



EVE-Cargo motorbike

Three innovations built the base of the total e-mobility system: an electric light vehicle, a battery swapping system and the intelligent integration of the various systems.

Technological Innovations of the Project

When developing the project, the central question was: how simplified and minimalistic can e-mobility on two wheels possibly be? The result is a completely new motorbike concept which is an explicit counter-statement to the current trends of the automotive industry.

The EVE- CARGO is a light vehicle weighing only 190 kg, including the battery. The low total weight is achieved by using a perfect and ultra-light mix of materials, an aluminum chassis and plastics for those parts which merely serve to cover the vehicle. The design of the vehicle follows the maximum usefulness it provides under the motto, “form follows function”.



Manual Battery Replacement System

Two of the factors standing in the way of a more widespread expansion of electric vehicles are the currently high purchase costs on the market as well as the relatively small range compared to that reached by combustion engine vehicles. Even though, in most cases, the fear of insufficient range is unsubstantiated.



A core element of the EVE cargo system is, therefore, the option to manually change the batteries thus maximizing vehicle utilization. Together with the use of renewable energies the reduction of CO₂ emissions can even be increased and the whole system achieves the status of a zero-emission mobility system.



Intelligent Fleet Network by Using Real-Time Data

To guarantee maximum efficiency and vehicle utilization, the Motorbike runs an advanced **IoT monitoring system**, whose overall operation is controlled using modern information and communication technologies.



In this system, all units, from the vehicles and battery replacement stations to the end-user apps and operating software, are interlinked and converge within the operator platform. In combination with the battery replacement system, this new sharing approach makes it possible to make the vehicles available to different user groups while at the same time supporting different modes of use.

The aim is to maximize benefits and car utilization by implementing a cross-sectoral concept whose centerpiece is a software system that makes it possible to employ these different modes of application at different billing rates. This way, the same motorbike can also be used for sharing systems vehicles, available for both passenger and cargo transportation.



TAXI



TOUR



SHARING



LOGISTICS



Unlimited range.
24/7 usage in the city thanks to the modular battery swapping system

Incredibly light.
Lightweight champion in its category with max. 210 kg with batteries

One for many.

The energy-efficient and cost saving lightweight vehicle can be used adaptively for the most varied applications in both passenger and goods transport in urban areas. In addition, different platforms and equipment fitted on the basic body of the vehicle make specific transport applications in the area of logistics possible.

Less vehicles. Better utilized.

Thanks to the innovative ICT technology used, the vehicles become connected software- based vehicles and are networked to the intelligent CITY FLEET. They can be better distributed and more efficiently used than privately owned cars. Thus, the vehicle density is reduced, the environment is protected and valuable space in the cities recovered!

Electrical is successful.

The competitive business model is based on many different sources of income such as ride-hailing, energy sales, digital advertising and battery leasing. Together with the technological innovations, the total operating costs can be greatly reduced. Electromobility therefore no longer has to be expensive and exclusive.



The idea underlying our approach was to develop a lightweight energy-efficient CITY TAXI for the vehicle category . For the intended use in city centres, we believe that a maximum speed of 90 km/h, 2 seats and a space for 55 litres suitcases should be more than sufficient.

Our solution to the range problem consists of battery modules which can be replaced manually at battery replacement stations. Charging with cable is also possible. This means that, in addition to the e-vehicle itself, we offer an overall package solution for EV mobility including the infrastructural supply required for it.

Networking all entities (vehicles, battery replacement stations, end users' smartphones, backend) with real-time data transmission makes it possible to intelligently and safely control the Vehicles. Real-time data serve as the basis for innovative business models and digital advertising control.