

# Reduce Risks & Improve Profitability of BESS Projects

With Energy Storage Analytics

Ryan Franks

Senior Technical Solution Engineer

[franks@twaiice.com](mailto:franks@twaiice.com) | 217.377.4038

📅 20 FEBRUARY, 2025

📍 CHICAGO, IL

# Leading & most trusted battery analytics provider

**120+**

team incl. battery software engineers & data scientists

**\$90m**

funding for long-term security

**3**

offices: Munich HQ (DE), Chicago (US), Berlin (DE)

**1**

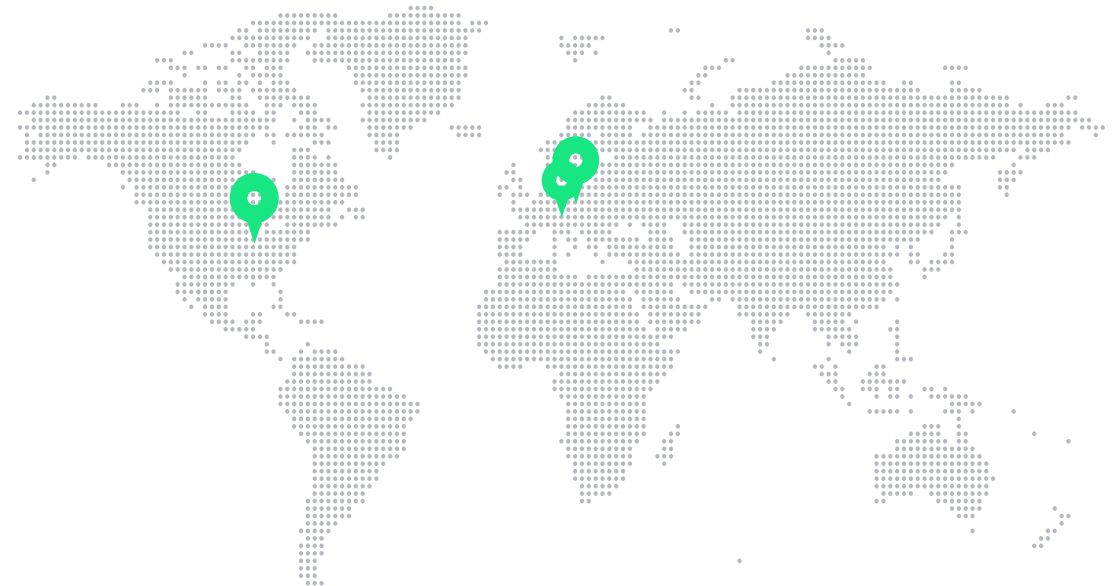
onsite battery research center

**70+**

BESS connected, adding up to a total of 5 GWh

**30+**

Patents (granted & in application)



## Advanced analytics turns BMS data into actionable insights



Raw data from  
BMS/EMS



▶ Data ingested into  
TWAICE cloud



▶ Data pre-processing  
& data storage



▶ Predictive battery  
analytics: algorithms,  
safety rule detection &  
more



▶ Actionable insights  
on TWAICE user  
interface & email  
alerts

# We help you solve business critical BESS challenges with advanced analytics

## Safety



“We have found issues in every storage we have analyzed – in commissioning & operation”

– Co-CEO TWAICE

## Availability & Performance



“Unplanned downtime led to an average availability across our fleet of only 84% last year”

- US ASSET OWNER

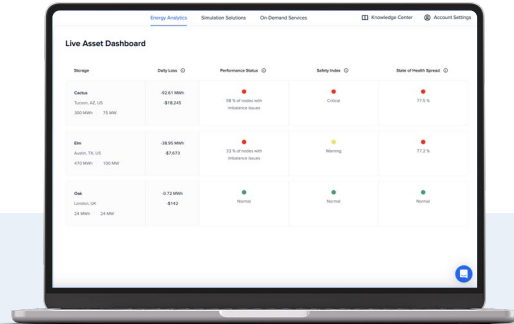
## Insurance



“Premium reductions of up to 30% possible due to battery analytics”

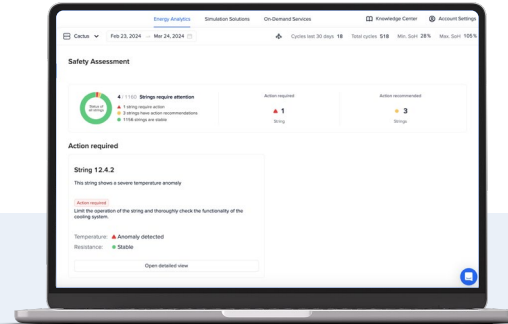
- US BESS BROKER

# Experience our predictive analytics platform: Energy Storage Analytics



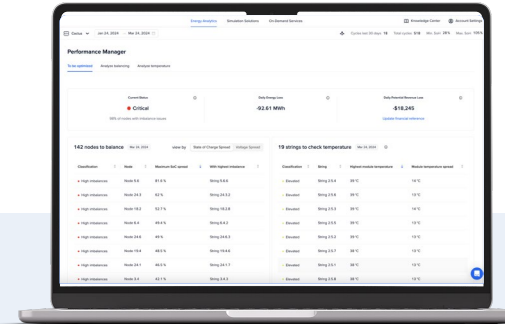
## Efficiently manage your BESS portfolio

- ✓ Optimize BESS health & lifetime
- ✓ Dashboards & standardized KPIs
- ✓ Automated Reporting



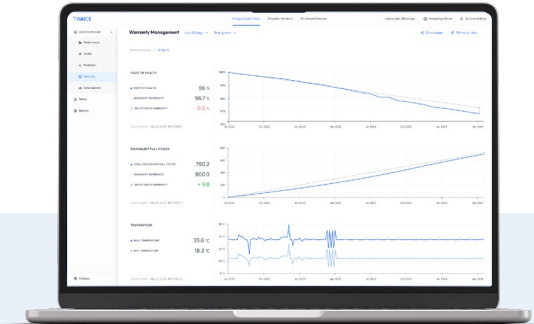
## Avoid fire risks & other safety incidents

- ✓ Identify safety-relevant trends across your fleet
- ✓ Get alerts & recommendations



## Improve availability & revenue

- ✓ Pinpoint components that are harming revenue
- ✓ Get recommendations on what to fix (e.g. balancing or replacing modules)

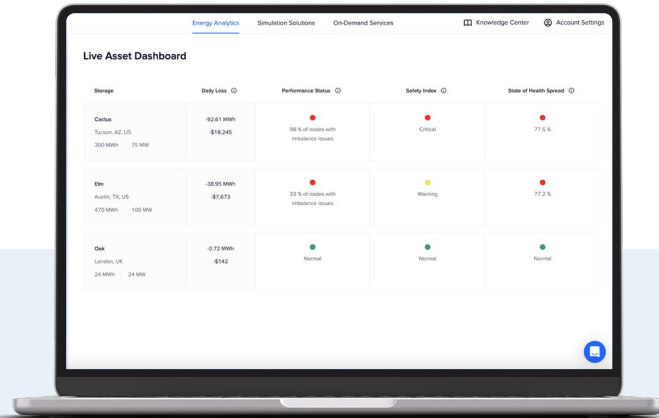


## Automatically track BESS warranties

- ✓ Automatically track warranty indicators
- ✓ Support decision making and communication during disputes

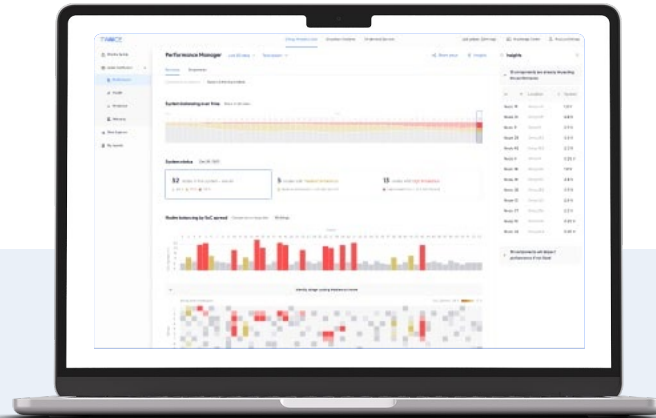


# Providing value for CFO, Asset Managers and Field Service engineers



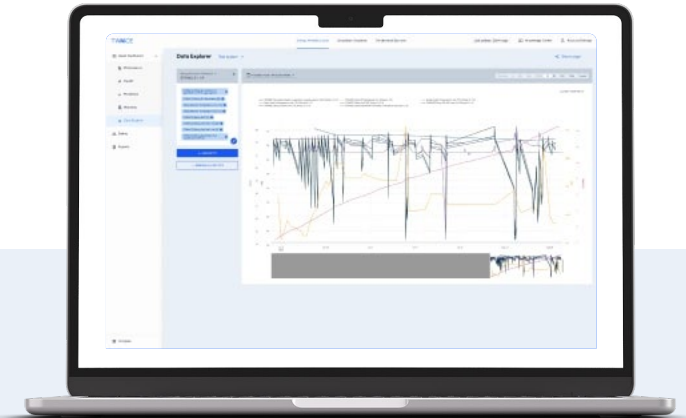
## High-level overview

- ✓ Asset management dashboard
- ✓ Proactive email alerts
- ✓ Identify immediate risks



## Detailed insights

- ✓ Pinpoint problematic components
- ✓ Concise summaries for quick action
- ✓ Predictive analytics to identify risks



## Advanced data exploration

- ✓ Explore data with powerful tool
- ✓ In-depth root cause analysis
- ✓ Work with TWAICE experts

# Increase Revenue – Improve availability by proactively identifying issues

## Challenge

- SoC Imbalances in the system limiting power availability
- Unclear root causes of imbalances

## Solution

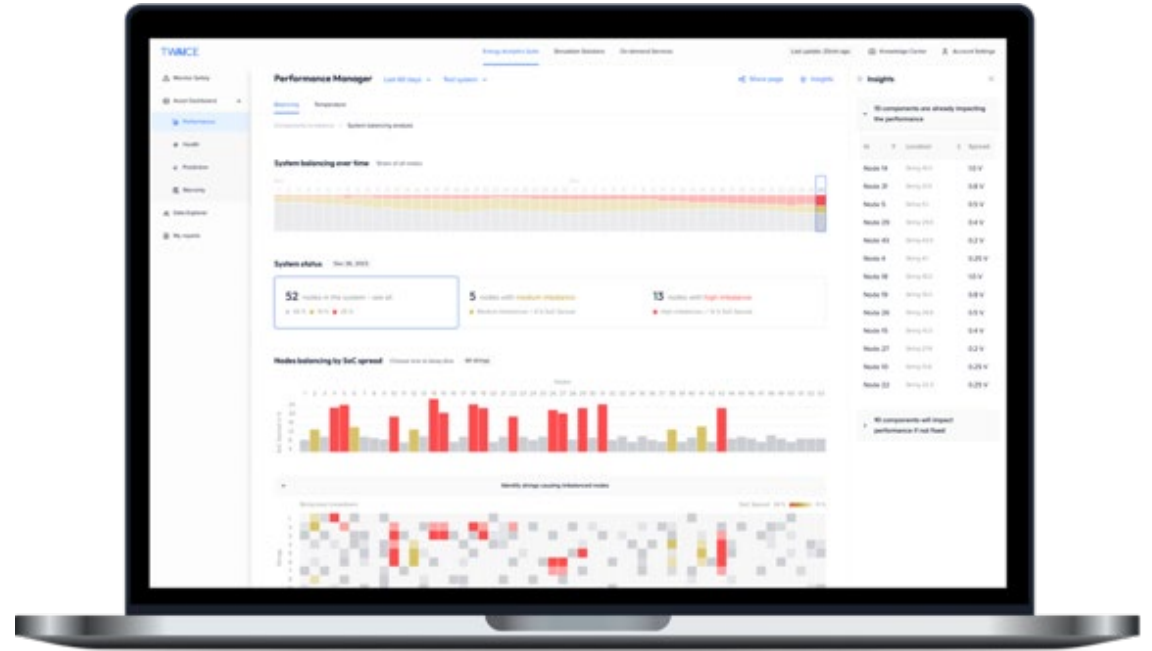
- ✓ Pinpoint problematic component
- ✓ Identify countermeasure (balancing, maintenance)

## Impact Examples

300 MWh nameplate, 406 MWh installed system

- 6 defective modules
- Daily loss of 18 MWh
- >\$1 M annualized revenue lost and gained back
- Provided documentation for legal claims (cell supplier)

## TWAICE Performance Manager



# Lower Costs - Digital Commissioning to pinpoint weak spots and baseline BESS

## Challenge

- Majority ( of failure incidents happens in the first two years and around half are related to manufacturing and integration ([Joint case study with EPRI](#))
- On-site measurements becoming more expensive & complex due to larger systems

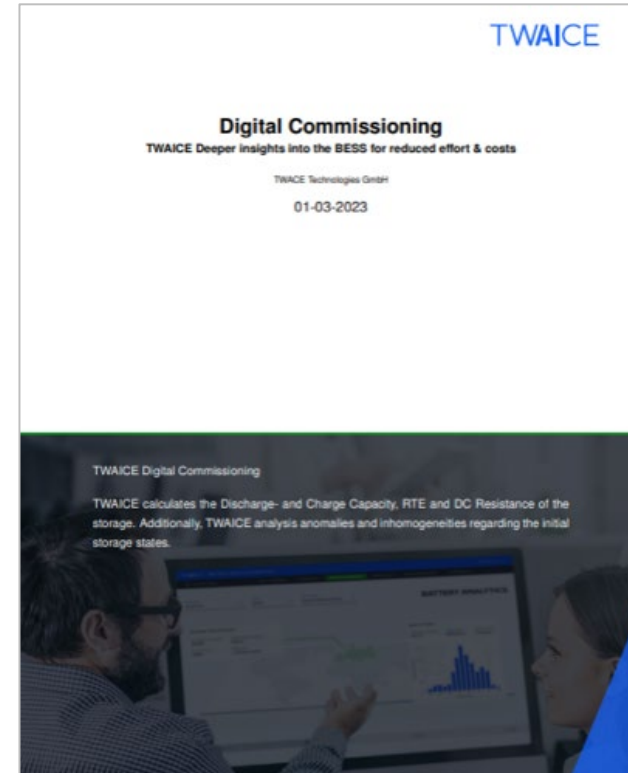
## Solution

- ✓ Pinpointing anomalies in the system to guide onsite teams
- ✓ Baseline the system to ensure performance

## Impact Examples

- VERBUND identified multiple issues with their storage systems ranging from temperature issues to integration defects (welding) ([case study](#) | [webinar](#))

## TWAICE Digital Commissioning





# Unlock improved profitability: Increase revenue & save costs

## INCREASE REVENUE

- ✓ Higher availability & better performance
- ✓ Higher energy utilization (more accurate SoC and lower degradation)

increase revenue  
+5-10%

## LOWER O&M COSTS

- ✓ Quicker troubleshooting & root-cause analysis
- ✓ Proactive maintenance
- ✓ Streamlined commissioning

costs reductions  
8-15%

Impact with current customers

# Learn more about how Energy Storage Analytics helps you achieve long-term success:



[Stay up-to-date on our blog](#)



[Read our customers' stories](#)



[Watch our webinars](#)

