



THE BATTERY DATA EXPERTS

Independent and neutral battery analysis
International Mobility Days 2021

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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

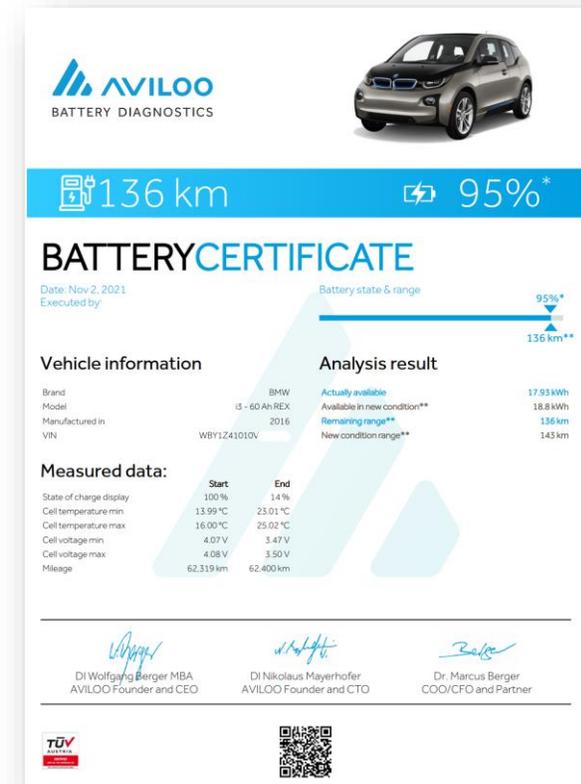
01

The independent AVILOO test-platform
AVILOO CHECK



02

The independent
AVILOO CERTIFICATE

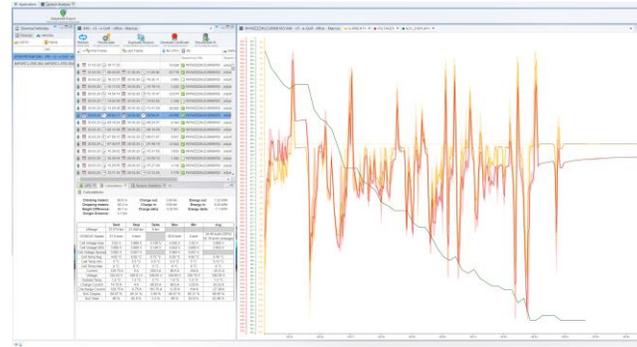


KEY COMPONENTS



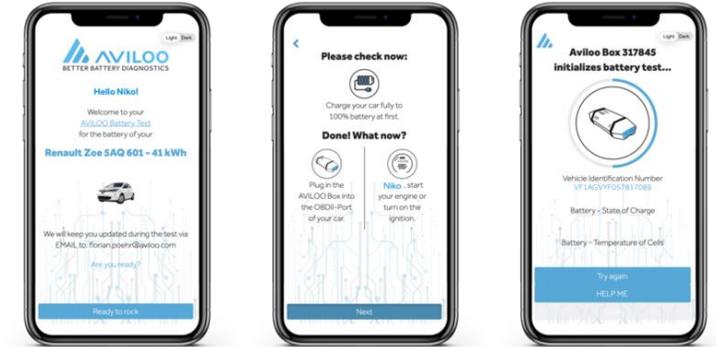
AVILOO – BOX

- ▶ 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



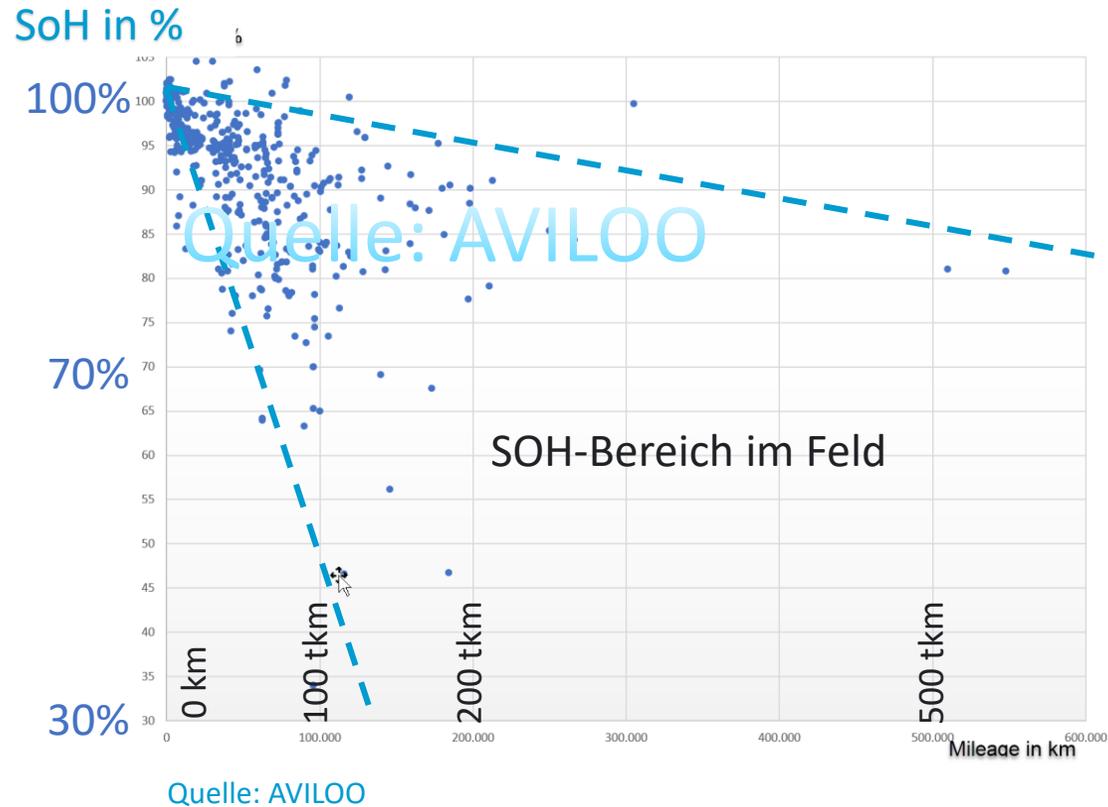
AVILOO APP

- ▶ 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



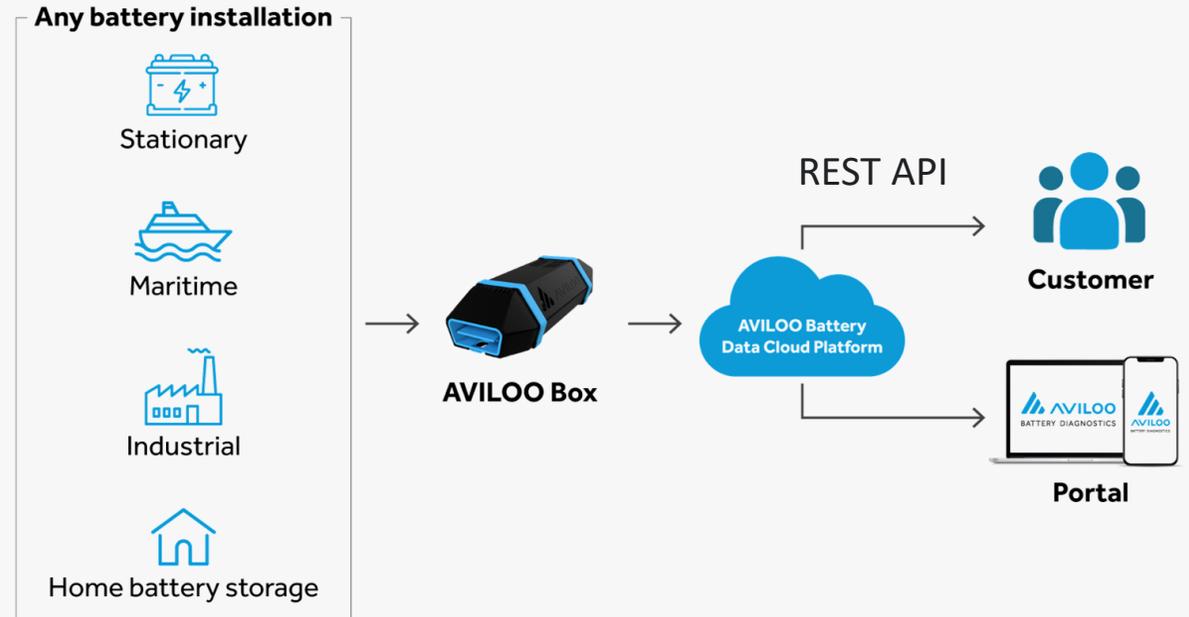
- ▶ Up to 30% deviation from the manufacturer's SOH
- ▶ Many manufacturers are not providing the SoH to consumers
- ▶ The spread of SoH at 100.000 km is between 95% and 50%

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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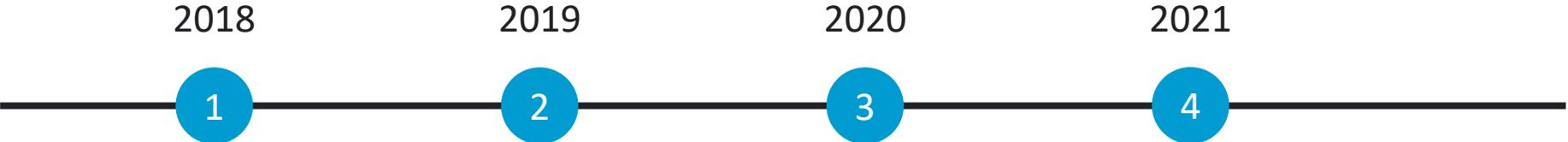
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Q&A

BACK - UP

MILESTONES



Year	2018	2019	2020	2021
Employees	0	3	20	30
Funding				Crowd Financing 1,25 Mio EUR

~6 Mio EUR
Total funding raised

~3 Mio EUR
Equity Round Q4 2021

MANUFACTURER'S FIRST SOURCE OF COMPLEMENTARY DATA

Laboratory Tests



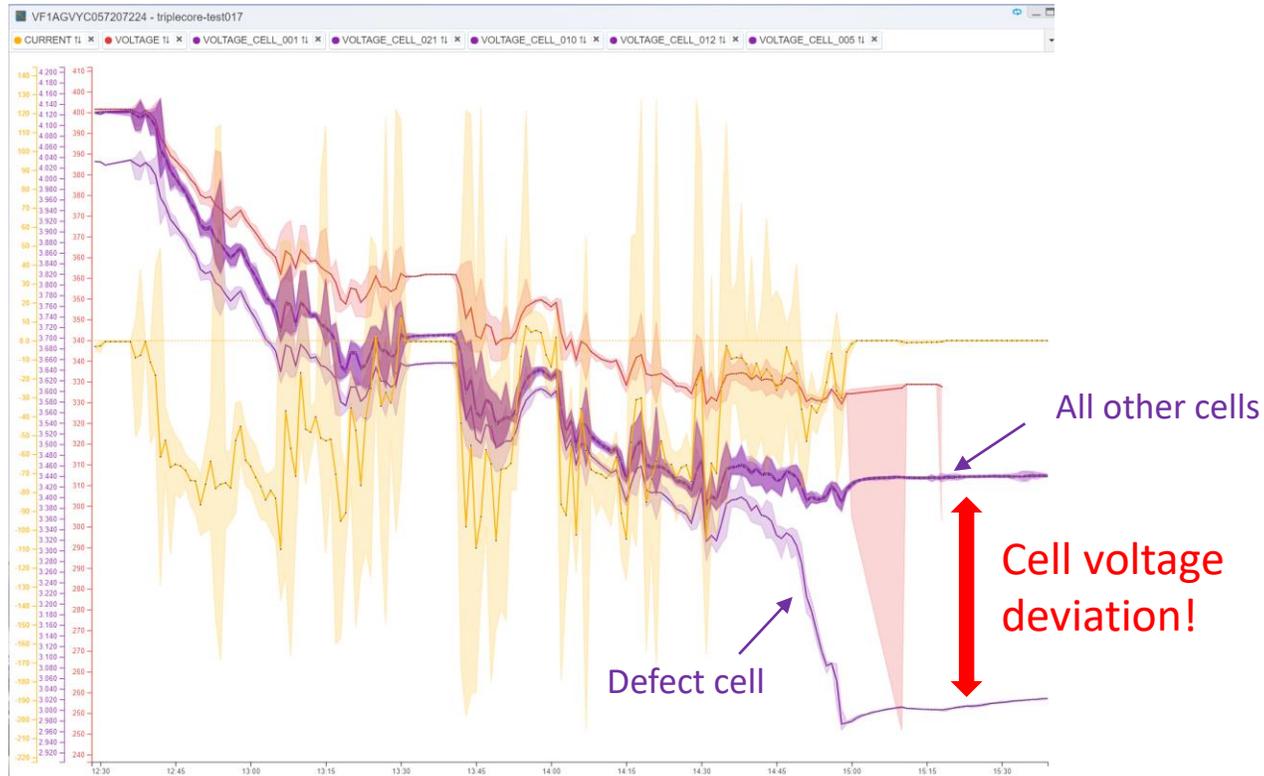
Integrating laboratory tests with field data

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



HARDWARE

AVILOO BOX



SOFTWARE -
BATTERY DATA
PLATFORM

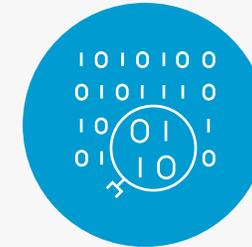
AVILOO CLOUD



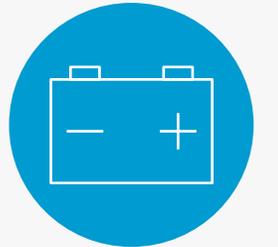
FIELD
DATA



DATA
SCIENCE



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**.

