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Transition to Trading 2.0

Digitalization and automation of market participation

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Energy Trading 2.0

Continuous Evolution of Energy Market landscape – New Challenges to be addressed (1/2)

Energy Market related **updates**

Wholesale Markets — Introduction of 15-minute resolution in Wholesale Markets

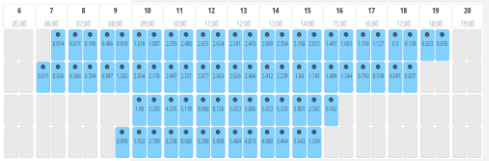
Negative Prices — Introduction of negative prices in Balancing market

DAM Prices — Appearance of first negative DAM prices in May and increased frequency ever since

RES Curtailments — Curtailment imposition to small RES parks

BESS Systems — Introduction of first BESS systems affecting market participation

Regulatory Framework — Finalization of regulatory framework for dispatchable RES assets and BESS systems



EnEx → 15mins

Negative DAM and Balancing prices

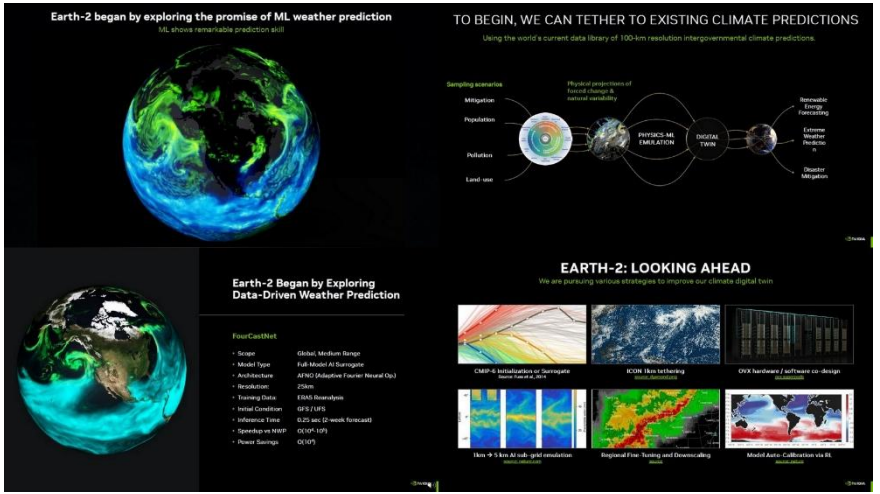
RES assets → increased curtailments

Continuous Evolution of Energy Market landscape – New Challenges to be addressed (2/2)

Technology Advancements: GPU accelerated forecasting techniques and AI supported decision making

NVIDIA HGX B200

Earth 2 Libraries for kilometer-scale forecasts



Harnessing the Next Generation of Computational Power

Unprecedented speed in data processing and AI model training

Ultra fast performance enabling real-time forecasting and optimization

Support for massive parallel simulations of weather, grid dynamics, and market conditions

Combination of deep learning and high-resolution climate modeling to predict

Enables sub-hourly forecasts for renewable generation, grid balancing, and trading decisions

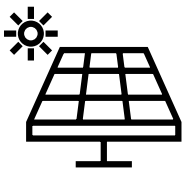
Hyperion –X: full automated energy management platform (1/3)

Meteo data

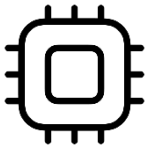
- Data for any geolocation
- Daily and hourly forecasting procedures to support DAM, IDAs and XBID

Energy data

- Historical and real time data organization and management
- Real time Data corrections-adapt to curtailments
- Historical power Curtailment Data
- Real time announced curtailments updates (new IPTO-HEDNO methodology)
- Cross – check procedures with IPTO data



RES Assets



Advanced ML models

Forecasting :

- RES generation
- Energy Market prices and conditions

Strategic Decision Making

- Optimal market positioning – re positioning
- Adapting to market changes
- Mitigating risks and increasing revenues

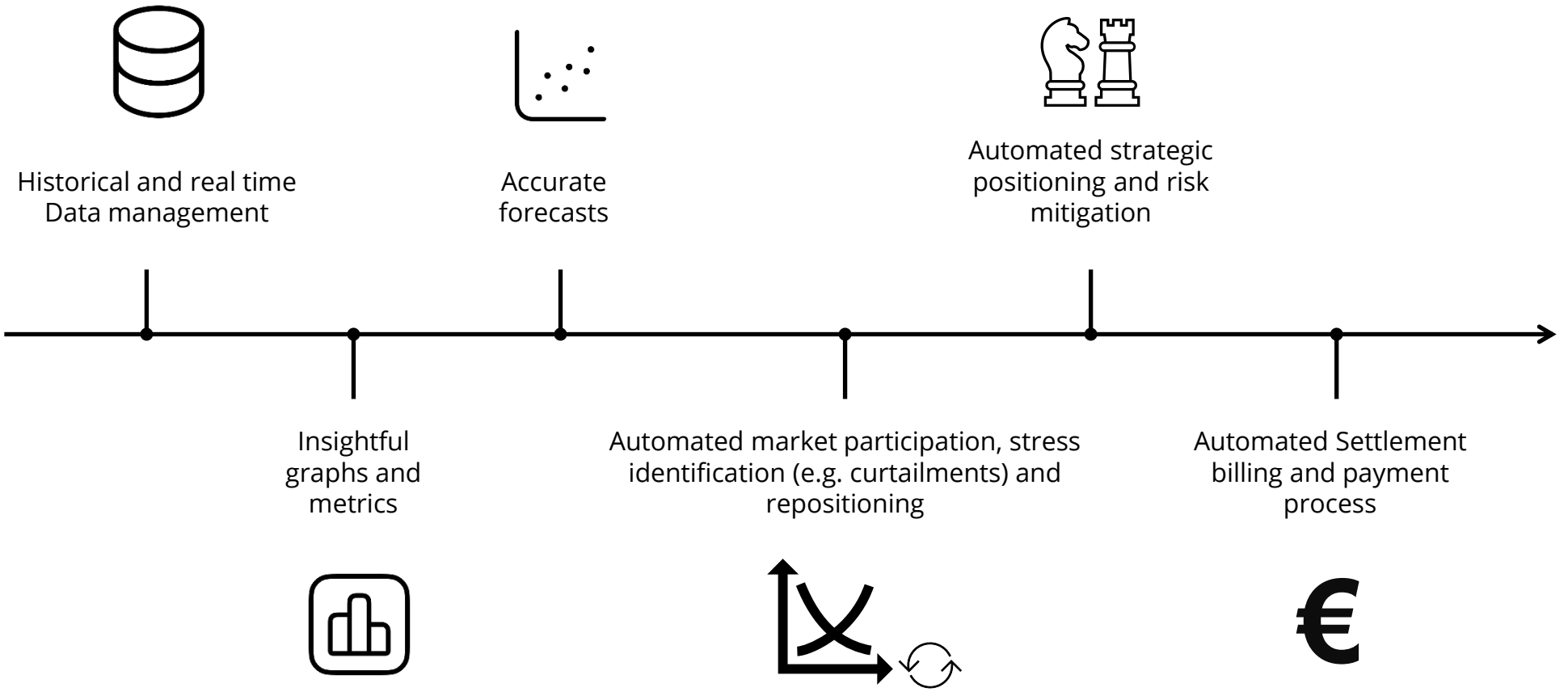
Adaptation to curtailments

Hyperion –X: full automated energy management platform (2/3)

HYPERION-X

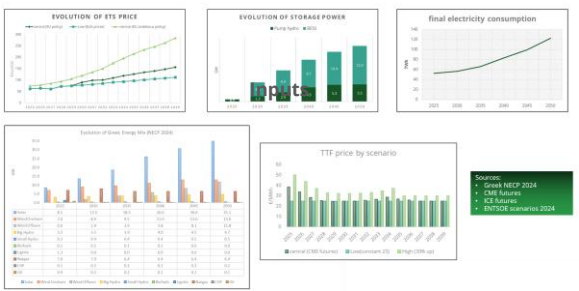
Automated Market participation
+ RES asset owner payments

Hyperion –X: full automated energy management platform (3/3)



BESS Revenue Optimizer for maximum profitability

Feeds on fundamental market Inputs



Step 1: Short term forecasts

Volumes and prices

Optimization problem

PV generation

Consumer Load Consumption

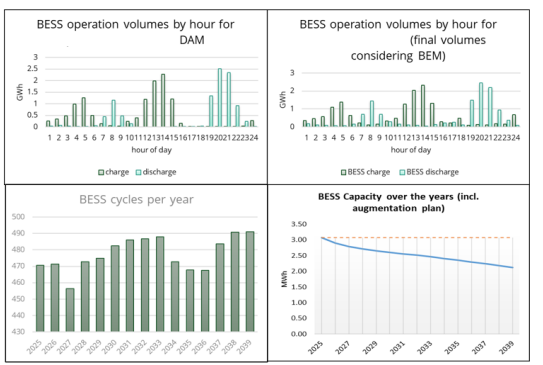
Energy Storage System

Accounts for all technical (asset related) and market related constraints to solve a profit maximization problem

Step 2: Optimization model run

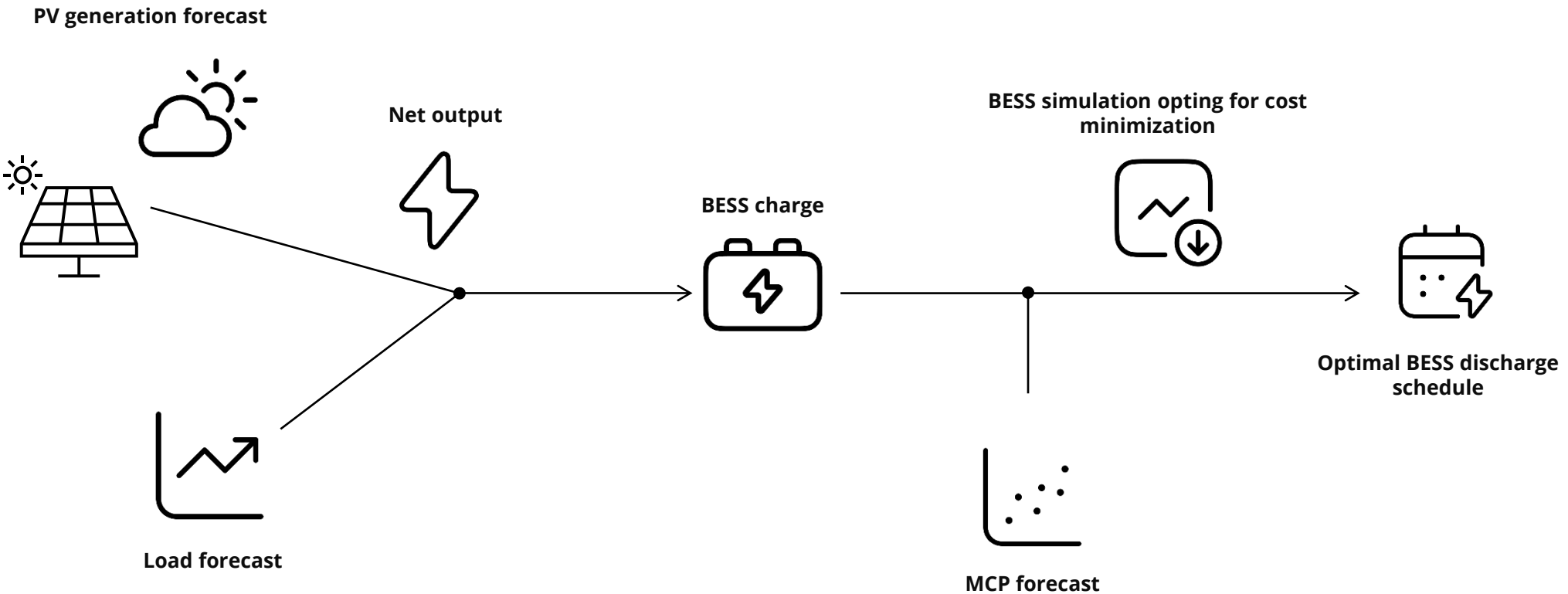
Optimal Market Schedule - Repositioning

- Optimal BESS operation schedule (charge-discharge)
- Market Positioning
- Capacity Degradation
- Optimal cycling
- Energy Cost and profit Calculation
- Cost Benefit Analysis



Step 3: Output results

Use case: Self consumption - Net Billing



Thank You

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