

volytica diagnostics



From Volts to Value



“ OUR VISION

Every battery must be used to its true potential.

Why Battery Monitoring

Technical Complexities:

- Battery degradation
- Fragmented data sources
- Diagnostic challenges

Industry Dynamics:

- Lack of standardization
- Rapid growth of the market

Operational Challenges:

- Complex operations
- Lack of experts
- Variability in warranty terms



➔ Accessible, manufacturer-independent technology empowers clients to make conscious decisions for safe, sustainable, and efficient battery use.

Battery Monitoring Solutions for:

Battery Energy Storage (BESS)



Maximum asset performance with intelligent diagnostics and predictive insights.

Public Transport & Heavy Duty



Ensure fleet reliability and efficiency with real-time condition monitoring.

E-Mobility (EV)



Empower EV fleets with seamless battery analytics incl. E-Health quick check via charger.

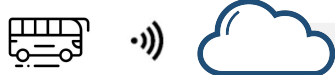
Our Solution

**We crack abundant data that others discard,
using our proprietary battery algorithms**

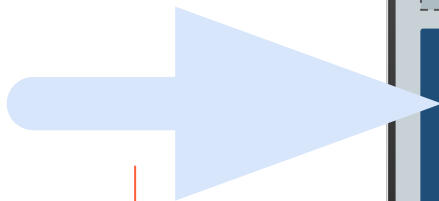
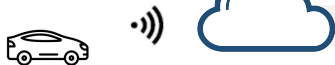
BESS



HEAVY DUTY



LIGHT VEHICLES



All data sources


No hardware necessary –
we tap into existing fleet or
condition monitoring
systems

Industry agnostic

Every Li-Ion battery is
supported

**Minimal
configuration**

More than 10 years of R&D
went into a smooth and easy
onboarding process without
lab experiments

 **Fraunhofer inside**

Crack it open

Using API integration, we
convert Voltage, Current and
Temperature into actionable
KPIs

V

Car Park Management

Solar Park Asset

Asset Management
System

V

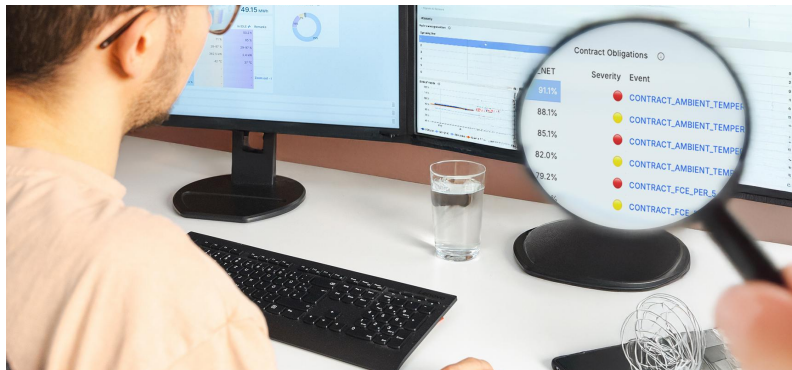
Operation & safety management

Root cause analysis & maintenance

Lifetime & replacement planning

Degradation assessment & certification

Contract Tracker



The *Contract Tracker* is an advanced monitoring tool designed **to help Battery Energy Storage System (BESS) operators stay compliant with complex contract terms across the entire asset lifecycle**. From warranty conditions and performance guarantees to financial KPIs, the Contract Tracker continuously visualizes obligations, detects deviations, and empowers proactive action.

Benefits:

- Full contract visibility
- Risk detection and alerts
- Custom rule-based monitoring
- Proactive risk management
- Audit & claims readiness
- Seamless integration

[Press release 28.04.2025](#)

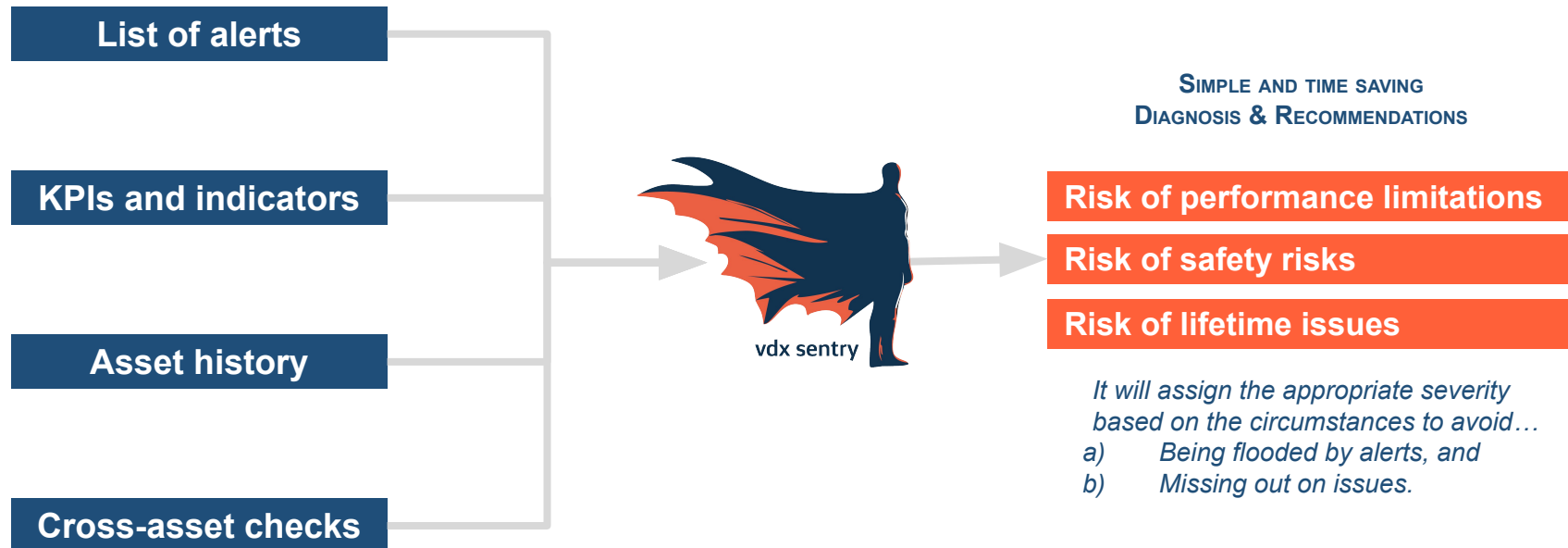


vdx sentry



Your virtual battery expert.

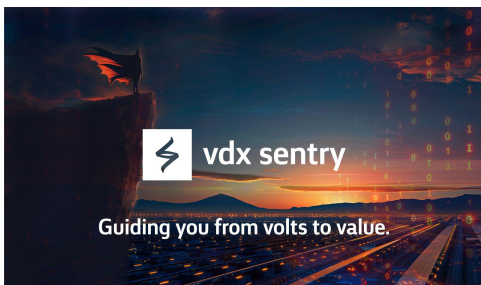
Less, but better alerts and recommendations:



Your virtual integrated expert in battery data analytics.

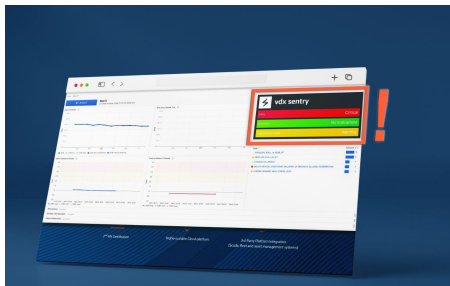
The vdx sentry is your virtual battery expert, automating monitoring and delivering actionable insights to extend battery lifespan, ensure safe operation, and optimize efficiency.

Virtual Battery Expert



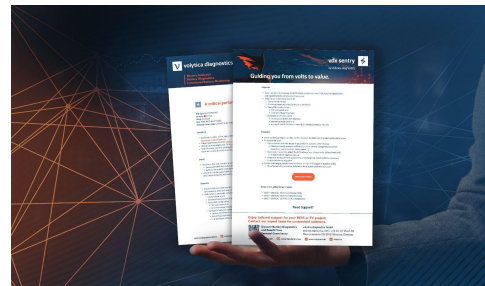
Empowers your team with battery expert capabilities.

Traffic Light System



Improves the efficiency of your daily operations.

Handling Recommendations



Strengthens your operational expertise with recommended actions.

Your virtual integrated expert in battery data analytics.

Customizable (API) Integration



Simplifies your workflow by integrating battery insights into familiar platforms.

White Label



Extends your brand by providing battery analytics under your identity, expanding your after sales service.

Beyond BMS (Battery Management System):

Historical data + Insights from similar systems + Cross checks within assets + vdx expertise

→ Comprehensive analysis of system performance, trends, and anomalies.

Modular solution



Operation & Safety

For operation, dispatch & mission control

- Monitoring of all operation & safety-related parameters (up to real time)
- Short-term notification of breakdown risks or risk of performance limitations
- Next best action recommendations

includes vdx sentry ⚡



Investigate & Resolve

For maintenance & expert departments

- Optimal support for root cause analysis
- Predictive action and maintenance to avoid breakdowns and safety events
- Support in warranty claims handling

includes vdx sentry ⚡



Value Retention & Lifetime

For long-term planning & reselling

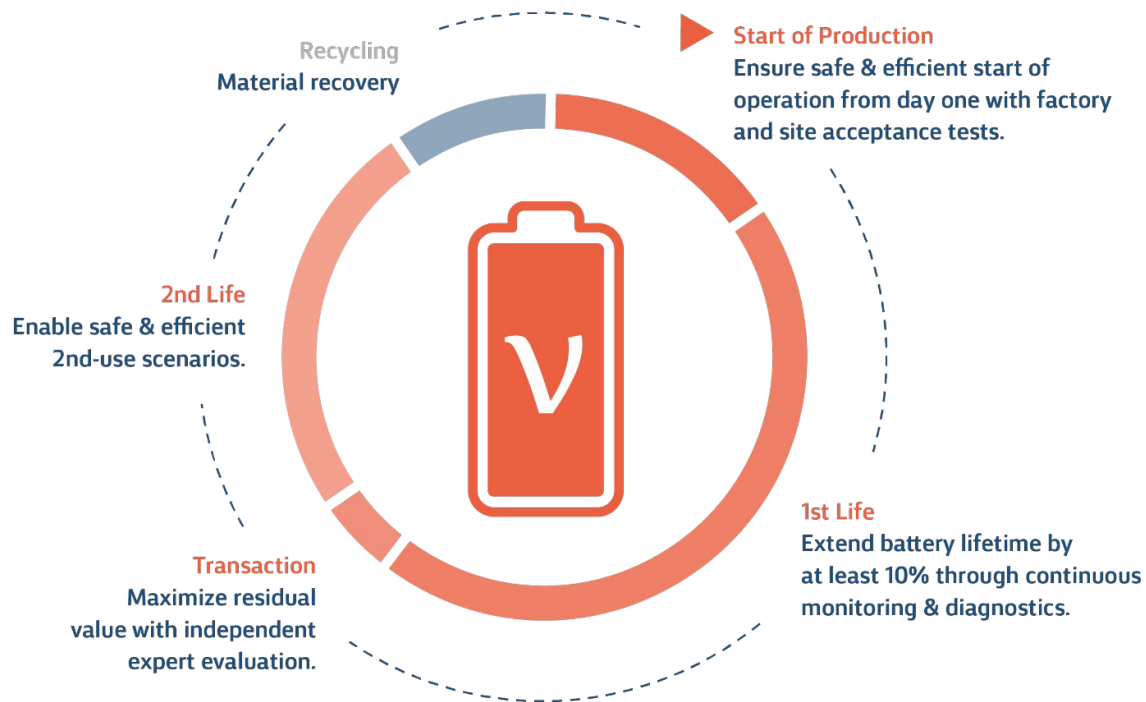
- Long-term tracking of degradation evolution
- Extrapolation of lifetime forecast (*remaining warranted lifetime*)
- Recommendations for stresslevel reduction and lifetime extension

includes vdx sentry ⚡

Battery essentials

Basis module containing calculation of all essential battery quality KPIs (SOH, RTE, stress level)

Where we step in: From start of production to end of second life



References

EnBW New Ventures

enel
Green Power

FTTF

ROCK
road

PI LABS

ATLANTIC
LABS

webfleet

BASEL ERFAHREN
BVB

galp

BVES
Energy Storage Systems Assoc.

eit InnoEnergy

QUANZEN

BVG

Fraunhofer
IVI

TÜVNORDGROUP

MAHLE

Forum für Verkehr
und Logistik

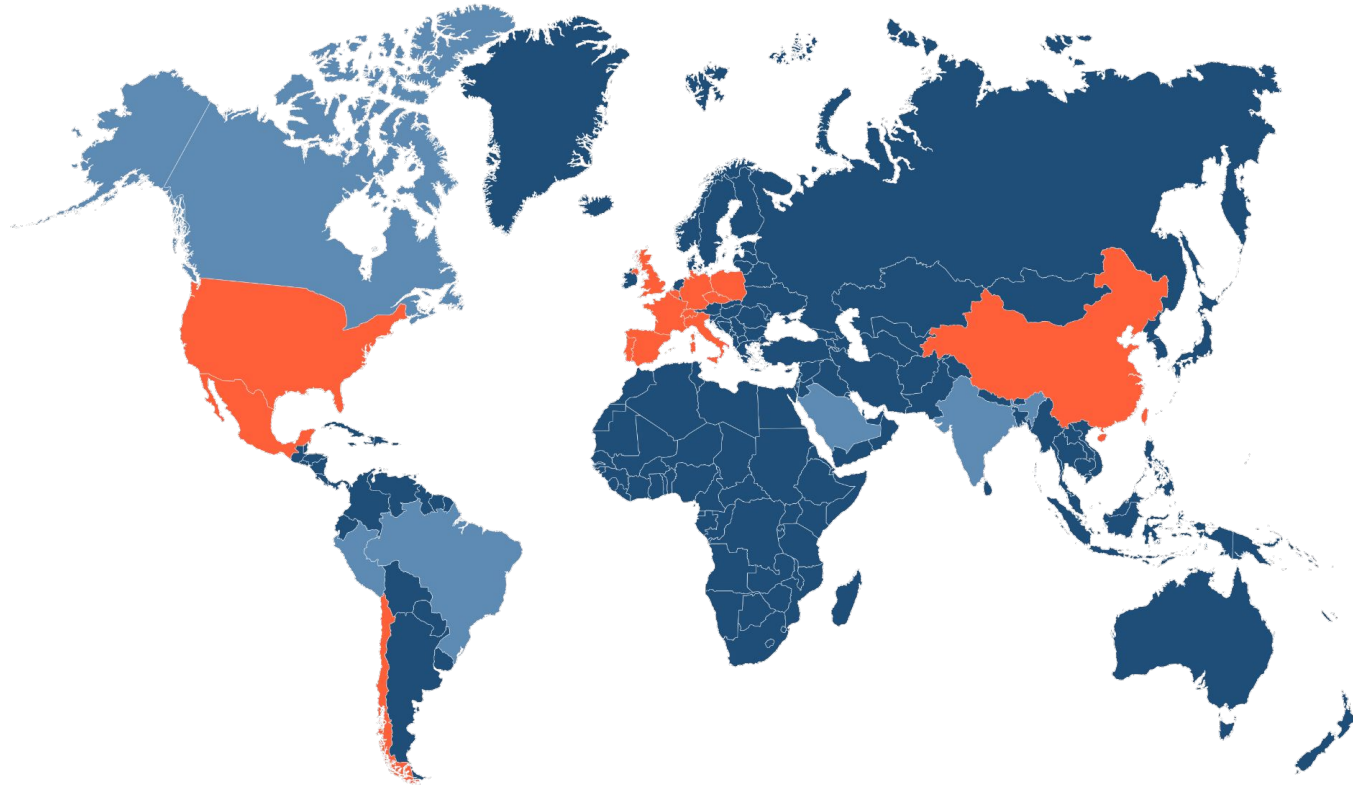
SINO
VOLTAICS


CarMedialab

enel x

NANO
POWER

>3 GWh of battery monitored globally



 Active monitoring and completed projects

 Upcoming Initiatives

With a monitored storage capacity of over 3 GWh, more than 100,000 analyzed battery modules and installations on several continents, volytica is a reliable and internationally active partner for companies in the renewable energy and energy storage sector.



Partner Solutions



Trading smarter – with battery insights

Combined battery analytics software with enspired's AI-driven real-time trading



Benefits:

- Optimized trading
- Warranty-safe operation
- Longer battery life
- Simple integration via API



BESSential: FAT / SAT* commissioning

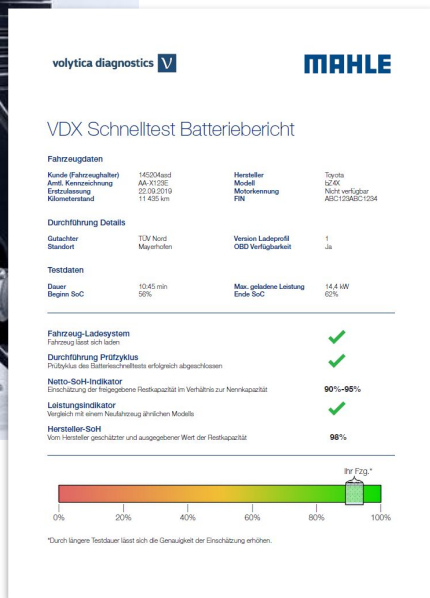
Analyze 100% of your plant's batteries. Find anomalies before you go live.



Benefits:

- 100% test coverage
- Detailed analysis results within 24 hours
- Seamless data exchange using existing load test files
- Minimize warranty risks from day one

E-Health Quick Check



Benefits:

- Fastest static battery diagnosis on the market
- Transparent health assessment for EV batteries
- Independent and universal application
- Enhanced decision-making for second-life and resale



Who are we?

Company Overview

More than 30 battery experts at your disposal



Sebastian Stoll
CTO, Dipl.-Inf.

15 years of Experience
in Scalable Cloud
Platform & Data Pipeline
Development



Claudius Jehle
CEO, Dipl.-Ing.

11 years of Experience
in Battery Diagnostics,
System Modelling,
Founding &
Management



Nicole Mattes
Head of Administration
& Finance

14 years of Experience
in Administration,
Finance, HR,
Controlling, Internal
Sales



Lutz Morawietz
Head of Battery
Diagnostics, Dipl.-Ing.

18 years of Experience
in Battery Testing &
Experiments, Algorithm
Development and R&D

+ more than 30 experts

>35% women

with a Battery, Data Science, AI, Cloud Platform Development and Product Background

We have more than 10 years of practical experience with applied battery diagnostics across industries



2012

First european e-busses monitored

volytica's predecessor research group at Fraunhofer monitored some of the first e-busses in Europe ([link](#), [link](#))



2017

Launch of first battery monitoring platform

IVImon, the first version of today's *vdX engine*, is launched into pre-commercial operation by Fraunhofer IVI

2019

Spinoff from the Fraunhofer Gesellschaft

For further growth and industrialization, volytica is spun out of Fraunhofer Society as a independent company

2023 Closing of €5.5M investment round led by SHIFT
Invest and EnBW New Ventures

2025

>3 GWh of battery monitored globally

With more than 30 experts in Dresden and all over Europe, we are one of Europe's leading battery diagnostics companies

