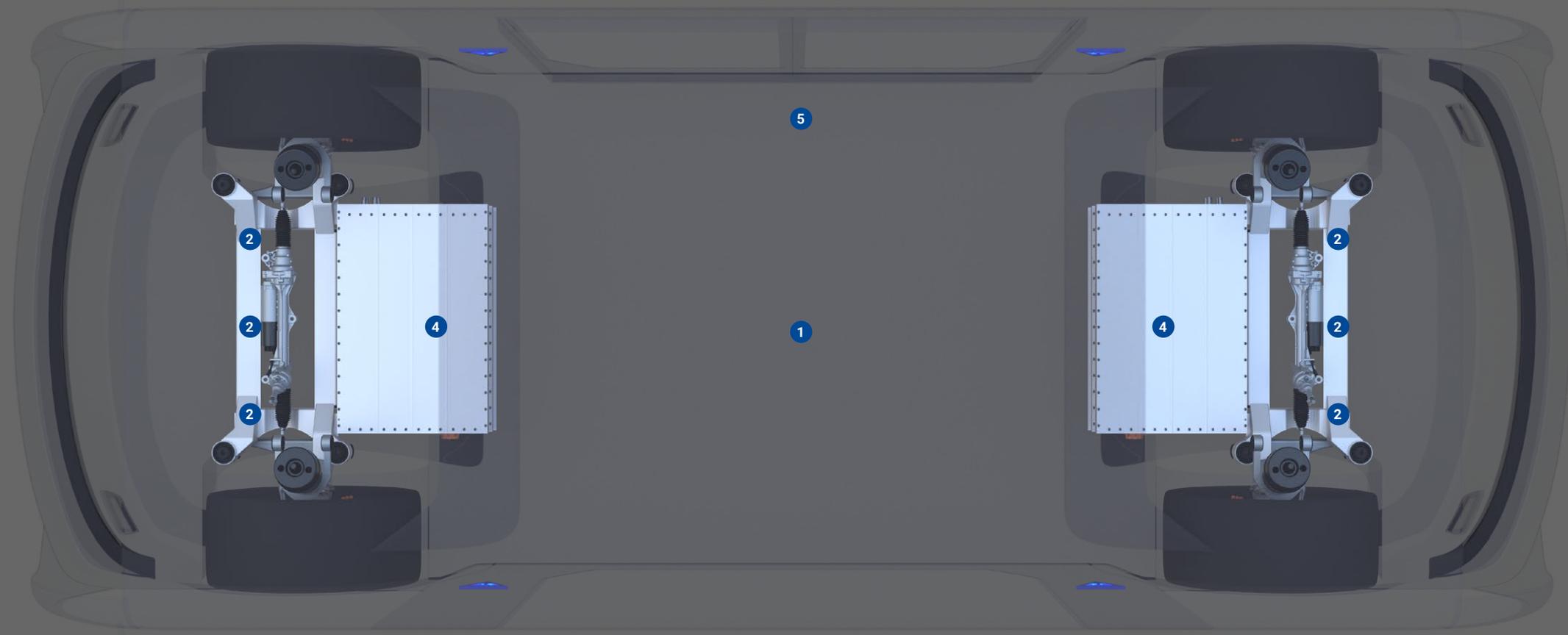
Skateboard solution

- 1 Robust scalable skateboard frame made of aluminium or steel for high loads
- 2 Vibration isolated multilink suspension system with integrated central electric motor and steering
- 3 Optional integrated rear axle steering
- 4 Battery system in the center of the skateboard for high battery capacity for long range applications
- 5 Fully integrated E/E architecture
- 6 Integrated crash management

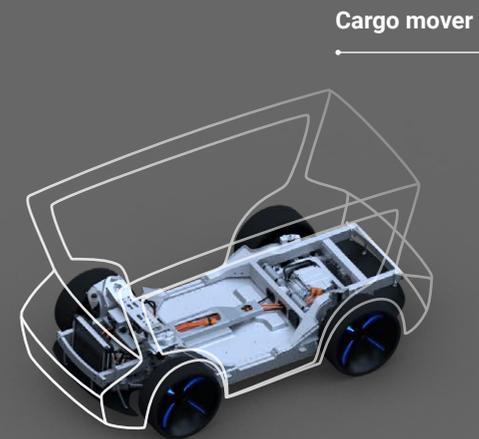


Integrated Power Modules solution

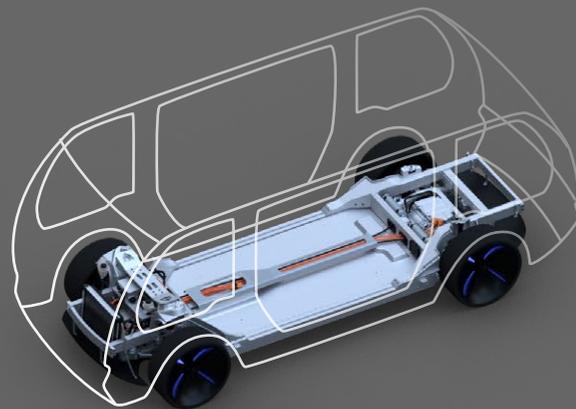
- 1 Cabin frame with decentral integrated double battery-system near the symmetrical and modular developed front and rear suspension systems for maximum low floor content and low step in height
- 2 Vibration isolated compact front multilink suspension with 2 in-wheel motors and steering system
- 3 Identical compact multilink suspension in the rear with 2 in-wheel motors and rear axle steering
- 4 Front and rear battery-system integrated decentral under the step in the vehicle floor
- 5 Low-floor cabin with automatic, extendable ramp



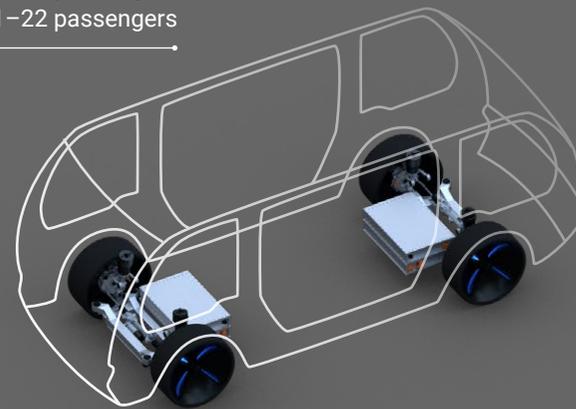
Flexible integral body solutions designed for different mover applications



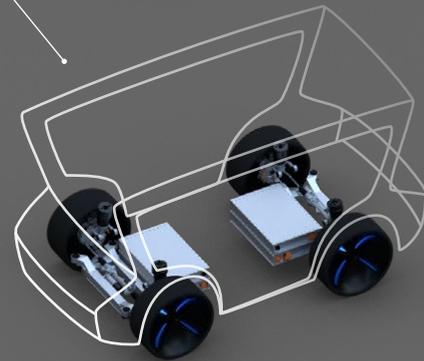
Cargo mover



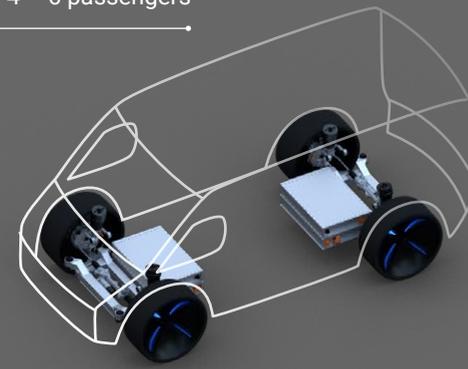
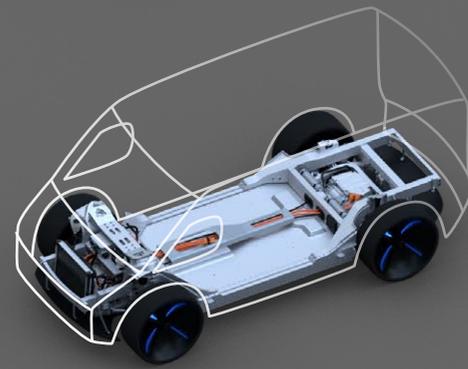
People Mover
1-15 passengers
and 1-22 passengers



We offer platform solutions for different mover applications. Our skateboard and Integrated Power Modules are both fully scalable according to your needs.



Passenger car
4 - 6 passengers





ADAS integration

Our platforms are designed for autonomous driving. With redundant systems and drive-by-wire, we are supporting ADAS level 4 and 5. Also cameras, lidars and radars can be integrated into our platforms.

Track Record

BENTELER's e-mobility has been subject to regular press releases since 2017, when we first presented our BENTELER Electric Drive System at the Shanghai Motor Show.

The acceptance by the international press of our technical innovations for NEVs has ever been outstanding.

In 2019, we presented our BEDS at the IAA in Frankfurt. In the same year, we collaborated with Automobili Pininfarina for a platform on a future luxury electric vehicle.

BENTELER's cooperations with Bosch, Vibracoustic and Pininfarina SpA was published in 2019.

Press releases increased considerably in 2020, starting with the CES in Las Vegas, continuing in 2021 – even on TV.

German Press Releases

Wallstreet online

Article: Sony-Auto mit BENTELER Technik
published 09.01.2020

Die Welt

Article: Überraschungs-Auto
published 08.01.2020

Automobil Produktion

Article: So fährt sich das Rolling Chassis
von Bosch und BENTELER
published 16.10.2020

International Press Releases

Finanzen.ch

Article: BENTELER présente ses innovations au CES 2020 in Las Vegas
published 07.01.2020

LA STRAMPA

Article: Nel domani con la Battista Anniversario L'elettrica celebra i novant'anni Pininfarina
published 11.03.2020

Auto-revista.com

Article: BENTELER coopera con Bosch y con Sony para Impuls la movilidad eléctrica
published 13.01.2020

Internet platforms and TV stations

YouTube

Article: Collaboration with Sony
published 21.01.2020

eMobility update

Article: E-Plattform für People Mover
published 03.05.2021

Several TV-stations

Our management team



MARCO KOLLMEIER
Vice President



DR. GEORGIOS LEONTARIS
Director Program &
Industrialization



JULIA HANSEN
Head of Business
Development



RAINER VÖSGEN
Director Technical
Development



LENA KLEINSCHMIDT
Head of Sales



YASSINE JEBRAN
Quality Management



OLIVER BUSCH
Controlling



JENS TEUTENBERG
Purchasing



CONTACT

electro.mobility@benteler.com

BENTELER Automobiltechnik GmbH

#E-MOBILITY

Elsener Straße 95

33102 Paderborn

Germany

