



AI-BASED OPTIMISATION FOR BATTERY STORAGE: UNLOCKING VALUE ACROSS MULTIPLE ENERGY MARKETS

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suena
energy

Maximizing Green Energy Value Through Market-Leading Technology



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OVER 60 PARTNERS IN THE ENERGY TRANSITION



RESEARCH SINCE 2015 AI-TRADING
SINCE 2021

10 years of research into battery
optimisation

> 750 MW
UNDER MANAGEMENT
Stand-Alone, Co-Location and
Co-Optimierung

40 EMPLOYEES
Experts in software
development, data science and
the energy industry



LOCATION HAMBURG HAFENCITY

suena offers AI-trading for all asset configurations

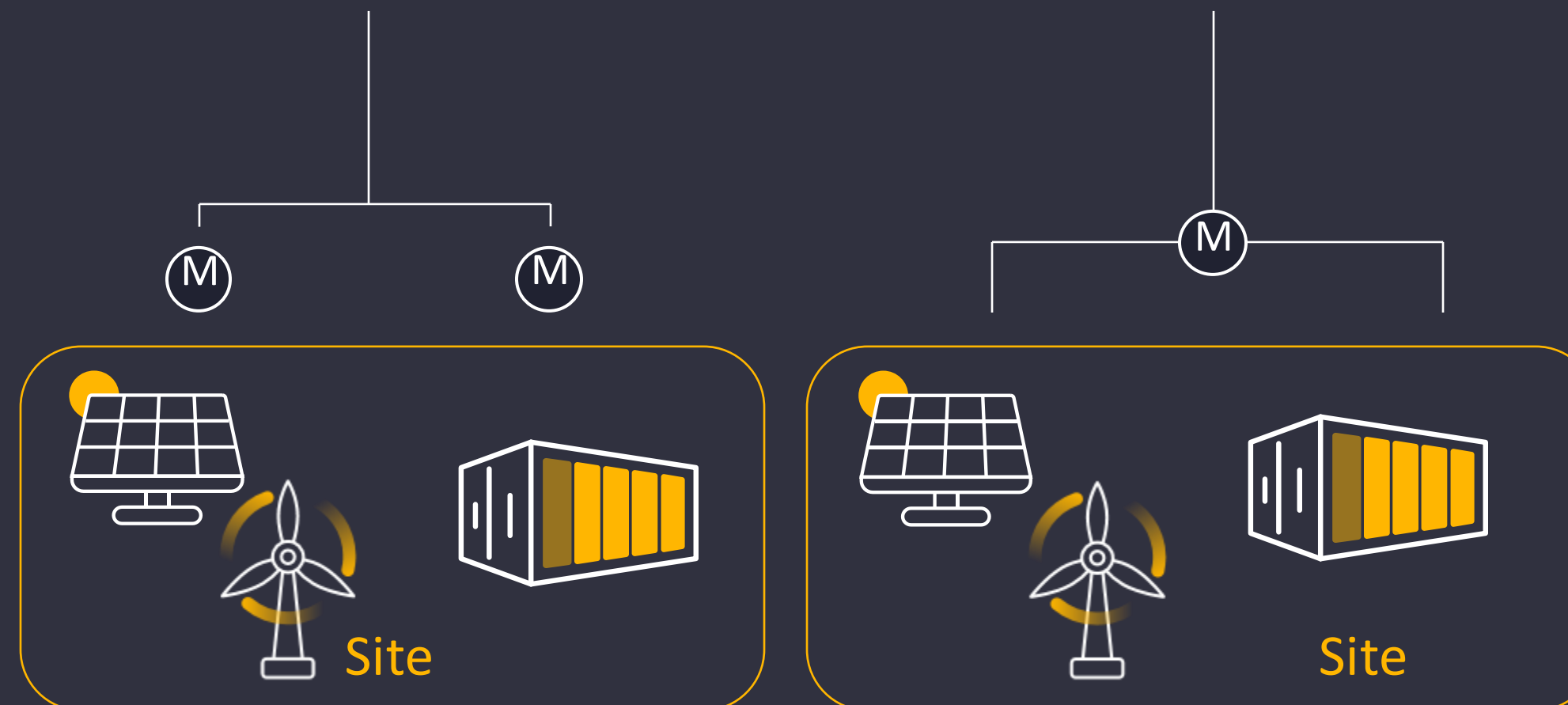
STAND-ALONE

with and without restriction at the grid connection point



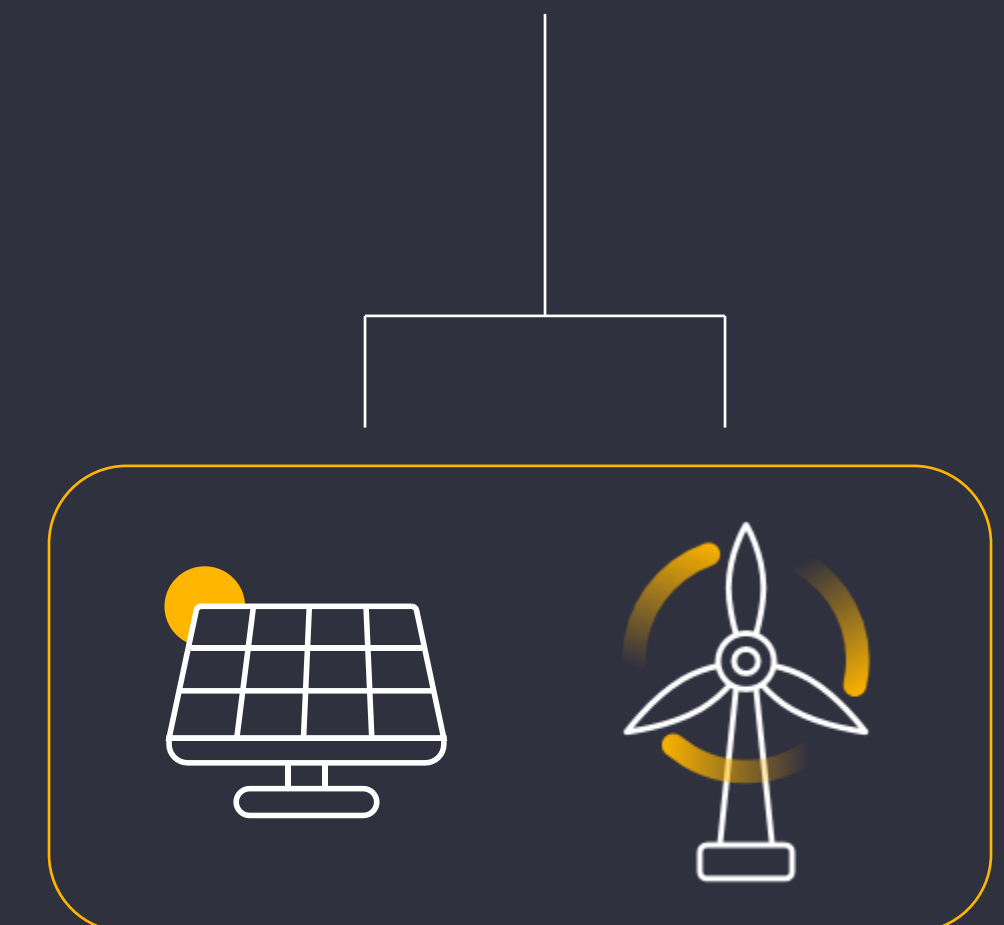
CO-LOCATION

of storage and renewable energies



RE-ONLY

Renewables /takeover of imbalance energy risk



We strive where **complexity** get's high!



First Multi-Large-Scale BESS Optimization



First Co-Located BESS with Wind in Germany



Largest Co-Located Multi-Market BESS in Germany



Co-Located Green BESS with Solar
Site specific Wind optimization

Trusted Customers



First Large-Scale BESS Multi-Optimizer operation in Germany



Largest Second Live BESS in Germany

Powerful partnerships meet high-performance trading strategies

01



REVENUE STRATEGY

- Tailored commercial models
- Market analytics
- Asset sizing for optimal business case

02



TECHNICAL READINESS

- Regulatory compliance, metering and EMS
- Optimal warranty design for the specific use case
- Consideration of grid constraints

03



MARKET QUALIFICATION & FAST ACCESS

- German PQ expertise for streamlined documentation and testing
- Efficient coordination with TSOs
- Fast and compliant entry into ancillary services

04



MARKET-LEADING BESS OPTIMIZATION

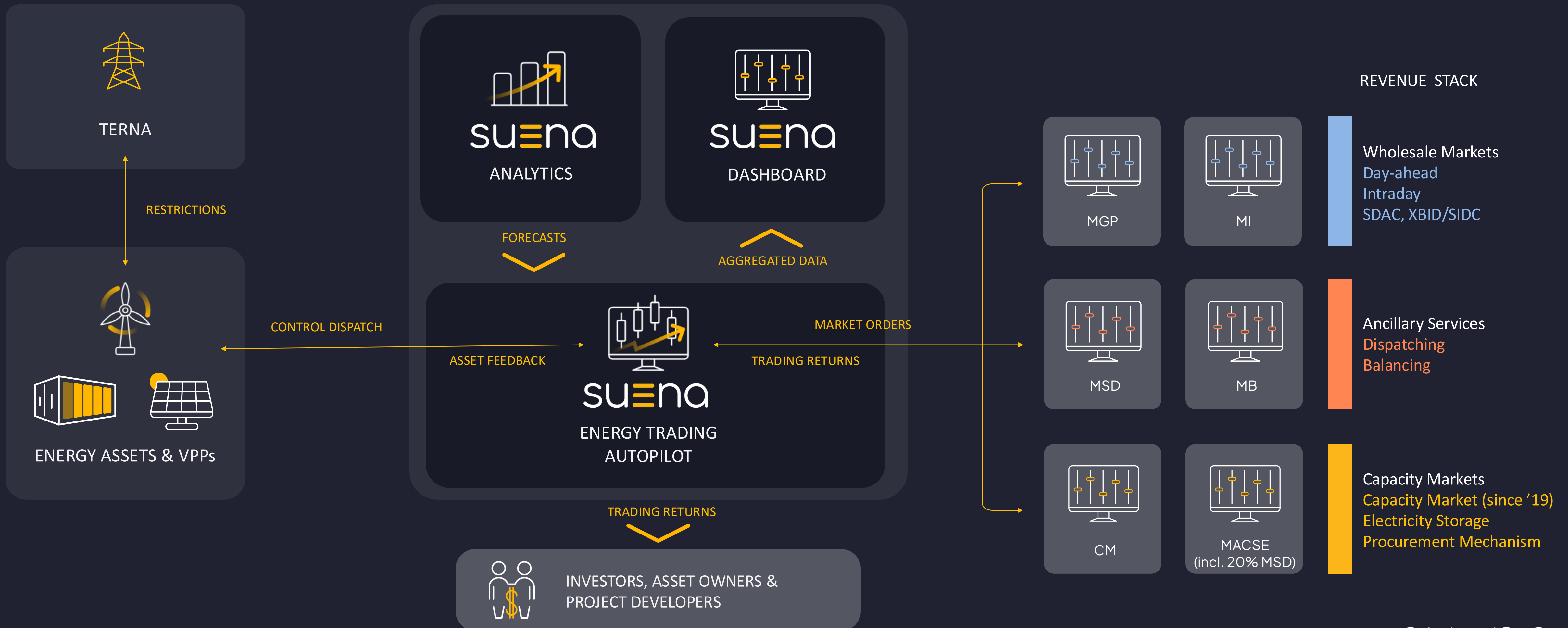
- AI-based trading algorithms proven in German real-market operations
- Real-time bidding with integrated degradation management
- Multi-market optimization to maximize overall returns

05

FULL SERVICE AND CONTINUOUS IMPROVEMENT

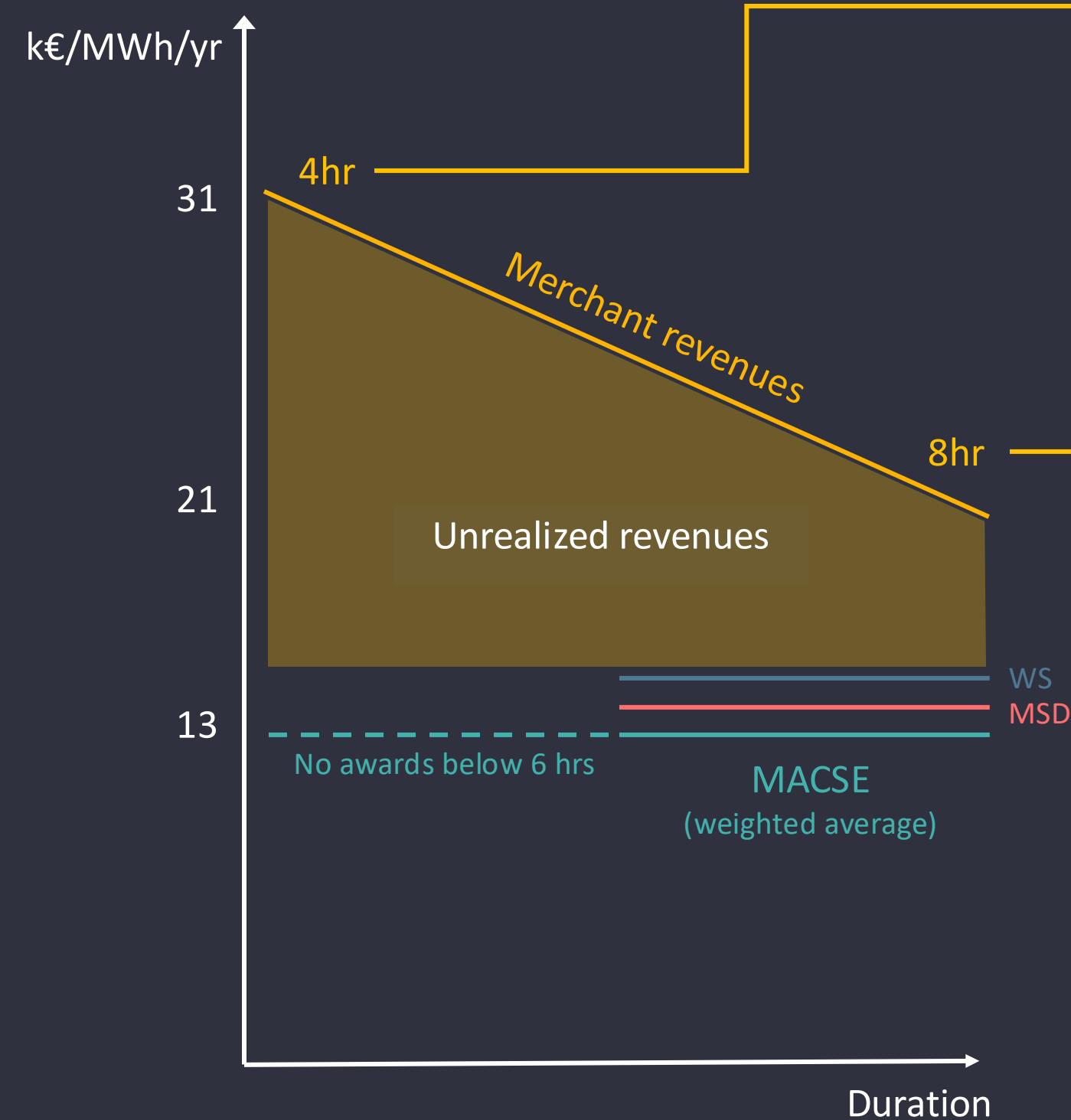
- 24/7 monitoring with live dashboards
- Expert trading oversight with continuous AI improvement
- Partnership approach to drive ongoing performance optimization

Unlocking the full value of your assets through market-leading technology



The revenue strategy determines your initial asset setup (and vice-versa)

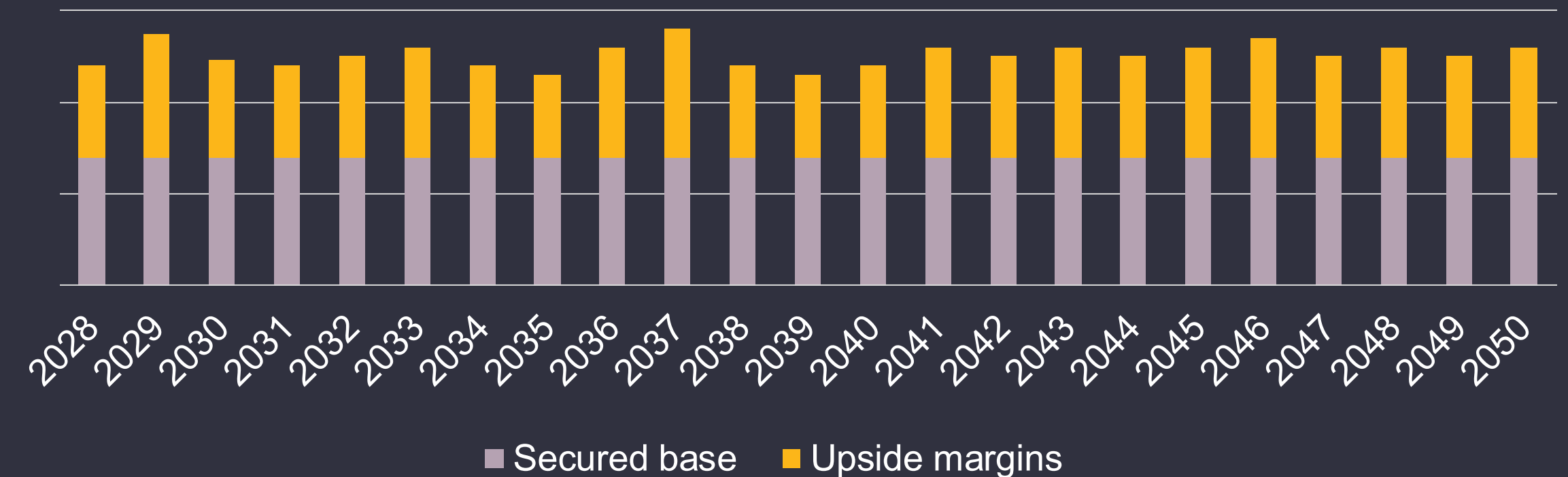
STABILITY-UPSIDE-TRADEOFF*



* Adapted from Pexapark

Partial tolling, suena FlexFloor

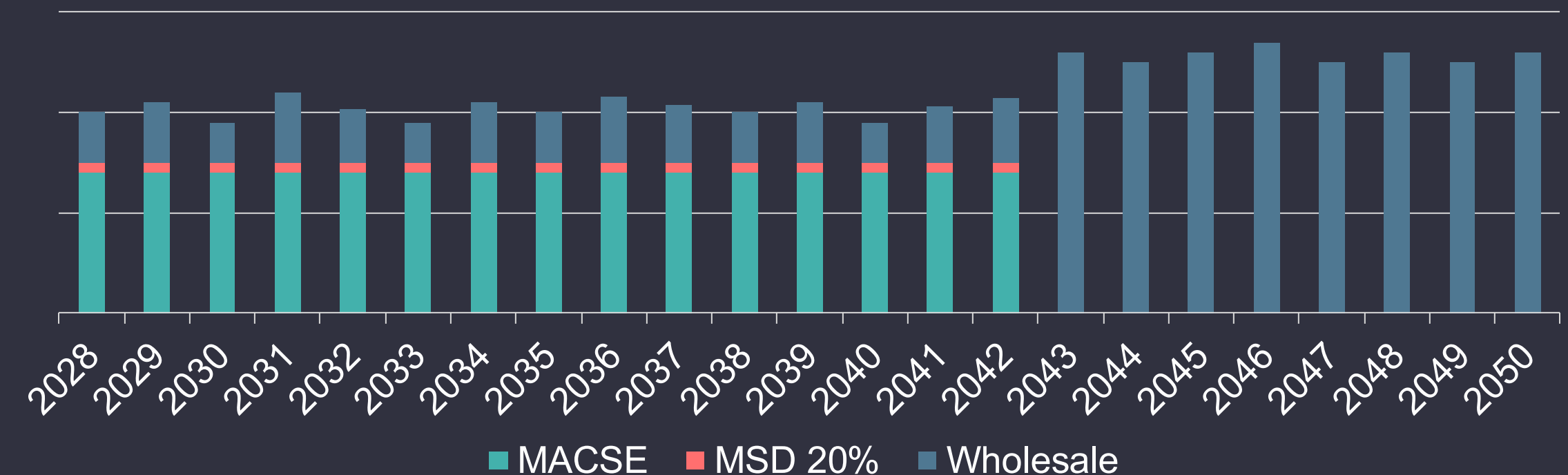
- Shorter duration BESS with higher upside potential



MACSE case

- All awarded assets with large durations from 6 to 8.5 hrs
- In average, ca. 25% merchant exposure (1st MACSE auction)

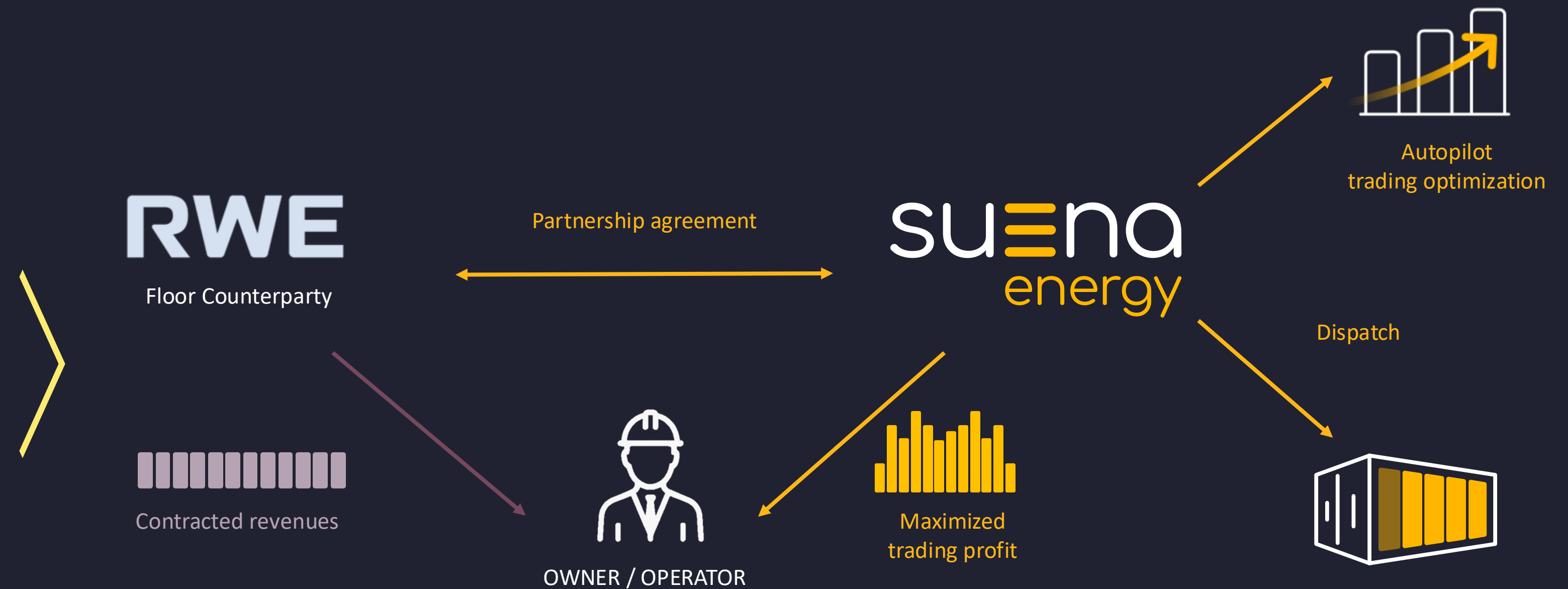
What is the revenue model after 15 yrs? (Arbitrage, CM, PPAs, FPAs...?)



suenas FlexFloor combines the security of steady floor revenues while adding merchant revenues on top

HOW IT WORKS

- suena holds the trading contract and forwards merchant revenues
- suena operates and dispatch battery storage in daily energy trading with leading technology to maximize merchant revenues
- Counterparty with high investment-grade guarantees revenues, backed by its balance sheet
- This enables risk mitigation and while participating in merchant upside





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