



BATTERY DIAGNOSTICS

THE BATTERY DATA EXPERTS

Independent and neutral battery analysis

International Mobility Days 2021

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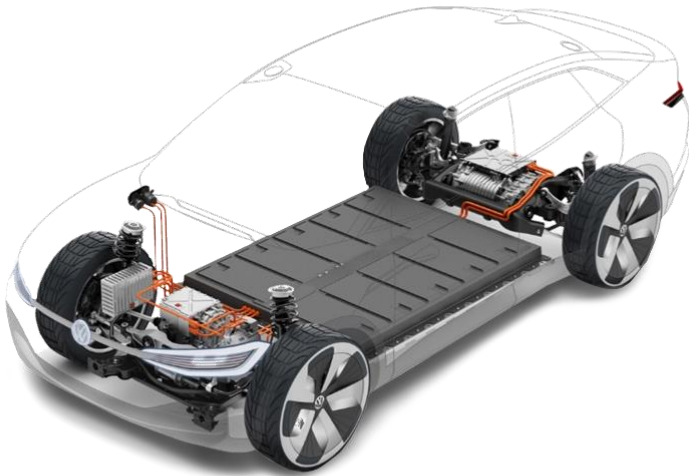
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Three Business Areas

- Battery State of Health Test for EVs and PHEVs
- Batterie Field Data
- Battery Remote Monitoring (stationary, maritime)

A KEY PROBLEM

Used electric vehicles – in which condition is the battery?



Fear of battery-wearout



No neutral and independent test available

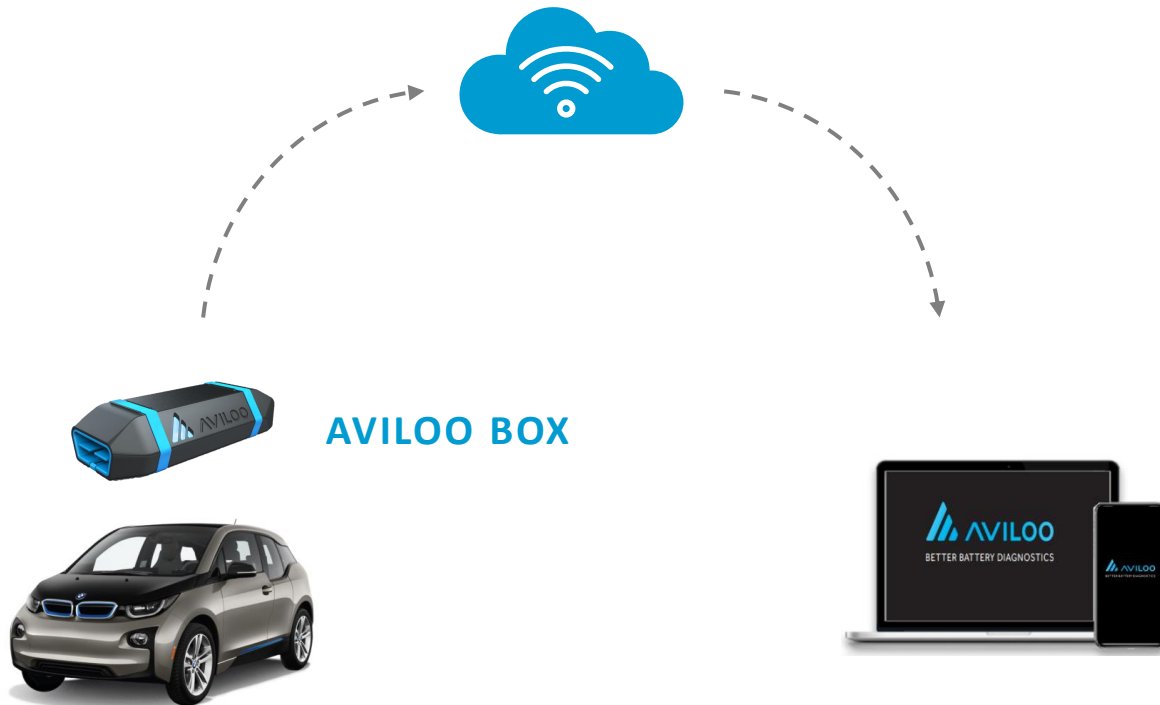


The value of the battery can make up to 50% of the total vehicle value

A PERFECT SOLUTION

01

The independent AVILOO test-platform
AVILOO CHECK

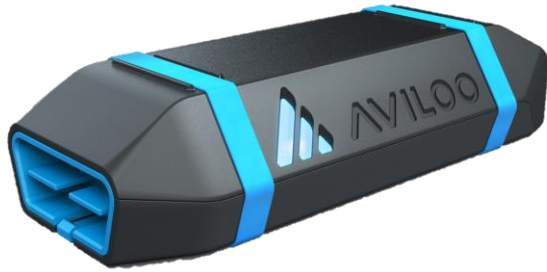


02

The independent
AVILOO CERTIFICATE

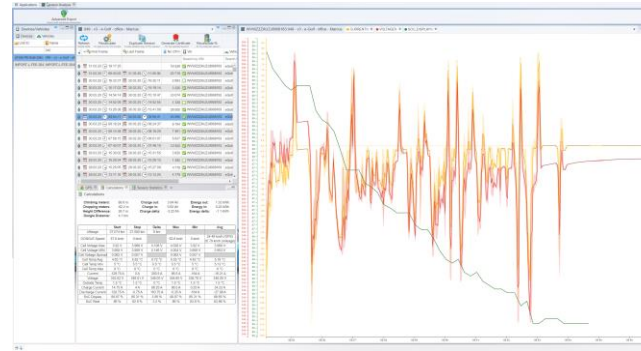


KEY COMPONENTS



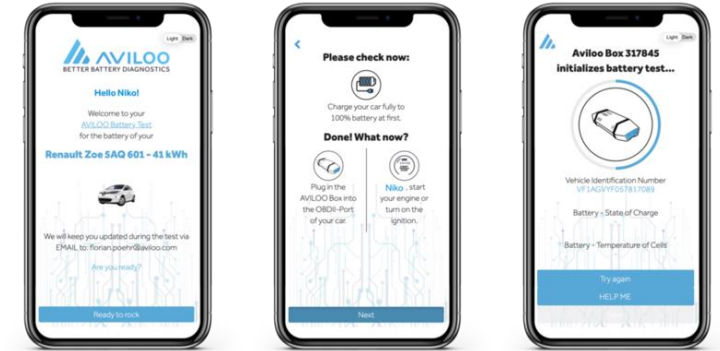
AVILOO – BOX

- ▶ AVILOO own development,
- ▶ High performance Hardware and Firmware
- ▶ Data acquisition in high frequency
- ▶ Over the Air updates



AVILOO BATTERY DATA CLOUD

- ▶ Big Data Application
- ▶ Processing of Billions of data points
- ▶ SoH Algorithm



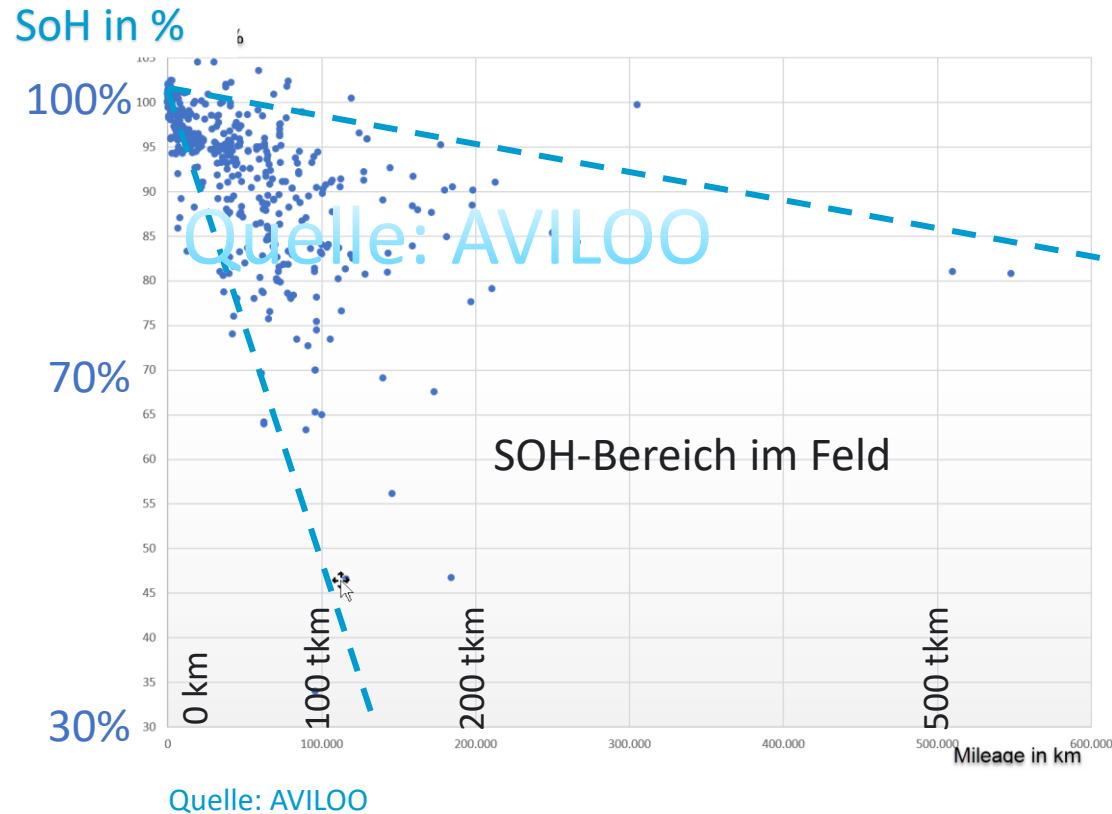
AVILOO APP

- ▶ Easy to use Web App
- ▶ No expertise required
- ▶ Guides the customer through the process

Lifetime of the battery

- ▶ Continuous fast charging halves the number of cycles
- ▶ Longest life time at 50% state of charge and a temperature range between 15 to 20 °C
- ▶ 20 °C deviation from the “normal” temperature halves the number of cycles
- ▶ A always fully charged battery shortens the lifetime as well

Mythus: Car manufactures are able to determine the SOH



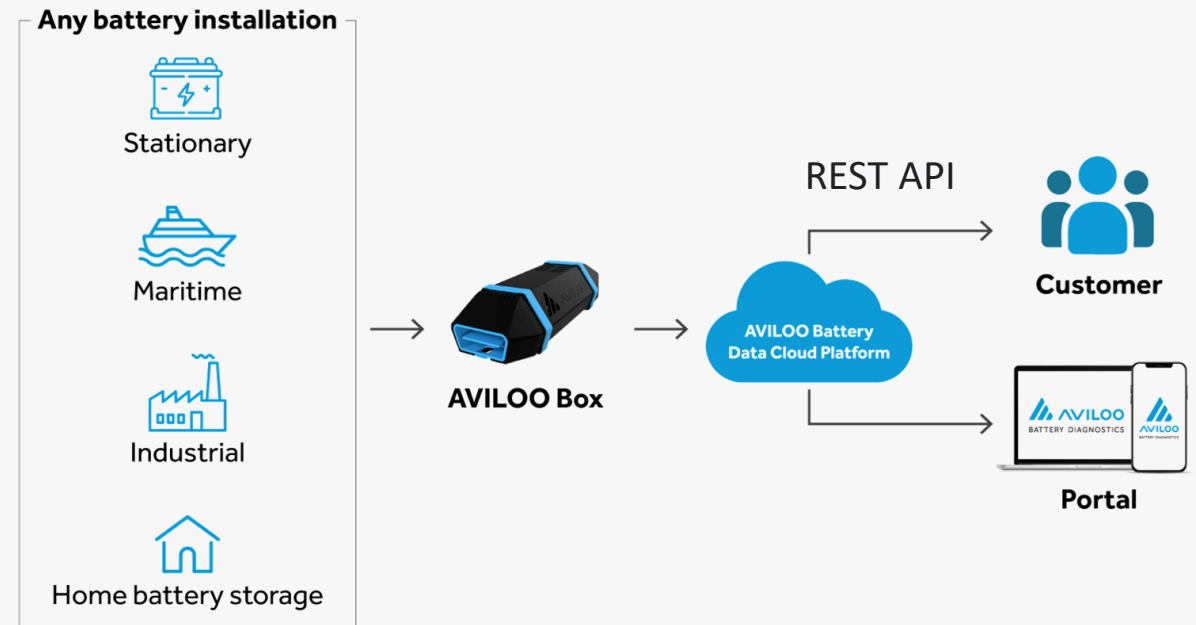
- ▶ Up to 30% deviation from the manufacturer's SOH
- ▶ Many manufacturers are not providing the SoH to consumers
- ▶ The spread of SoH at 100.000 km is between 95% and 50%

OUR ADDITIONAL PRODUCTS

Battery Field Data Sale



Remote Battery Monitoring



AVILOO

BATTERY DIAGNOSTICS



- Funded 2018, Vienna - AUSTRIA
- 30 Team Members
- 6 Mio EUR Invested



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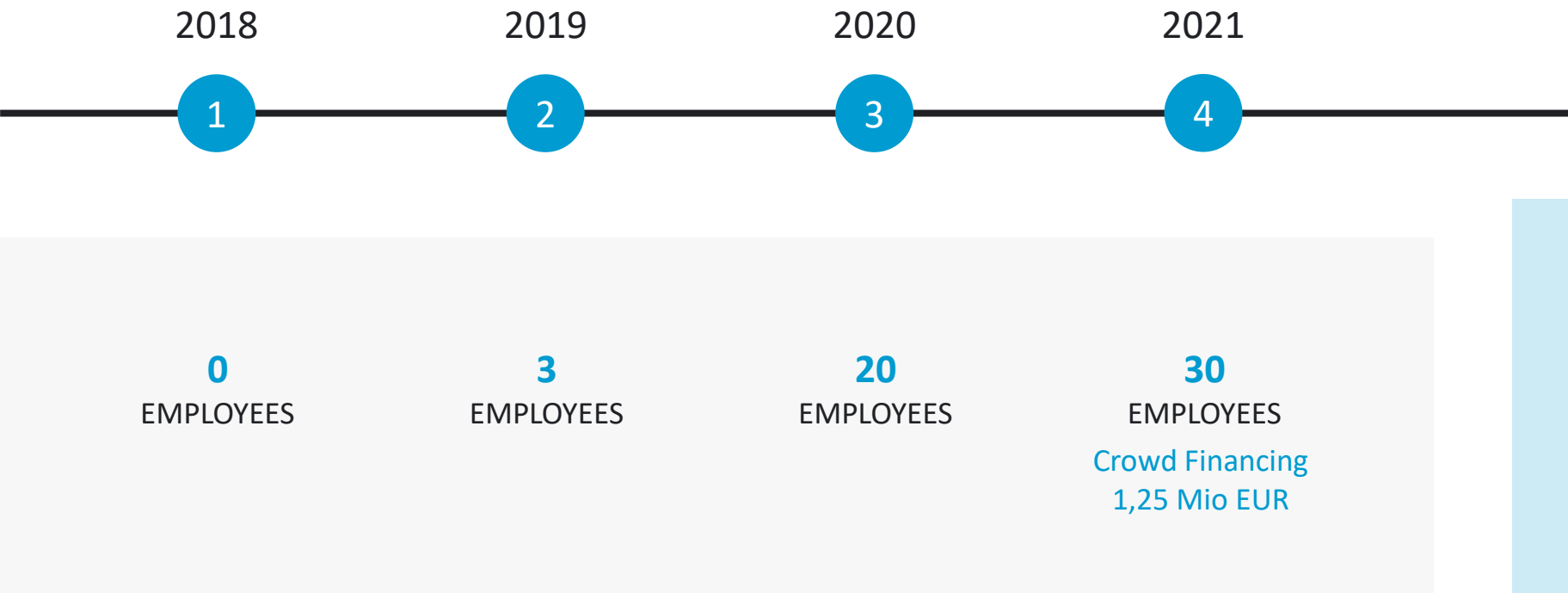
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Q&A

aviloo.com

BACK - UP

MILESTONES



~6 Mio EUR

Total funding raised

~3 Mio EUR

Equity Round Q4 2021

MANUFACTURER'S FIRST SOURCE OF COMPLEMENTARY DATA

Laboratory Tests



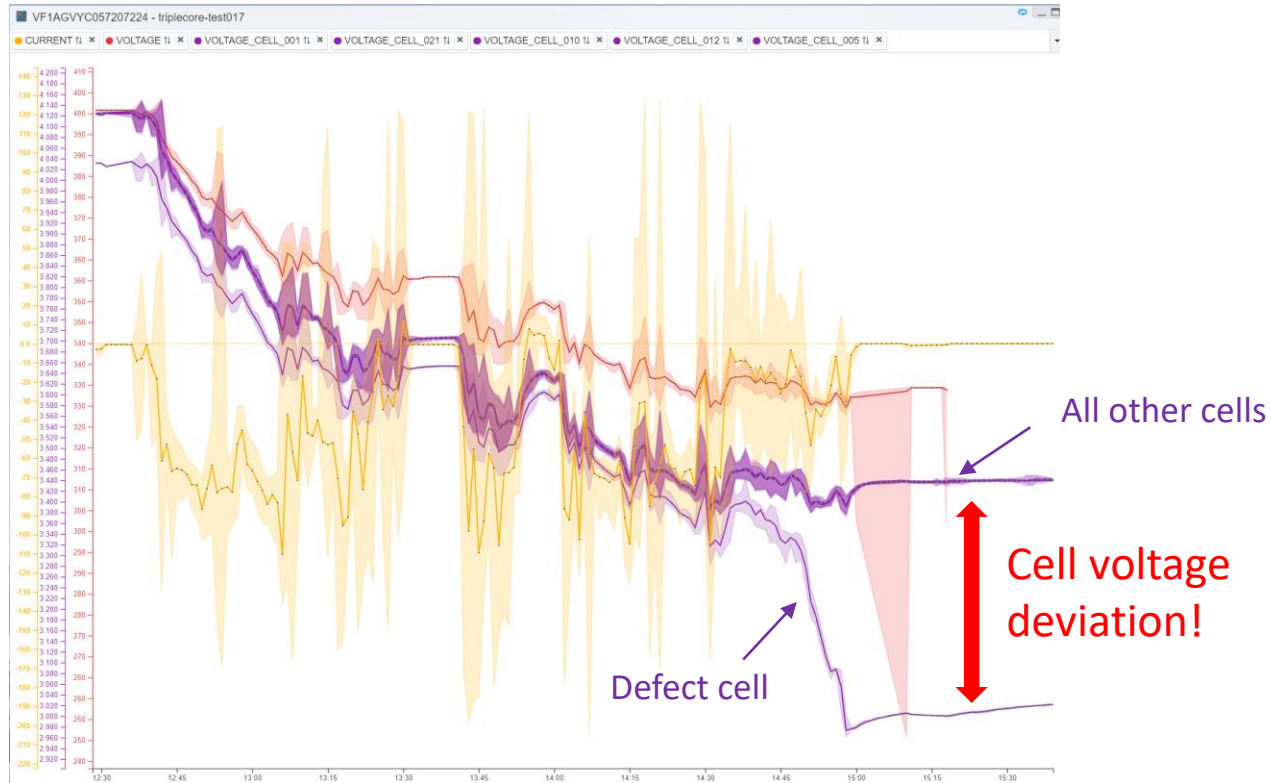
Integrating
laboratory
tests with
field data

Field Data



Cell defects


Defective cells = ticking time bomb



- ▶ Massive drop in range.
- ▶ No rapid charging capability
- ▶ Safety risk from battery fire
- ▶ Recognize warranty claims at an early stage

BROAD TECHNOLOGY STACK

**DATA AQUISITION
EV –
STATIONARY**

An illustration of a silver car with a blue battery icon and a lightning bolt symbol above it, indicating electric vehicle data acquisition.


HARDWARE

AVILOO BOX


A photograph of the Aviloo hardware box, which is a green circuit board with various components and a black connector.

**SOFTWARE -
BATTERY DATA
PLATFORM**

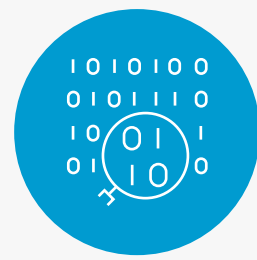
AVILOO CLOUD

A blue circular icon containing a white outline of a cloud, representing the Aviloo Cloud software platform.

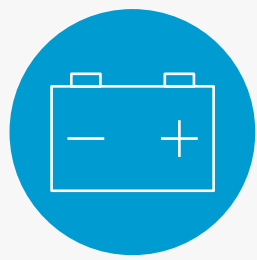
**FIELD
DATA**

A blue circular icon containing a white outline of a gauge or speedometer, representing field data collection.

**DATA
SCIENCE**

A blue circular icon containing a white outline of a battery with a plus sign and a minus sign, representing data science and battery testing.

**CELL
TESTING**

A blue circular icon containing a white outline of a battery with a plus sign and a minus sign, representing cell testing.

AVILOO CHECK

ELEVATOR PITCH – State of Health Test

Currently nobody can make an independent statement about the state of health of the batteries in used electric vehicles.

Every purchase is a **FINANCIAL RISK**.

AVILOO developed the worldwide first and **ONLY INDEPENDENT, TRUSTWORTHY, OBJECTIVE** and **TÜV CERTIFIED STATE OF HEALTH TEST**.

