



Next-Gen Energy Storage

MONSSON'S BESS

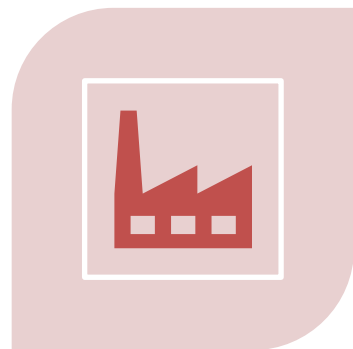
FOR A STABLE, SUSTAINABLE GRID

Challenges, Innovation & Vision by Monsson

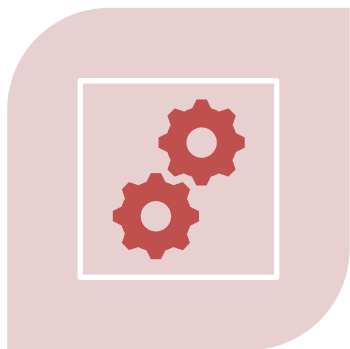
MONSSON - INNOVATING IN RENEWABLE ENERGY SINCE 2004



Confidential



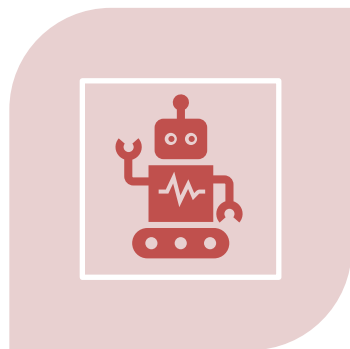
DEVELOPMENT &
ASSET MANAGEMENT



OPERATION &
MAINTENANCE



TRAINING &
EDUCATION



SOFTWARE, AI &
DIGITALIZATION



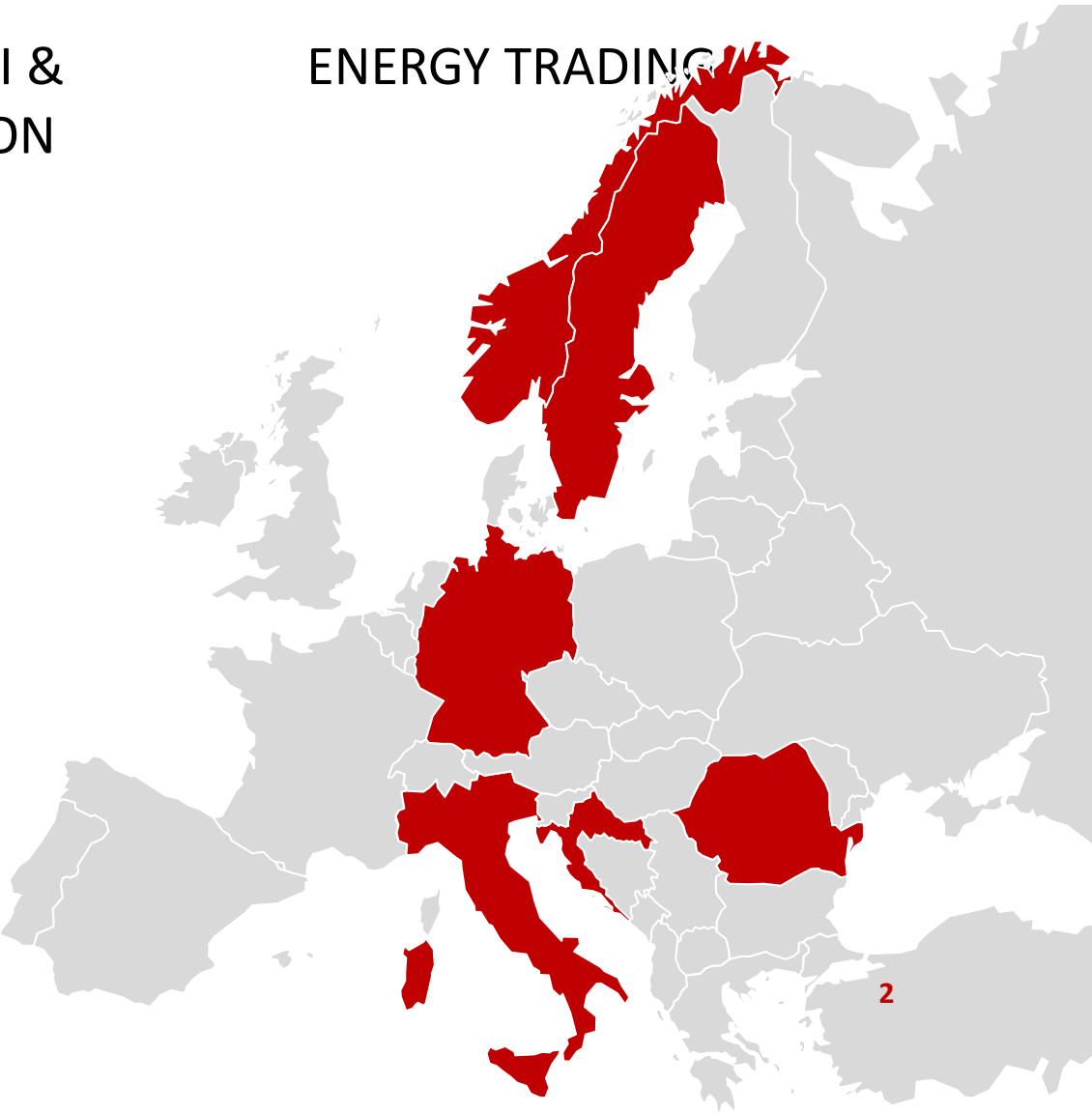
ENERGY TRADING



IPP & ASSET
INVESTMENTS



EPC & CONSTRUCTION
MANAGEMENT



MONSSON - INNOVATING IN RENEWABLE ENERGY SINCE 2004



- **Monsson offers turnkey solutions for the development, construction, and operation of renewable energy projects, Net0Academy trainings, including advanced battery energy storage systems.**
- **Diverse Expertise** - Active in wind, solar, hybrid energy projects, research and development, energy trading
- **Global Innovation** - Delivering large-scale renewable energy projects across multiple countries



6 GW+

of renewable projects developed worldwide



114 MW & 130 MWh

Owned PV and Wind & operating BESS



300 million

Group turnover



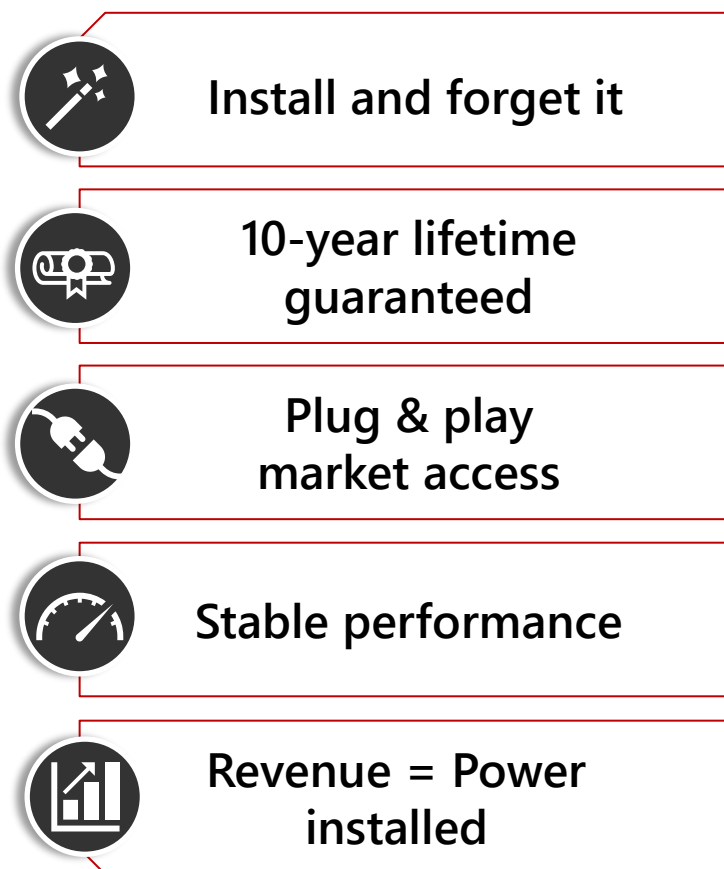
500+

employees

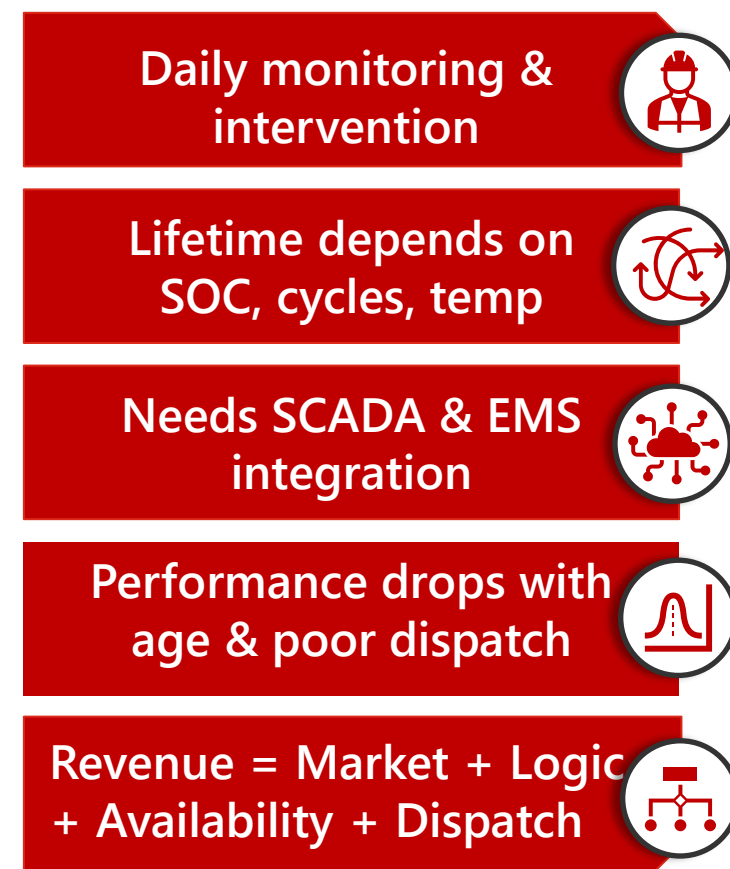
FROM “BUY-AND-FORGET” TO STRATEGIC ASSET MANAGEMENT IN GRID-SCALE STORAGE

THE LEGACY MINDSET

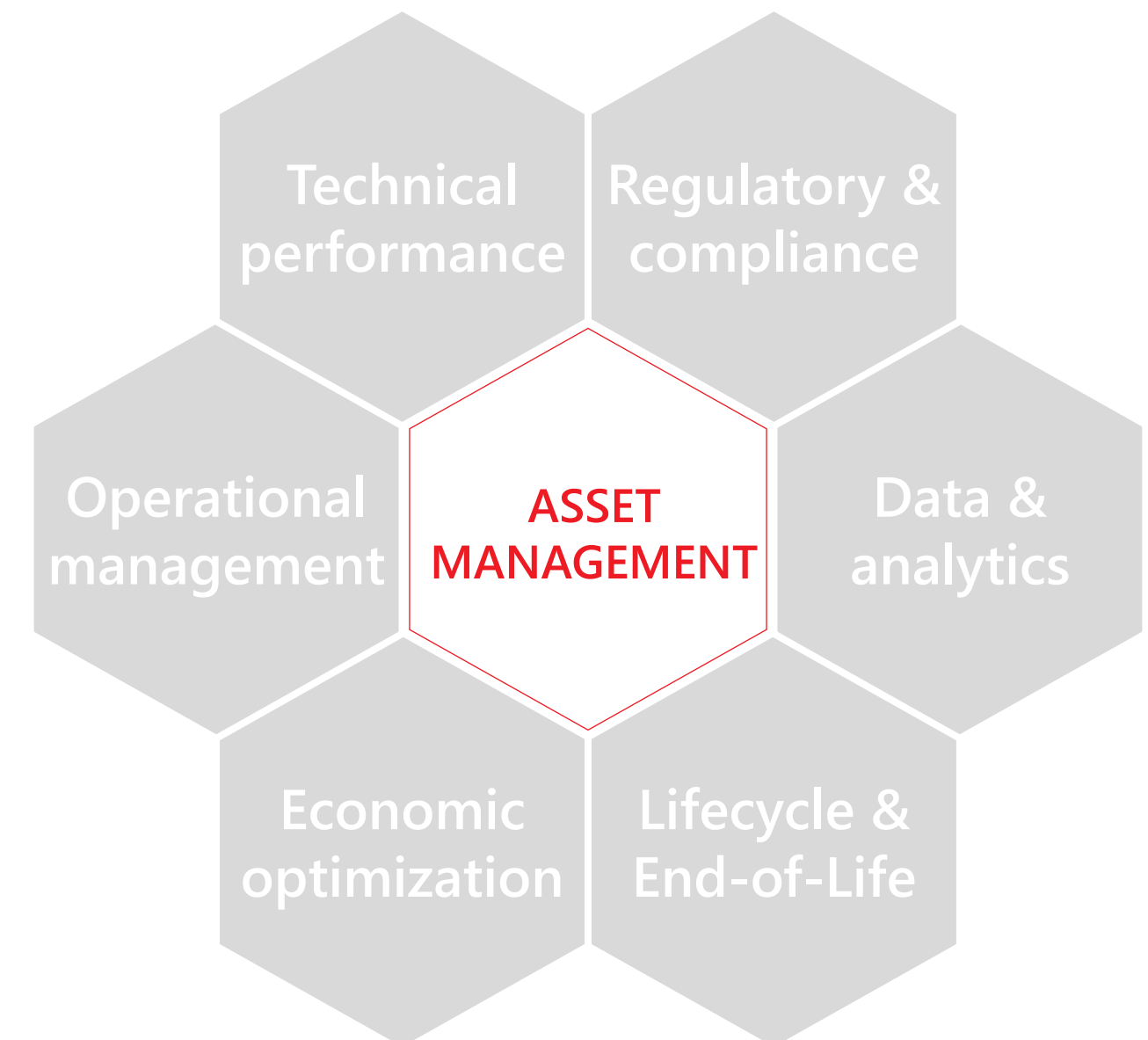
⚠ WHAT'S OFTEN PROMISED...



🧩 WHAT ACTUALLY HAPPENS...

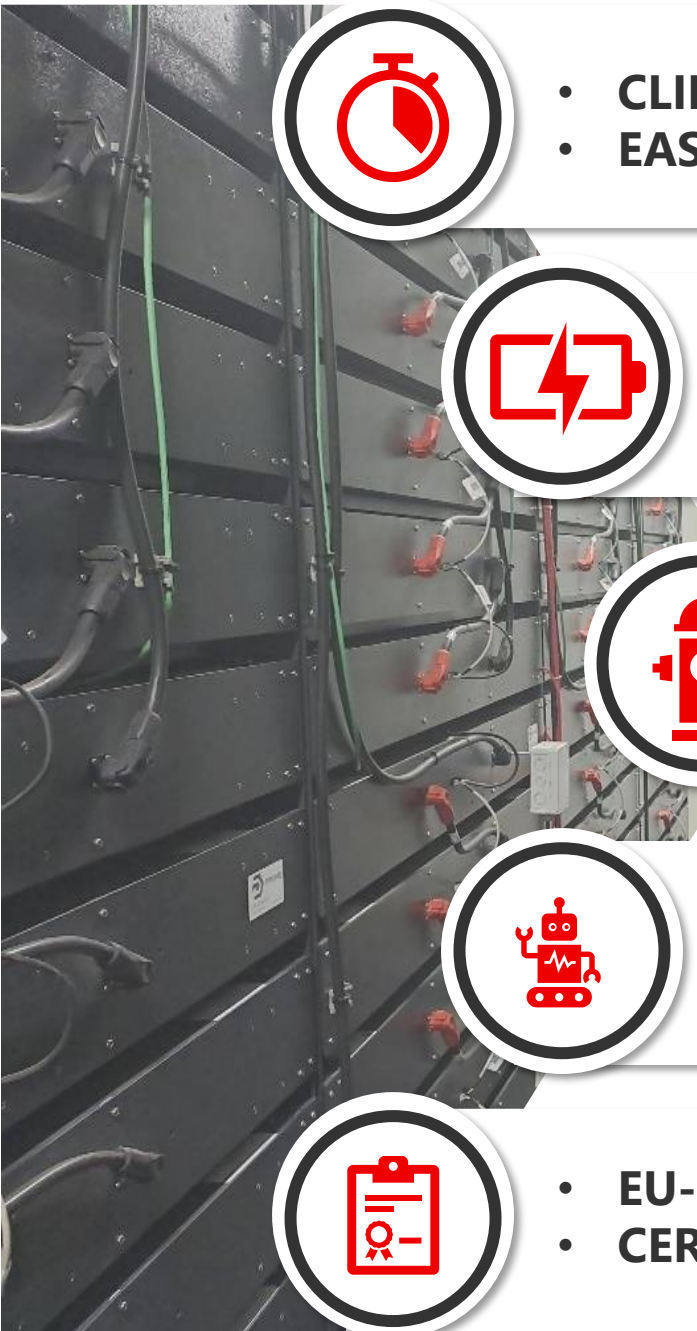


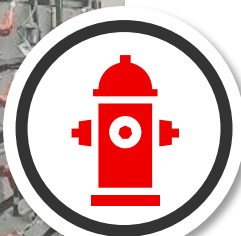
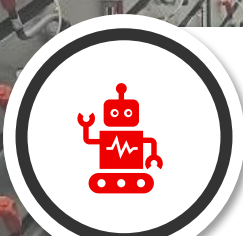
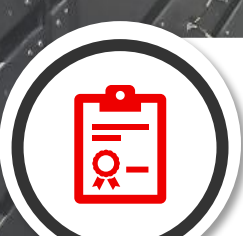
REALITY OF STORAGE ASSET MANAGEMENT



Storage brings multidimensional complexity that challenges traditional asset management approaches.
As energy arbitrage and real-time optimization expand, **BESS owners must adopt a more holistic, data-driven, and proactive management strategy.**

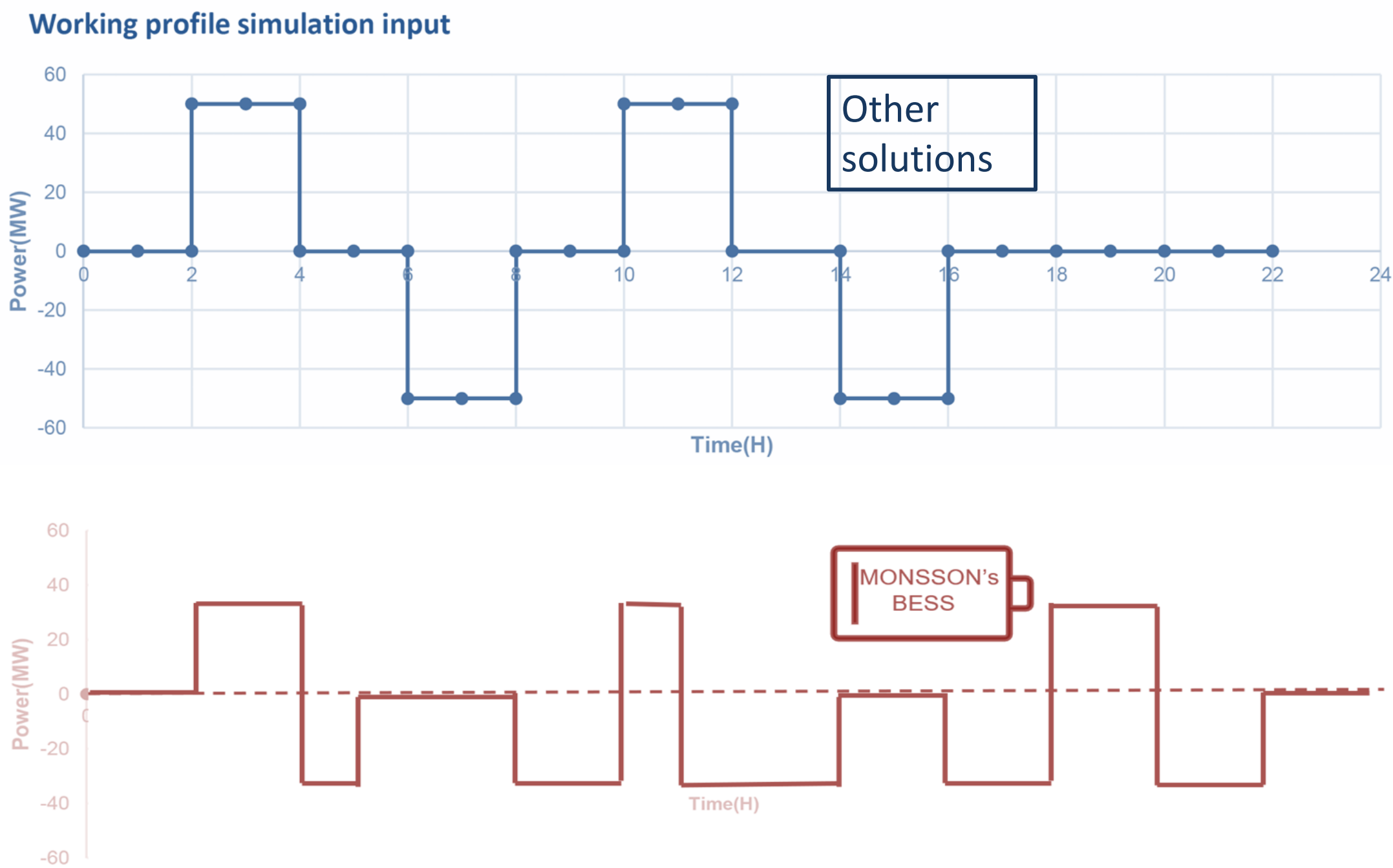
MONSSON's BESS – ENGINEERED FOR HARSH CLIMATES



- 
 - **CLIMATE-READY DESIGN** – Climate-controlled for snow load & high wind, **IP65 ingress protection**.
 - **EASY OPERATION & MAINTENANCE** – Low downtime, high availability
- 
 - **EXTENDED BATTERY LIFE** – Optimized parameters in all modes
 - **HIGH EFFICIENCY** – Innovative HVAC + heat recovery system
- 
 - **ADVANCED FIRE PREVENTION** - the **Oxygen Reduction System (ORS)** with Nitrogen as inerting gas mitigate effectively fire risks
 - **EFFICIENT THERMAL REGULATION** - **Glycol-water dual circuit** with integrated heat pump system for constant battery temperature control in all climates
- 
 - **FULLY AUTOMATED** – Remote operation with **zero on-site need**
 - **MODULAR & SCALABLE** – Easily expandable and adaptable
 - **FUTURE-PROOF** – Ready for solid-state, sodium-ion or other chemistries
- 
 - **EU-MADE** – All key components sourced from Europe;
 - **CERTIFIED AND REGISTERED FOR QUALITY**




MONSSON's TECHNICAL DIFFERENTIATORS ARE TAILORED TO UNLOCK REAL MARKET VALUE



No cooldown required

- Charge & discharge immediately.



Charge & discharge immediately.

- No overheating issues.



More cycles per day

- Maximized revenue in energy markets, always ready to respond

MONSSON — FULL ENERGY STORAGE MANAGEMENT: SCADA, TRADING & AUTONOMOUS CONTROL



In-House Engineering:

Monsson BESS utilizes a proprietary SCADA software platform.
Provides centralized control for all battery and cooling systems.



Versatile Integration:

Allows for local or remote access to monitor performance.
Features real-time alarms and automated operational logic.



Advanced Control:

Integrates seamlessly with trading algorithms for optimized performance;
SCADA integration allows for predictive adjustments based on market data.



What-if Analysis

Simulations to anticipate market conditions and adjust operational strategies, optimizing revenue by adapting to peak demand periods.

Extreme Prices Over Time



MONSSON's ADVANCED FIRE PREVENTION & SUPPRESSION SYSTEM



MULTI-LAYERED FIRE PROTECTION



OXYGEN REDUCTION SYSTEM

Keeps O₂ levels at 14.3 – 14.7% to prevent ignition



NYTROGEN FLOODING SYSTEM

High-pressure inert gas flooding triggered by multi-sensor logic



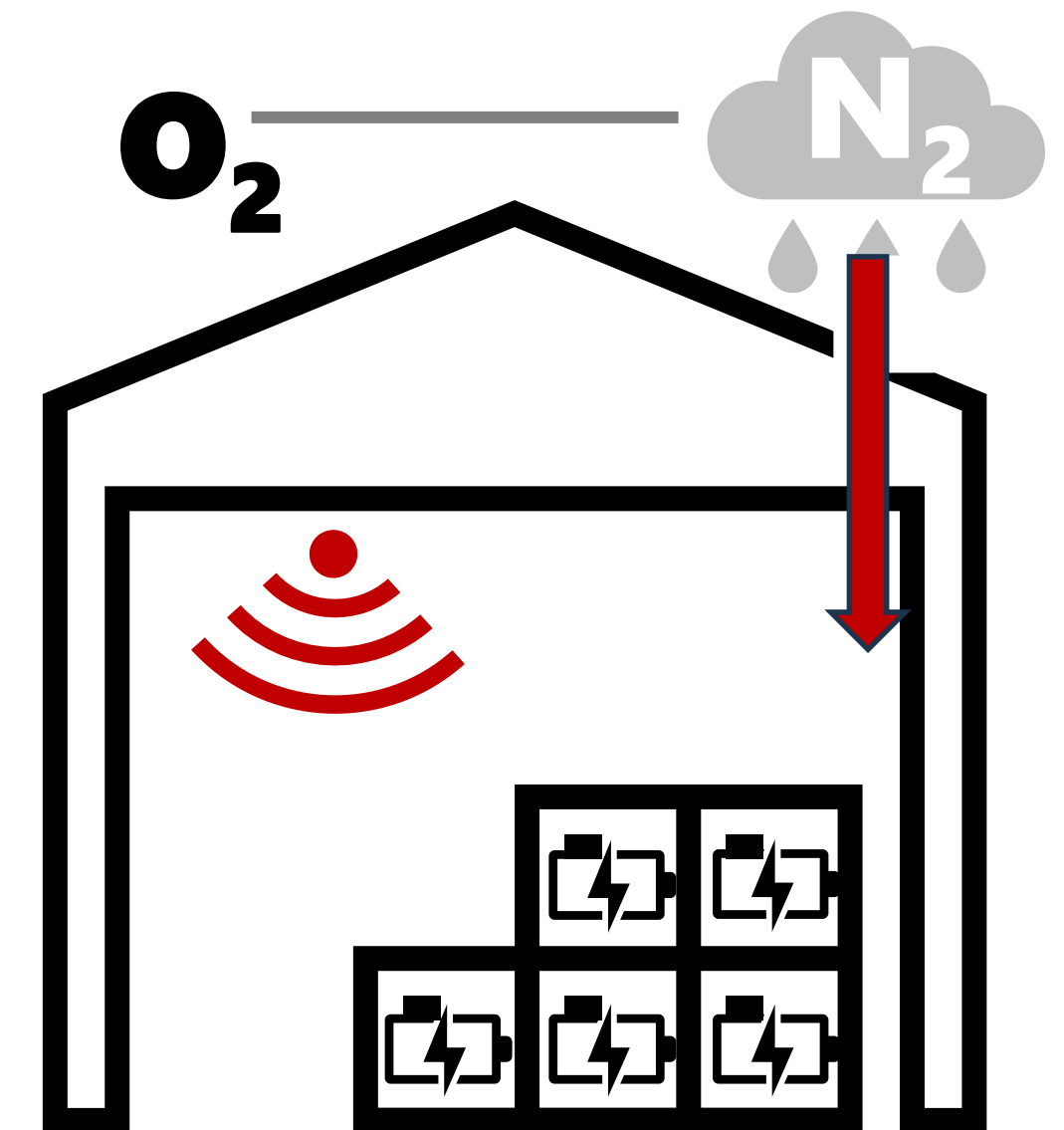
MANUAL ACTIVATION WITH DELAY & VALIDATION

Built-in 30s delay + operator validation to avoid false triggers



SAFE for PERSONNEL

Nitrogen is inert, nonreactive and non-toxic



FIRE RISKS ELIMINATED BEFORE THEY BEGIN. MULTI-LAYERED SAFETY BY DESIGN.

MONSSON's DESIGN & ASSET MANAGEMENT PHILOSOPHY YIELD IMPROVED OPERATIONAL EFFICIENCY AND COST FORECASTING



CATEGORY		MONSSON BESS	OTHER SOLUTIONS
1.	Energy Efficiency	~90% - Maximized energy recovery & revenue.	~85% - Higher losses, lower revenue.
2.	Climate Resilience	Thermal-insulated design → Reliable in extreme conditions, lower energy use.	Needs active cooling → Extra costs, higher consumption.
3.	Cooling & Degradation	Advanced cooling → Extends battery life	Accelerated degradation in similar conditions
4.	Operational costs (OPEX)	Optimized access & maintenance → Minimized downtime & failures.	40% of O&M report weekly issues* → Higher downtime & costs.
5.	Safety & Reliability	Advanced safety→ Reduces thermal runaway risk	Higher risk → Extra safety measures needed.
6.	Grid & Market Integration	Full market access → No cooldown limits, maximized participation.	Market limitations→ Cooldown limitation, minimized participation.
7.	Easy to repower	Modular design → Easy component replacement, extended lifespan.	Full system overhauls needed → Higher replacement costs.
8.	Fire Protection	ORS + N ₂ suppression, automated monitoring	Reactive-only systems, slower response

