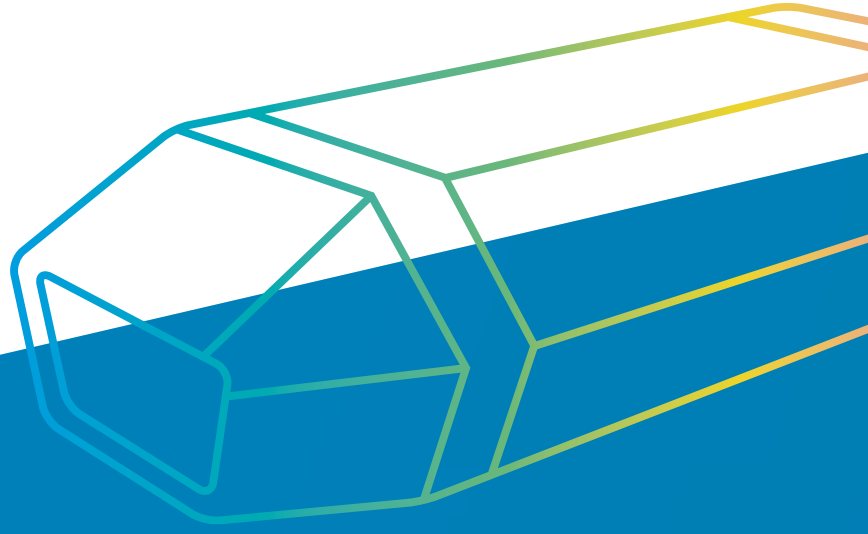




BATTERY DIAGNOSTICS



# WORLD- LEADING BATTERY DIAGNOSTICS

- Manufacturer-independent
- TÜV-certified

CONNECT TO DETECT

[AVILOO.COM](http://AVILOO.COM)



# A VISION BECAME REALITY: WORLD-LEADING BATTERY TESTING, MONITORING AND ANALYSIS



## AVILOO at a glance

AVILOO GmbH, the developer of battery diagnostics for electric and plug-in hybrid cars, is an Austria-based company operating throughout the EU market and beyond.

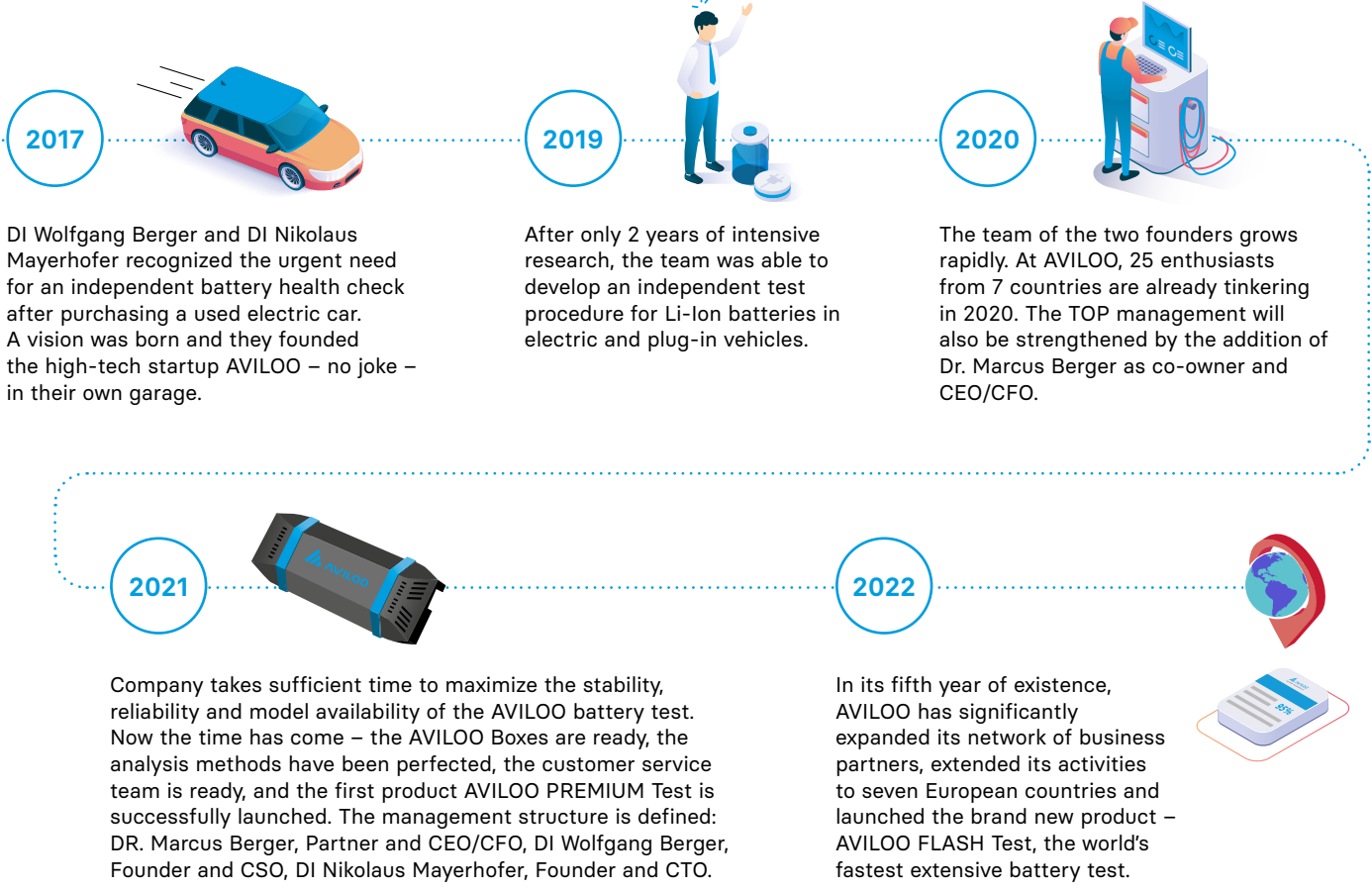
The team of more than 25 AVILOO experts has developed a unique technology for testing Lithium-ion batteries and has thus opened a completely new market dimension within the automotive industry. The AVILOO Battery Diagnostic is independent, accurate, and reliable, and the battery tests themselves are simple and tailored to the needs of each user.

## AVILOO in numbers

- 10.000+ battery tests performed
- 100+ different vehicle models
- 142.600+ measured kWh
- 670.000+ driven km
- 30+ AVILOO team members



## From the garage into the world

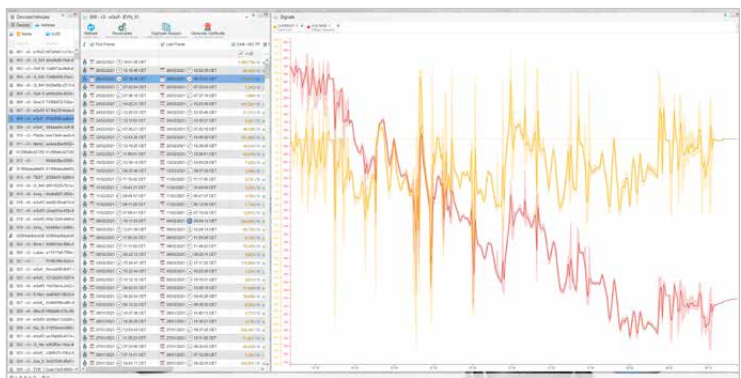
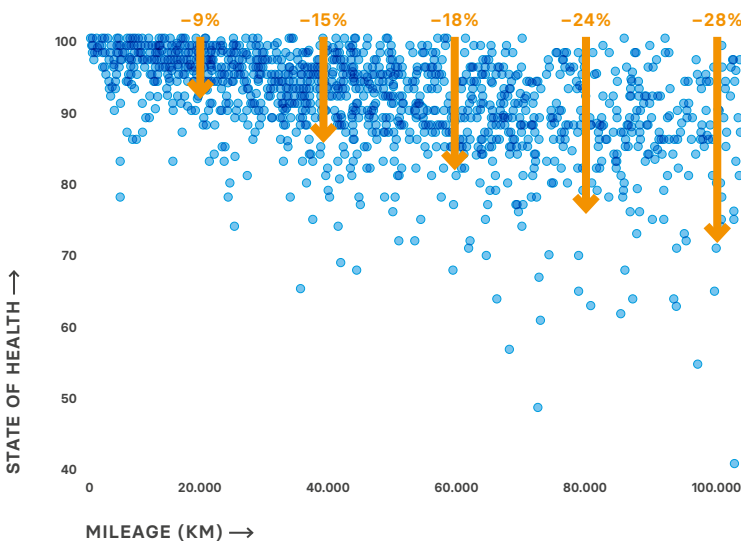


# AVILOO: POWERED BY PASSION FOR BATTERY INSIGHTS AND TRANSPARENCY



We love batteries ... and we want to know what's going on inside of them! That's why we have perfected battery diagnostics!

Determining the condition of the battery of an electric or plug-in hybrid car must be determined the State of Health (SoH). There are different methods for calculating battery power and analysis, but just one provides the most relevant answer for users. So if you want to know how far you can go with your electric car in actuality, not theoretically, the best and the most precise technology will give you SoH based on range. AVILOO technology processes real-time, actual, measured data, obtained through the testing process.



Aviloo Battery Data Cloud

## → Engineering for each battery type

We decode and interpret data from batteries of electric cars, ships, construction machinery and stationary equipment.

## → The AVILOO Box – connectivity for every need

The AVILOO-Box is a unique high-tech solution for variable measurement data generation in stationary and mobile application areas, modularly applicable and tailored to specific needs.

## → The AVILOO Battery Data Cloud – the heart of data analysis

The super-fast and user-friendly AVILOO Battery Data Cloud provides a customizable view of millions of collected data points with just a few clicks. This allows experts to quickly and efficiently collect and interpret battery application.

## → Big Data battery data analysis

The core of the battery data analysis is the AVILOO Estimator – a powerful machine learning algorithm powered by billions of collected data points that gets more accurate with each data set. Data is processed and stored in real-time, secured to the highest standards, and redundant in the AVILOO Battery Data Cloud.

## → Objective and reliable results

Results are automatically checked to the highest quality standards. Thus, every AVILOO Battery Certificate is not only objective, transparent and accurate, but also 100% trustworthy.

# AVILOO PREMIUM — THE WORLD'S MOST COMPREHENSIVE BATTERY TEST



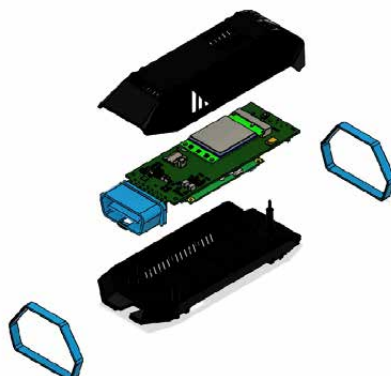
The TÜV-certified, manufacturer-independent and objective AVILOO PREMIUM Test is an exact SoH test which provides battery information of electric cars and plug-in hybrids.

The SoH values are expressed transparently, clearly and simply in the Battery Certificate as a percentage. A result of 100 indicates that the energy extracted during the test corresponds to the usable energy when new. The real-time result is accurate and trustworthy.



That is how easy it is:

- **Step 1**  
Choose your vehicle and get the AVILOO box via webshop order!
- **Step 2**  
Plug the AVILOO Box into the OBD port of your car!
- **Step 3**  
Charge your car to 100%!
- **Step 4**  
Open the webapp (link will be sent to you by email) and follow the instructions!
- **Step 5**  
Drive your car from 100 to 10% charge level in the course of your ordinary driving. You have up to seven days to do this.
- **Step 6**  
You will receive the TÜV-certified AVILOO battery certificate within 2 working days after finishing the test





# AVILOO FLASH — THE WORLD'S FASTEST EXTENSIVE BATTERY TEST

The AVILOO FLASH Test is a quick test that in just 3 minutes determines the functionality of the traction battery without moving the vehicle.

The result is numerically presented via an AVILOO Report through the manufacturer-independent AVILOO Score and calculated based on a wide range of test data (current measured values combined with historical data). The higher the score, the better the battery condition. For substantial risks, the FLASH test provides a „Red Flag“ report, with specific indications of the nature and type of fault.



Three minutes, three steps – that’s how quick and easy the FLASH Test is:

### → Step 1

Connect AVILOO box to the OBD interface of the vehicle.

### → Step 2

Wait until the LED of your AVILOO Box flashes yellow and the battery check begins. Fasten the driver’s seat belt and start the vehicle.

### → Step 3

After about three minutes, the LED lights up green and the battery check is finished! AVILOO Report will be generated and in your email inbox before you get out of the car.



# PERMANENT REMOTE BATTERY MONITORING FOR INDUSTRIAL APPLICATIONS



Whether it is large battery storage for ships, ferries, electrified dredgers and cranes or stationary storage, permanent monitoring of the battery storage is of great importance.

The monitoring includes:

- 24/7 battery monitoring
- analysis of the collected data in relation to the client's needs
- predictive analysis and risk assessment of the battery condition, along with creation of strategies based on the results obtained.



## Case Study 1 Current Direct

**Sector:** Shipping – transport of people and goods by water

**Task:** Monitoring and tracking of batteries on overseas transport vessels to create a predictive maintenance strategy aiming at zero emission, efficient organization, sustainability and affordability.

**Work process:** providing information for each of the cells of each battery, delivered in real time to the client; alerting and warning of irregularities in cell operation, distributed to each of the named persons, the moment the irregularity occurs; expert statistics available at any time; intelligent analysis and processing of existing data; generating predictive analysis utilizing algorithms.



## Case Study 2 Global Heavy Machinery Manufacturer

**Sector:** Production – Robotics

**Task:** Monitoring of robots under factory conditions, with the aim of higher operational efficiency.

**The work process:** takes place in several stages - drawing up the project plan, establishing a connection to the monitoring objects (electronics), decoding the language of the electric batteries, monitoring, data collection and specific analysis.

# HIGH QUALITY FIELD DATA VIA AVILOO BATTERY CLOUD



AVILOO technology was developed based on a simple need – to determine the condition of a traction battery. A team of experts has worked for years to develop a unique formula that infallibly determines various battery factors such as functionality or health status.

Years of testing and data collection, as well as classifying vehicles according to several parameters depending on customer needs have resulted in a unique database of high-quality battery field data from all known electric vehicles and plug-in hybrids.



## Case Study 1 Battery manufacturer

**Industries:** Electronics, Energy

**Task:** Battery testing and data collection to create better versions of products and develop models for sustainable energy resource management.

**Work process:** Cell manufacturers and many other industry partners in the field of electromobility often have extensive laboratory data, but rarely large amounts of real field data. In this example, we are testing newly created batteries under various conditions. Customers have direct access to the real database via the AVILOO Data Battery Cloud, where they can monitor and analyse the results and determine the further course of testing.



## Case Study 2 Transport company with a fleet of refrigerated vehicles

**Sector:** Medicine/Food/Pharmaceuticals

**Task:** Monitoring and data collection of the existing fleet of delivery refrigerated vehicles in order to optimize driving routes.

**Work process:** This project is carried out very intensively and in close cooperation with the client. A fleet of special delivery vehicles that transport goods such as medicines and foodstuffs under specific temperature conditions are monitored around the clock. The client uses the data provided via the AVILOO Battery Data Cloud platform to optimize train routes, all with the aim of optimising business operations and achieving Zero Emission.



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