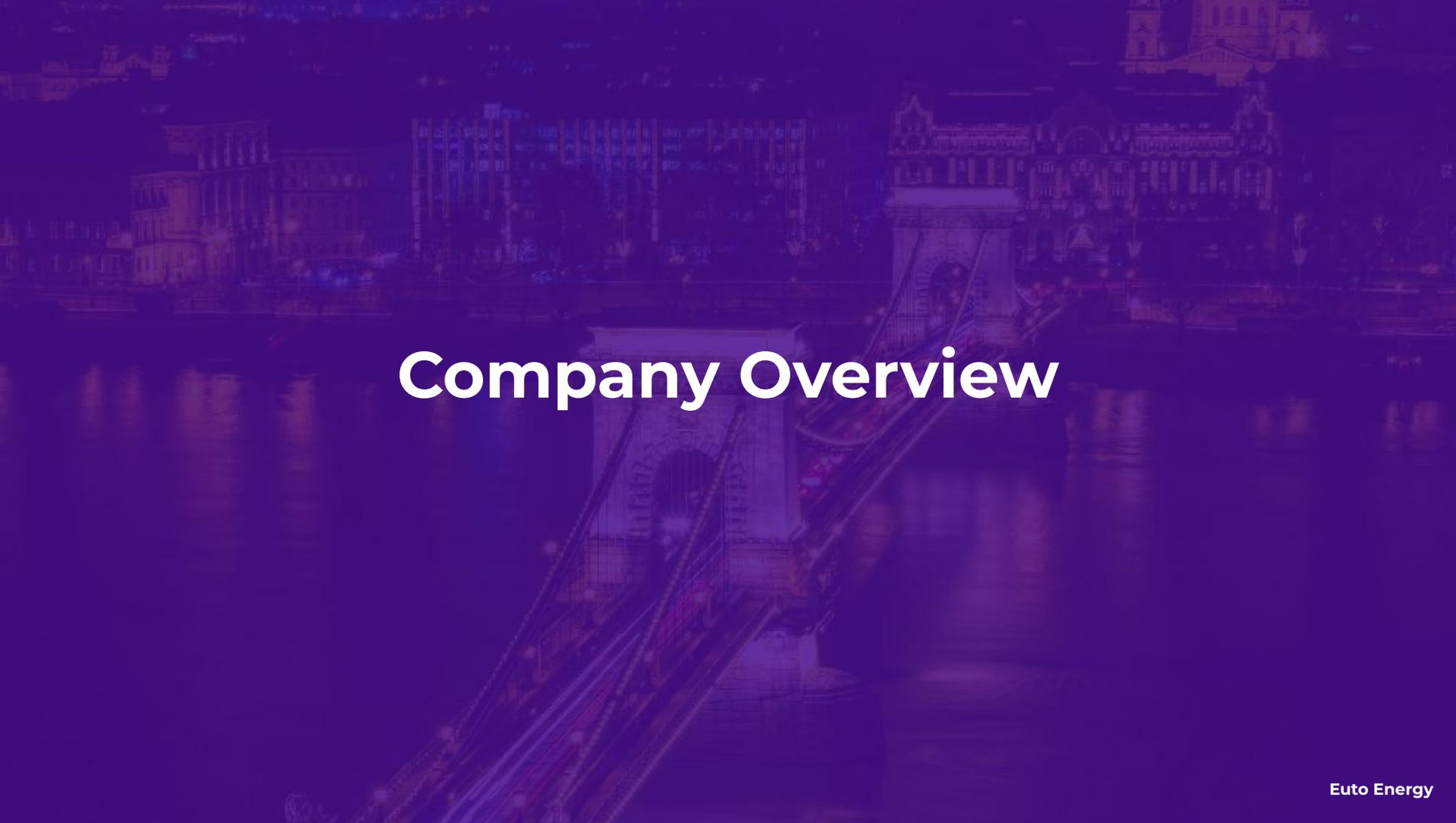


# Euto

Empowering electricity grids to deliver **reliable energy** anytime, anywhere by enabling the **high-performance energy infrastructure** of the future, today.

[eutoenergy.com](https://eutoenergy.com)

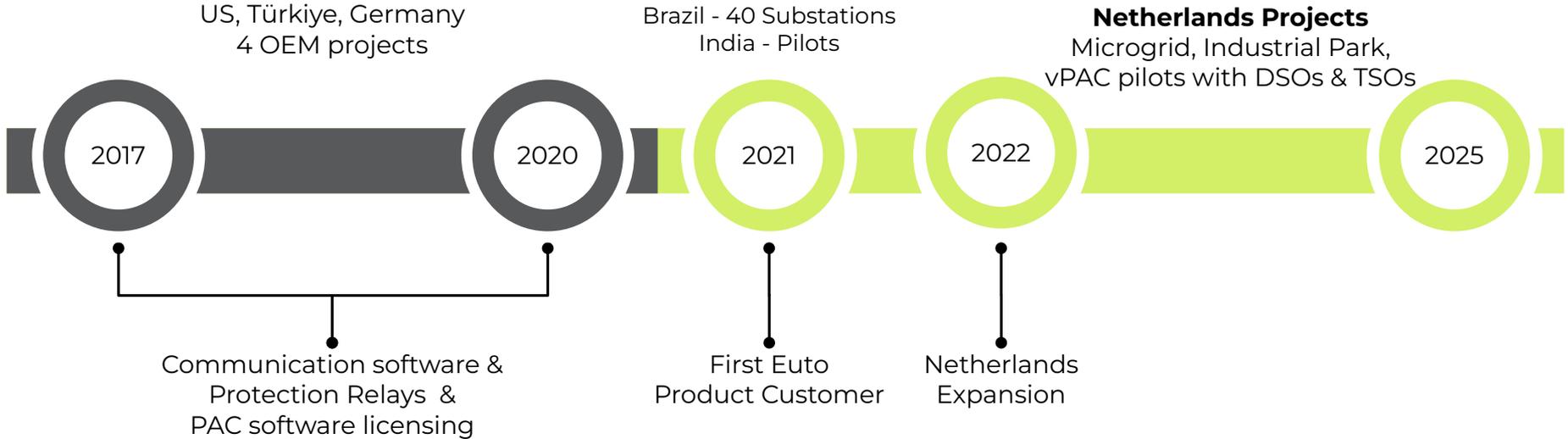




# Company Overview

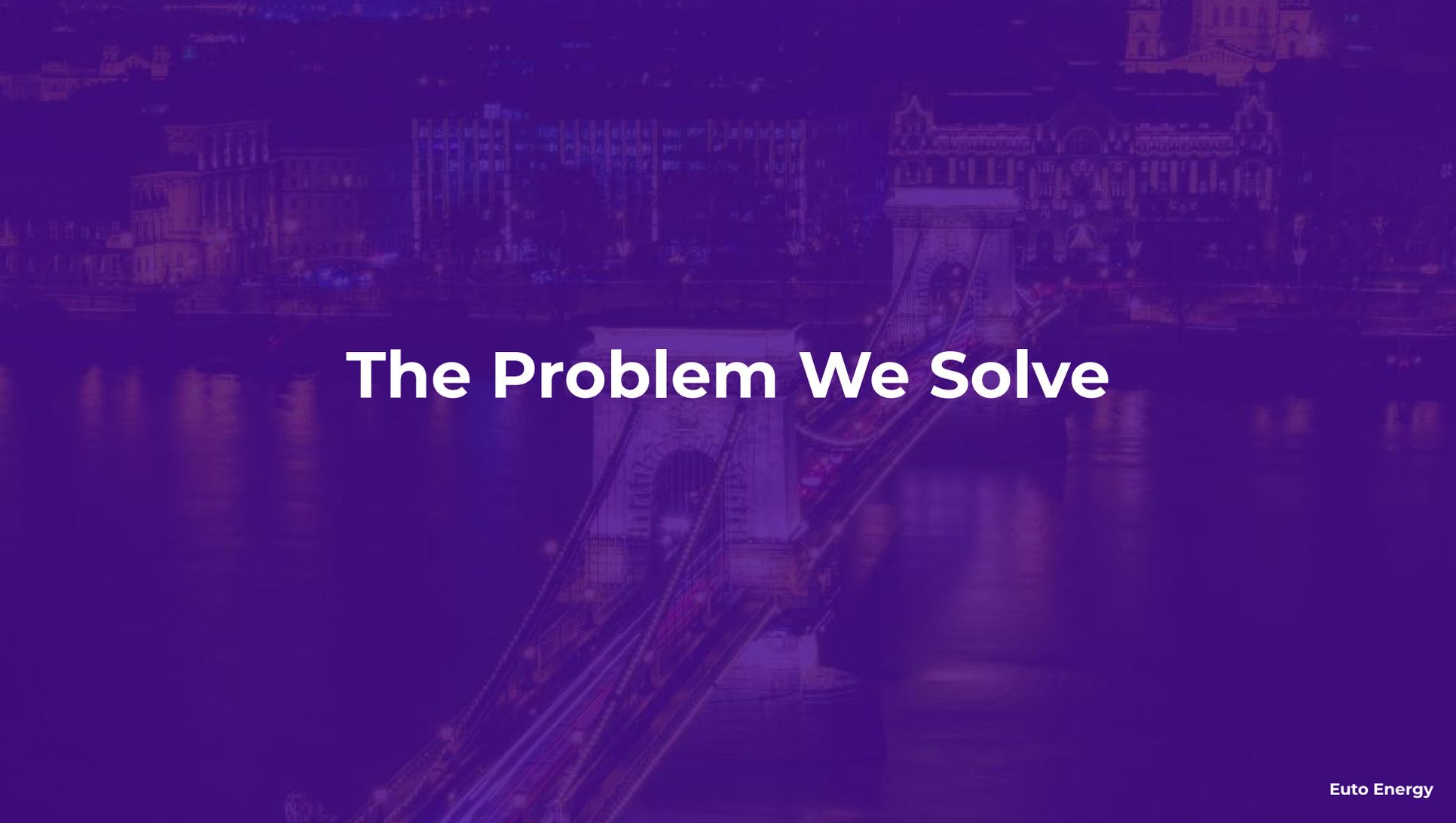
# Euto's History

Since 2017, Euto's core software has been deployed over 1,000 times in distribution and transmission substations.



CONSULTING COMPANY

PRODUCT COMPANY



# The Problem We Solve

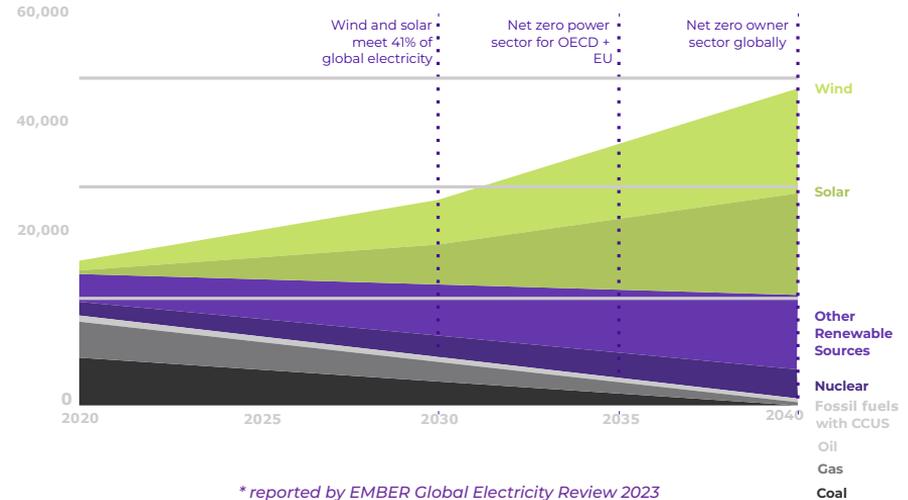
In the Netherlands alone, over **10,000 companies** are **stuck waiting up to 10 years** for grid capacity, a bottleneck estimated by BCG to cost society up to **€40B annually**.

**Globally huge economical and social impact!**

## Demand is doubling

### Power sector Transition to net zero by 2040

Global electricity generation (TWh)



# Energy Transition

## Bottleneck

Electricity Grids

## Problems

Grid Congestion

Capacity Expansion Shortage

Intermittent Sources - Renewable Integration

Rising Pressure from AI Development

## Solutions

Increase Grid Utilization - Use Better

Enable Grid Expansion - Build Faster

Source: IEA.  
International Energy Agency  
Website: [www.iea.org](http://www.iea.org)



Electricity Grids and Secure Energy Transitions

Abstract

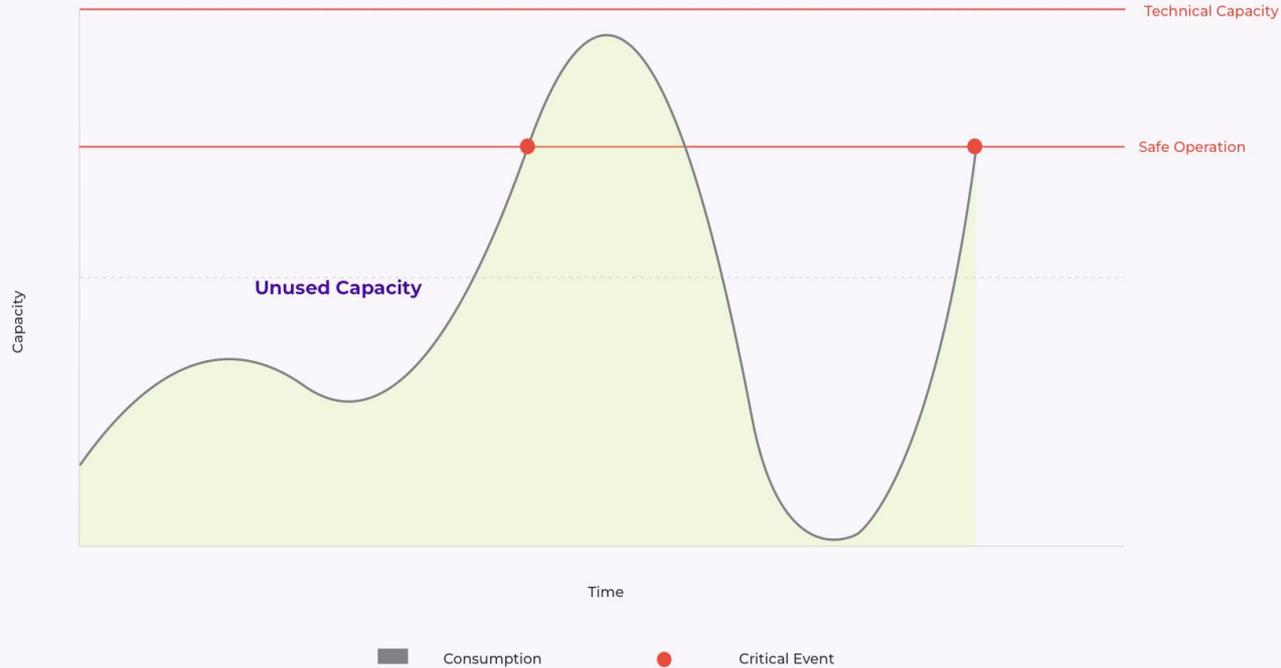
## Abstract

Grids have been the backbone of electricity systems for more than a century, underpinning economic activity by bringing power to homes, industry and services. As clean energy transitions advance, the role of electricity will be more prominent, making grids even more important for society and economies. Electrification and renewables deployment are both picking up pace, but without adequate grids to connect the new electricity supply with the demand, there is a risk that clean energy transitions will stall.

This report offers a global stocktake of the world's electricity grids as they stand today, taking a detailed look at grid infrastructure, connection queues, the cost of outages, grid congestion, generation curtailment, and timelines for grid development. We find that there are already signs today that grids are becoming a bottleneck to clean energy transitions and analyse the risks we face if grid development and reform do not advance fast enough.

We find that delayed action means prolonging reliance on fossil fuels, resulting in an increase in emissions and costs to society. An unprecedented level of attention from policy makers and business leaders is needed to ensure grids support clean energy transitions and maintain electricity security. The report concludes with key recommendations for policy makers, highlighting the necessary actions in areas

## The Grid Capacity Challenge



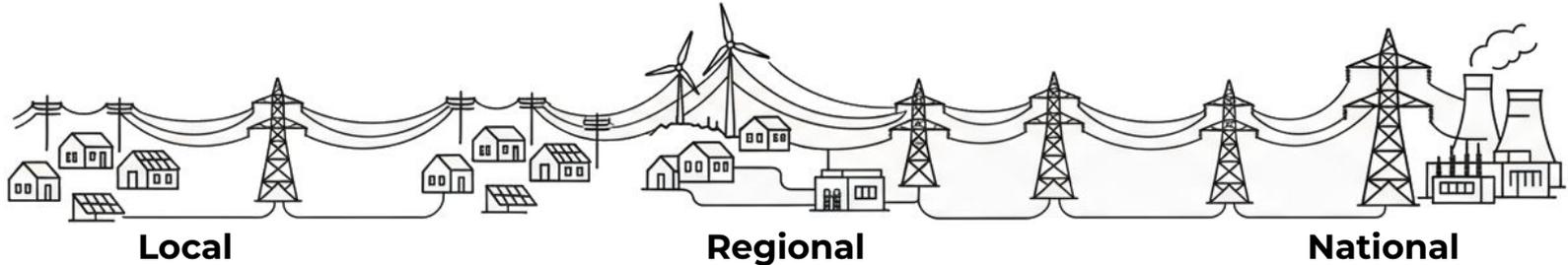
Around **70% of grid capacity is left idle** on average (calculated by IBM),  
**Congestion is not constant:** it arises only at peak moments, in specific places.

# Key Market Challenges: A Three-level Bottleneck

How do you **power an autonomous community** 24/7 with complex local assets?

How do you **grow your business** when the local grid connection is full?

How do you build the grid fast enough to meet **climate and economic goals**?



## The Consequence

Unreliable and insufficient power, **increasing energy costs.**

Waiting for grid connection for years, **stalled economic growth.**

Billions in CAPEX are planned, but projects are **delayed for years.**

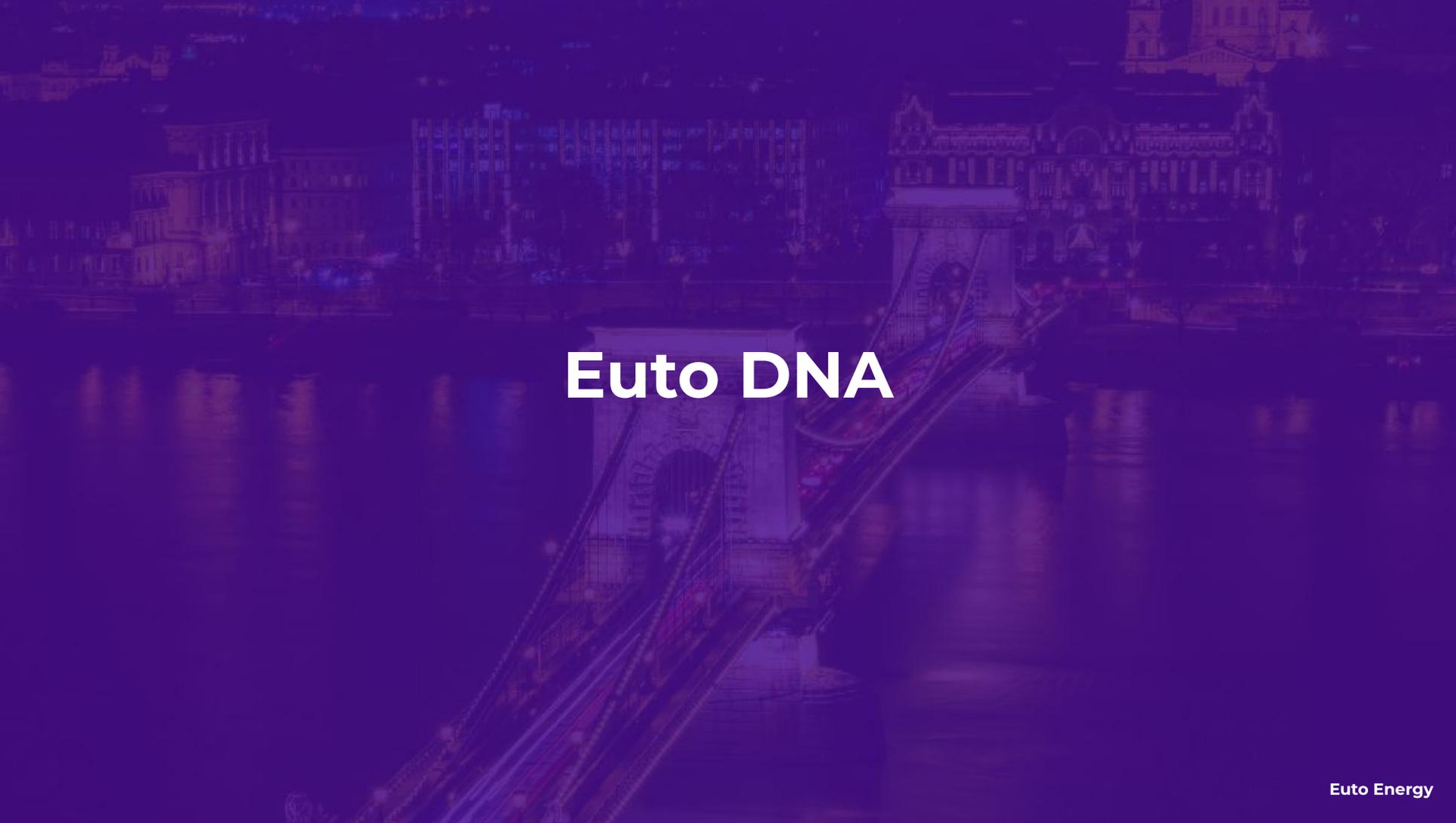


## The Root Cause

Lack of real-time **system-wide** visibility and **automated control** over all distributed assets.

No way to **dynamically share** the ~70% of grid capacity left unused.

A systemic crisis based on **high expansion costs** and a critical **scarcity of technical personnel.**

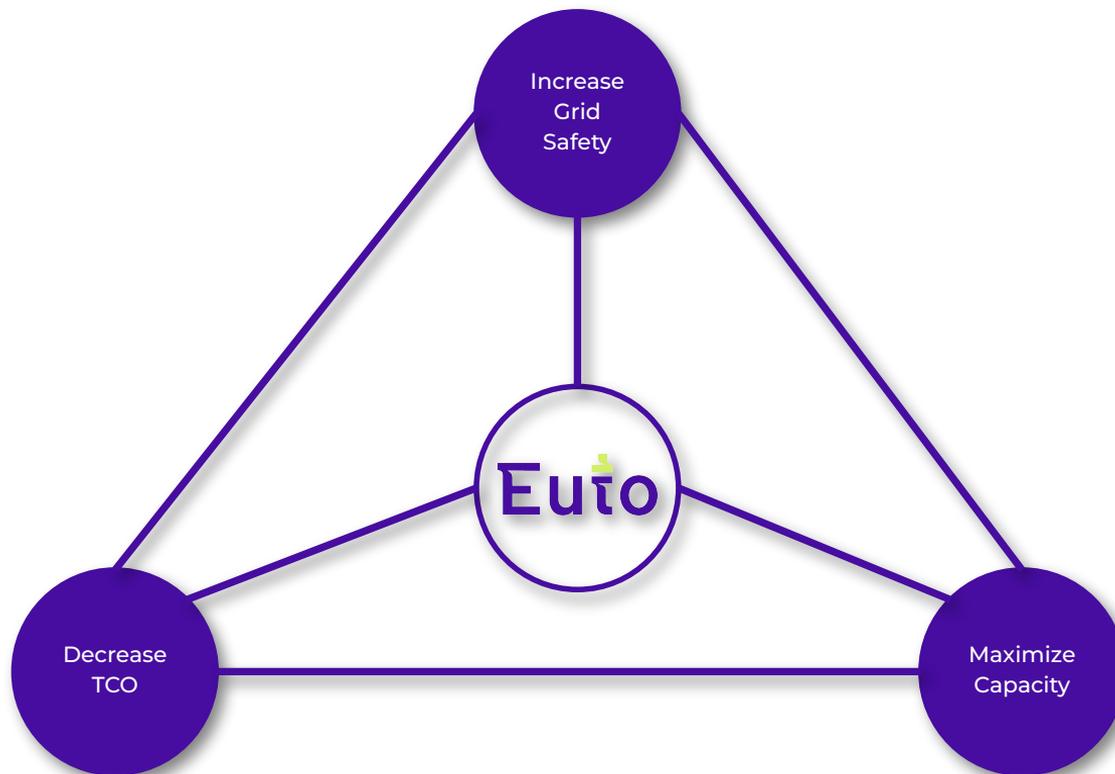


# Euto DNA

# Euto Optimizes Grids to Do More with Less

---

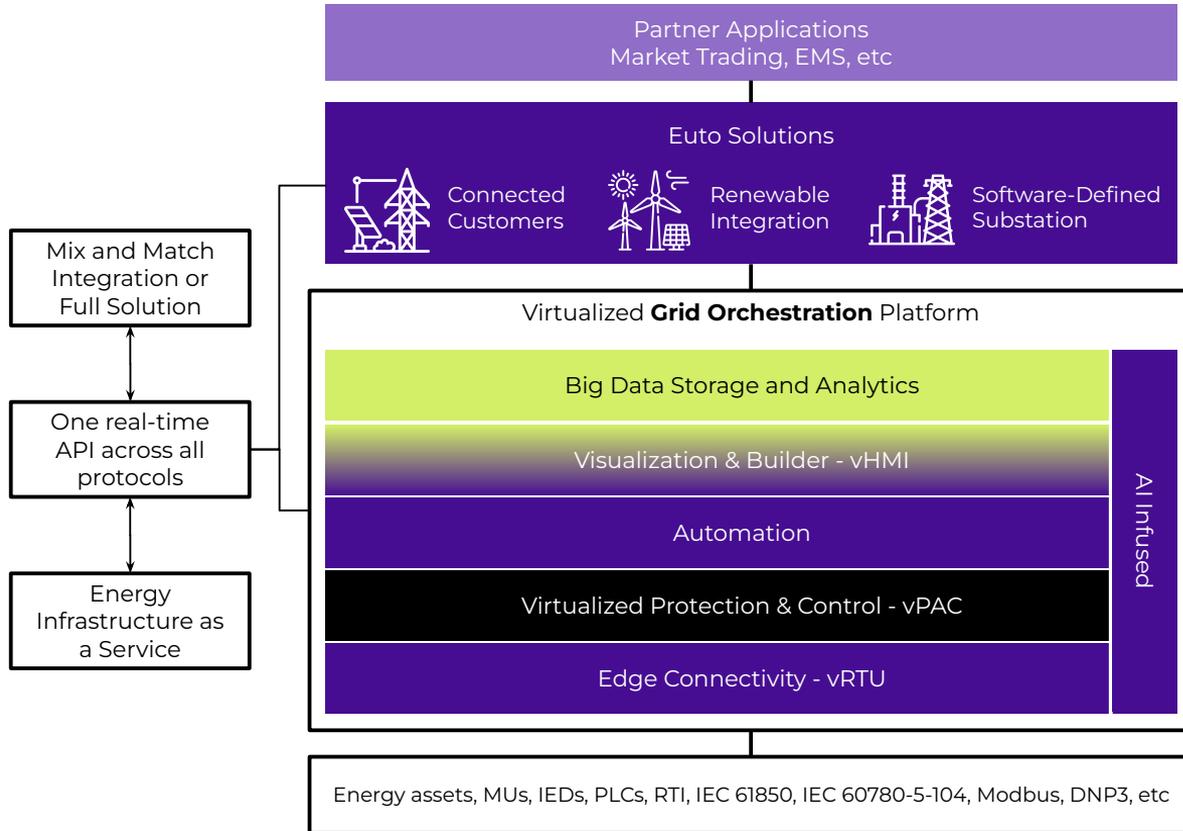
Unlock hidden capacity with less costs , and improved safety





# How our technology helps grids

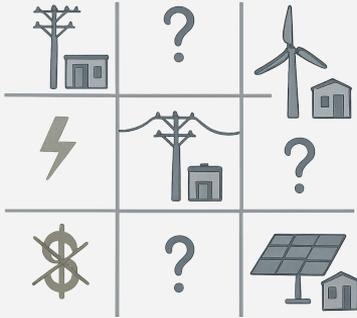
# Euto Digitizes, Virtualizes and Controls Grid in Real-time



# Euto is Building The Nervous System of The Grid

From Reactive Congestion to **Predictive Intelligence**

## The "Blind" Grid: REACTIVE & FRAGILE



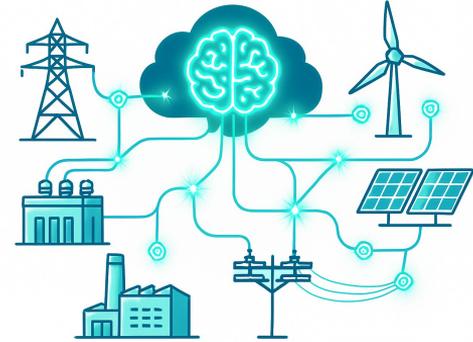
**Blind Operation:** No system-wide view

**Siloed Control:** Local decisions cause global problems

**Slow Response:** Manual intervention for every fault

**Hardware-Dependent & Costly:** Specialized inflexible hardware for every function, limited scalability, high installation and operating costs

## The "Intelligent" Grid: PREDICTIVE & RESILIENT



**Holistic View:** System-wide optimization & control

**Centralized Brain, Local Reflexes:** AI-driven grid-wide strategy, autonomous edge execution

**Self-Healing:** Proactive fault prevention & instant recovery

**Software-Centric & Cost-Effective:** Runs on standard hardware, scales efficiently with software in quantity and functionality

We are building the future of energy with our **patent-pending** technology: a **self-healing, self-optimizing nervous system** for the grid.

# Digital, Connected and Real-time: Use Better

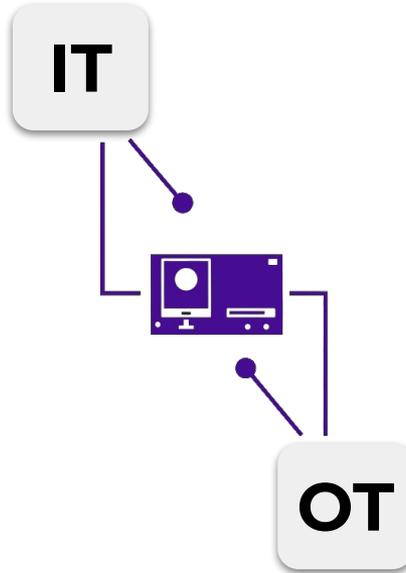
Efficient and real-time IT-OT connectivity **increases grid utilization** by keeping it safe and balanced.

## Resilient

Flexible and adaptive PAC enables more responsive grids to less predictable effects.

## Interoperable

High interoperability increases grid performance without vendor lock-in.



## Intelligent

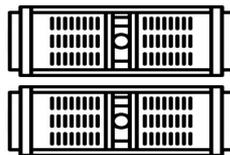
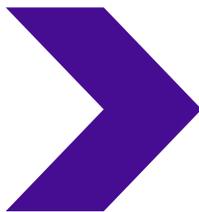
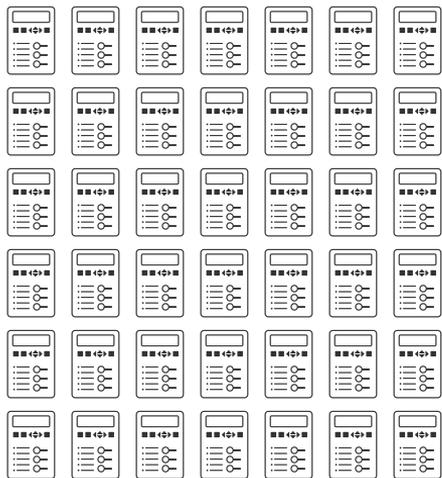
Big data analytics gives more real-time insights and improves grid performance.

## Reliable

Protection, automation and control at the edge ensures reliability.

# Virtualized and Centralized: Build Faster

By replacing more than 50 legacy devices with only 2 edge computers powered by Euto software, grid operators can **build faster, at lower cost, and with less reliance on technical staff.**



## Minimize Costs 40%

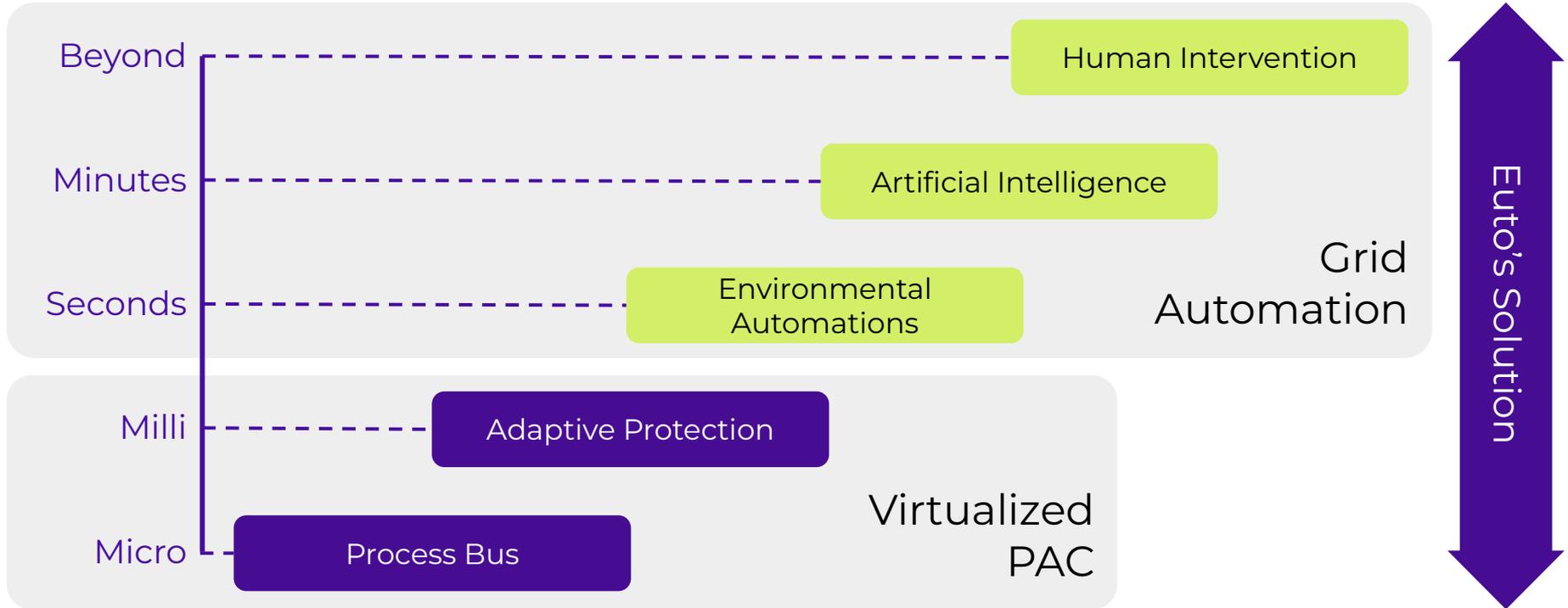
- Less hardware
- Less infrastructure
- Less technical personnel needed

## Future-proof

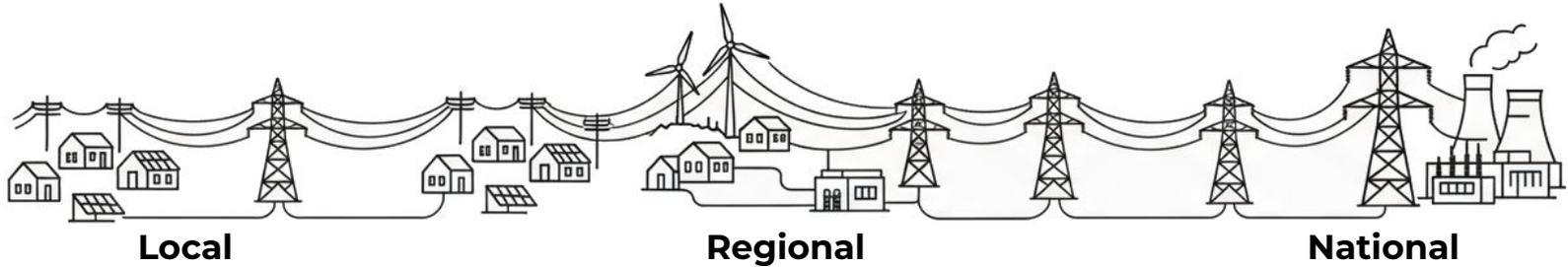
Always up-to-date performance and security for your changing grid.

# Euto's Intelligence Advantage

Euto's solution enables **seamless real-time vertical integration** of functions across different time scales, infusing energy systems with **built-in reliability and intelligence**.



# The Solution: One Unified Platform. Three Levels of Value.



## AI-Powered Microgrid Controller

We provide **autonomy and resilience** for self-sufficient systems.

 Deployed & Proven

## Capacity Sharing System

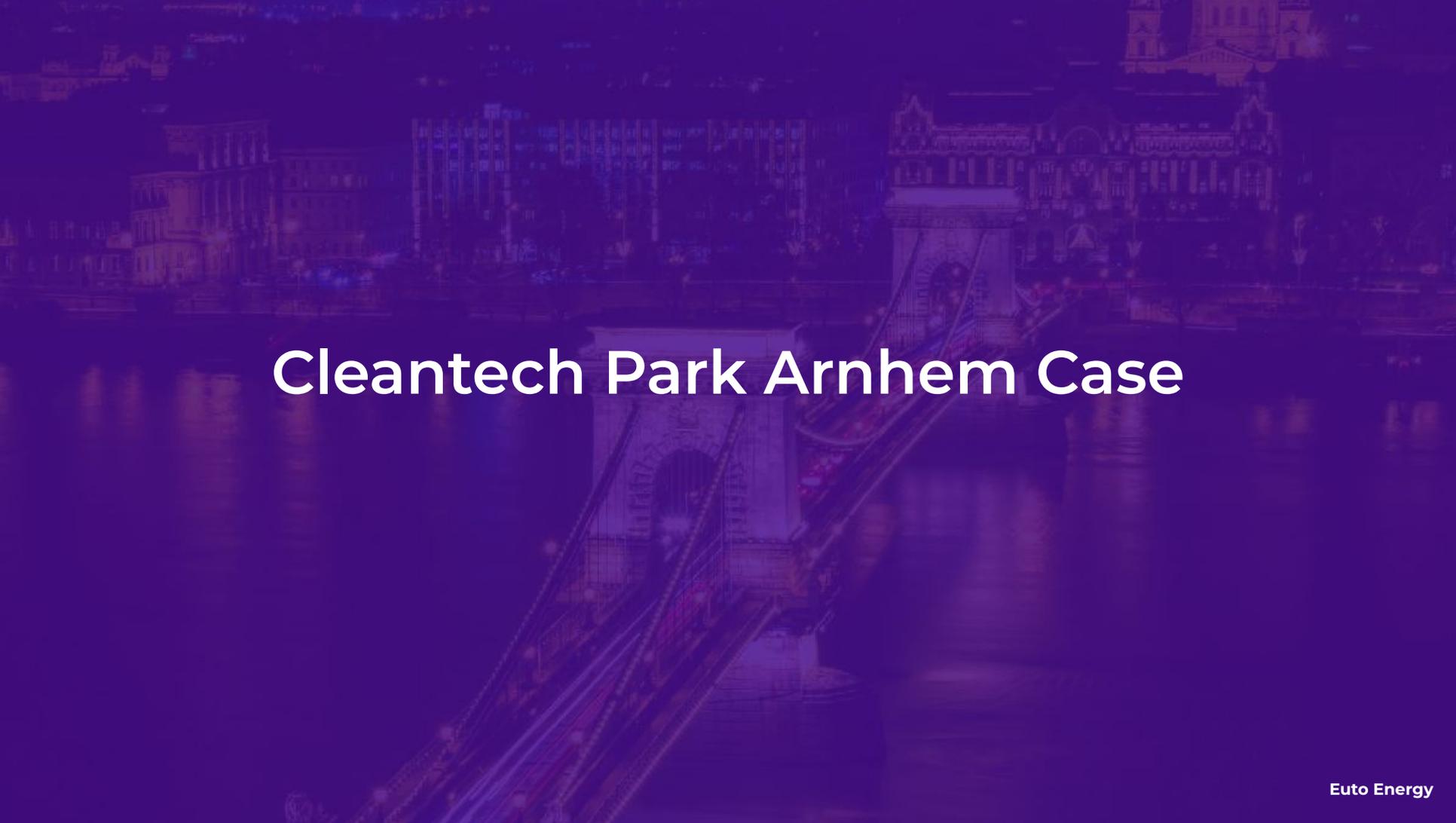
We **unlock +30% capacity** by making the regional grid shareable.

 Live & Delivering Value

## Virtualized Substation Automation

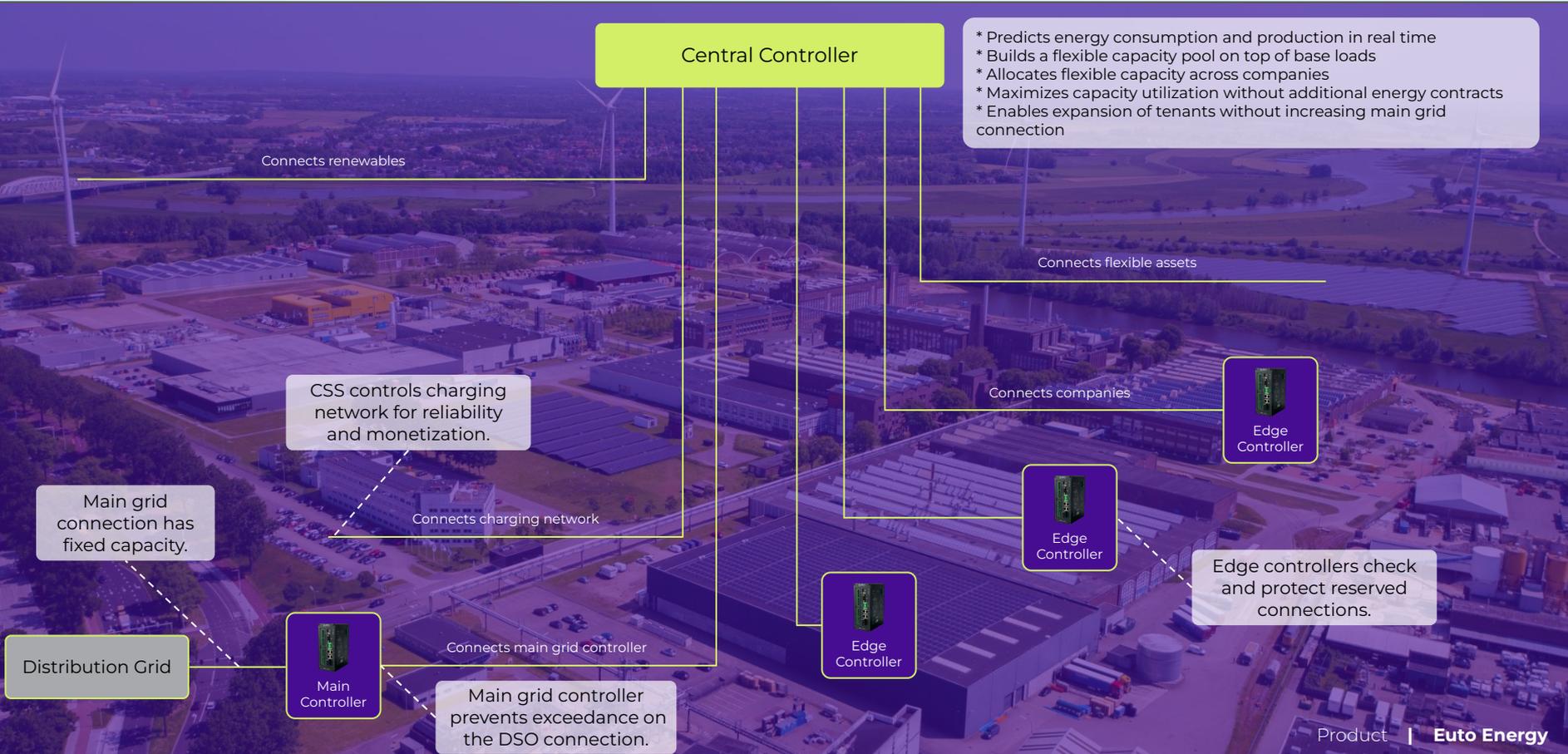
We provide the core intelligence (vPAC/vRTU/vHMI) for a national **software-defined grid**.

 In pilot with leading DSO & TSOs

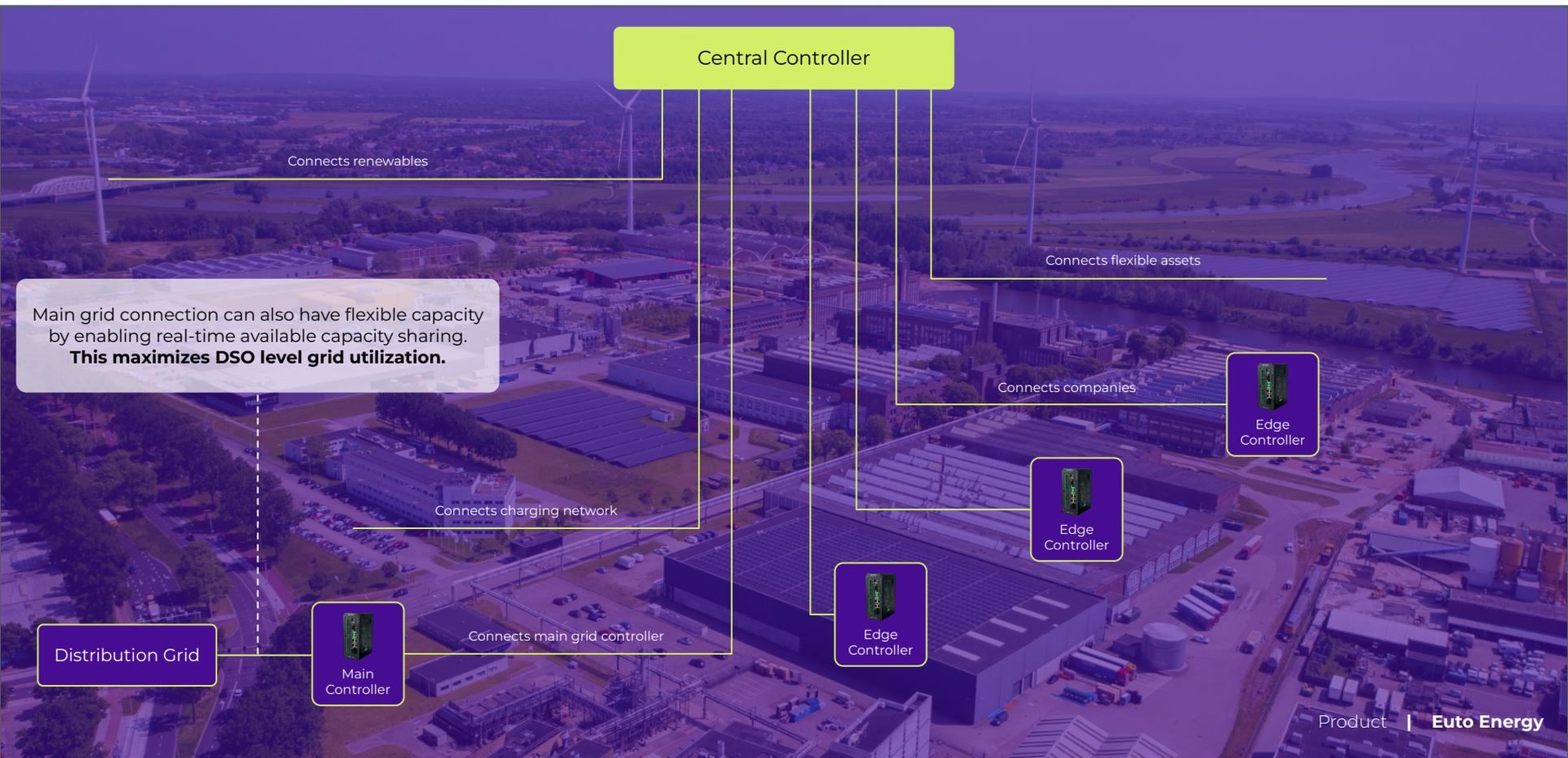


# Cleantech Park Arnhem Case

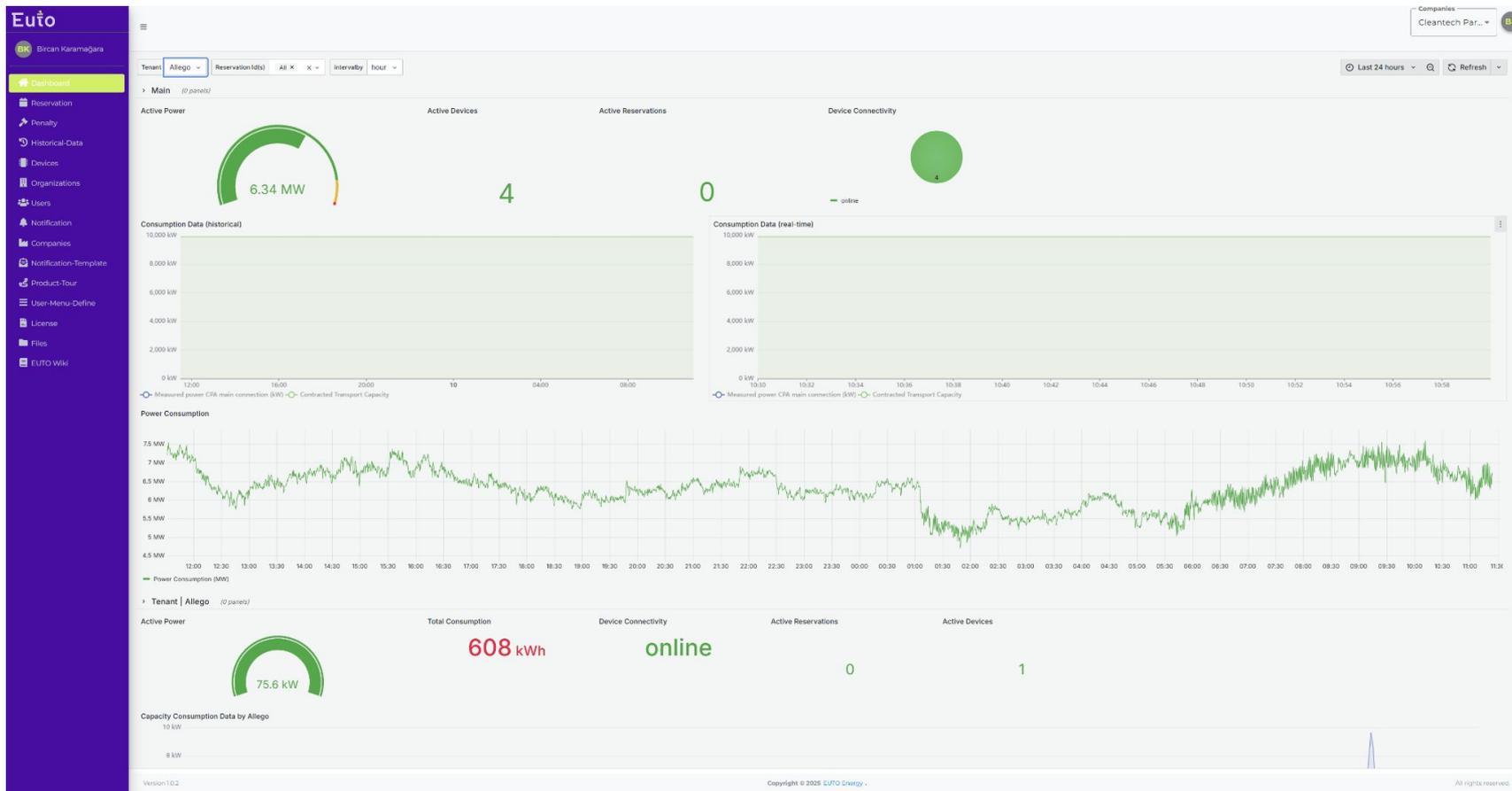
# Capacity Sharing System



# Capacity Sharing System



# Capacity Sharing System Dashboard



# Capacity Sharing System Dashboard

**Euto**

BK Bircan Karamagara

- Dashboard
- Reservation
- Penalty
- Historical Data
- Devices
- Organizations
- Users
- Notification
- Companies
- Notification-Template
- Product-Tour
- User-Menu-Define
- License
- Files
- EUTO Wiki

Companies  
Cleantech Par...

Tenant: **Allego** | Reservation id(s): **All** | interval: **hour**

Power Consumption

Power Consumption (kW)

**Reservation**

Expected available space

Reservable time slots

Start Date-Time	End Date-Time	Max Process Power (kW)
2025-12-09 11:00	2025-12-09 11:30	3717
2025-12-09 11:30	2025-12-09 12:00	4008
2025-12-09 12:00	2025-12-09 12:30	4741
2025-12-09 12:30	2025-12-09 13:00	5099
2025-12-09 13:00	2025-12-09 13:30	5035
2025-12-09 13:30	2025-12-09 14:00	4934
2025-12-09 14:00	2025-12-09 14:30	4776
2025-12-09 14:30	2025-12-09 15:00	4813
2025-12-09 15:00	2025-12-09 15:30	4724
2025-12-09 15:30	2025-12-09 16:00	4702
2025-12-09 16:00	2025-12-09 16:30	4789
2025-12-09 16:30	2025-12-09 17:00	4765
2025-12-09 17:00	2025-12-09 17:30	4411
2025-12-09 17:30	2025-12-09 18:00	4357

**Reservation - All**

No data

Measured peak consumption

Average consumption

Duration of the peak

Total Fine Amount

Version 1.0.2

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# Reservation Screen

The screenshot displays the Euto Reservation Screen. On the left is a dark blue sidebar with the Euto logo and navigation items: Tenant Admin, Dashboard, Reservations (highlighted), Penalty, Devices, Users, Notification, and Files. The main content area is titled "Reservations" and includes a filter for status (All, Active, Cancelled, Past-Due) and an "Add New Reservation" button. A table lists reservations with columns for Reserved By, Reserved Capacity, Reservation Begin, Reservation End, and Description. A modal window titled "Energy Capacity Scheduler" is open, showing a table of energy usage and availability for various times. The modal also includes a "Selected" section with a "Kilowatts" input field and a "Note" field.

**Energy Capacity Scheduler**

Filter by kilowatts

Time	Energy (kW)	Availability
12/10/25, 11:30 AM	4247	<div style="width: 100%;"></div>
12/10/25, 12:00 PM	4297	<div style="width: 100%;"></div>
12/10/25, 12:30 PM	4294	<div style="width: 100%;"></div>
12/10/25, 1:00 PM	4174	<div style="width: 100%;"></div>
12/10/25, 1:30 PM	4072	<div style="width: 100%;"></div>
12/10/25, 2:00 PM	4068	<div style="width: 100%;"></div>
12/10/25, 2:30 PM	4337	<div style="width: 100%;"></div>
12/10/25, 3:00 PM	4991	<div style="width: 100%;"></div>

Selected: 12/10/25, 11:30 AM - 12/10/25, 1:30 PM

Kilowatts\*  
1000

Note\*  
Reserved for 5 truck charging

Cancel Save

Items per page: 10 1 - 10 of 208

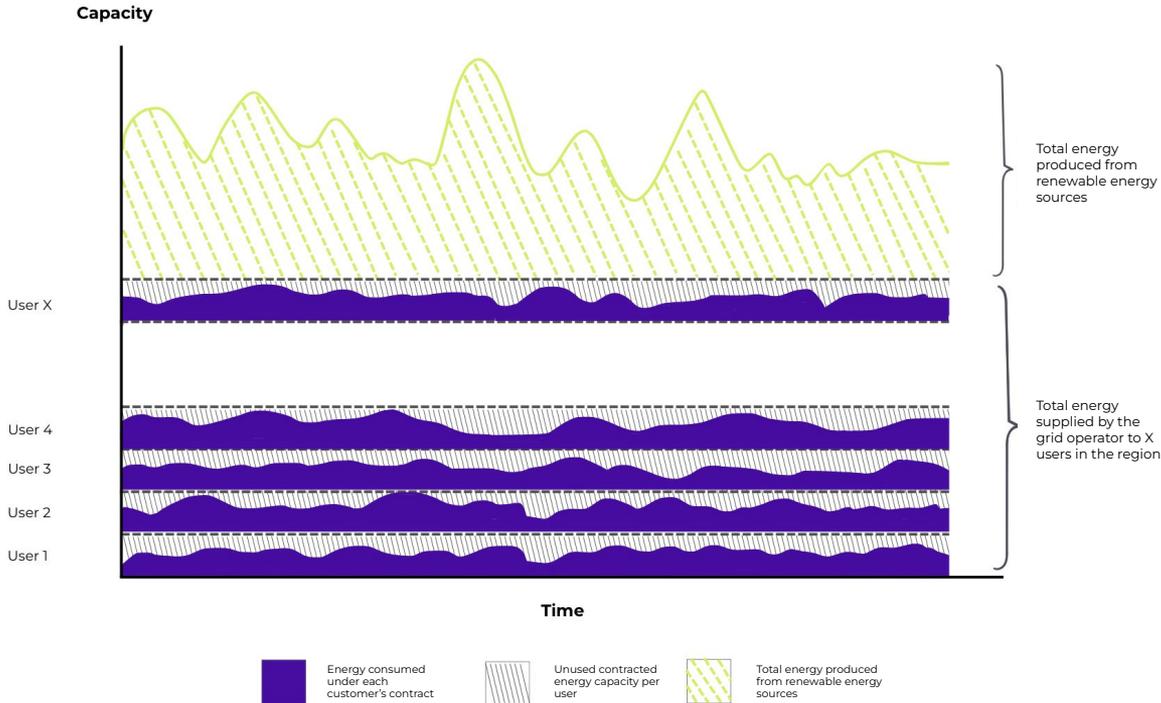
Version: 1.0.2 Copyright © 2025 EUTO Energy All rights reserved.

An aerial photograph of a coastal island, likely in the Netherlands, showing a town, agricultural fields, and a forest. The image is overlaid with a purple gradient. The text "Thank you!" is centered in white.

Thank you!

# Capacity Sharing System

This chart shows that the grid operator allocates a specific connection capacity for each user, yet this capacity is not always fully utilized.



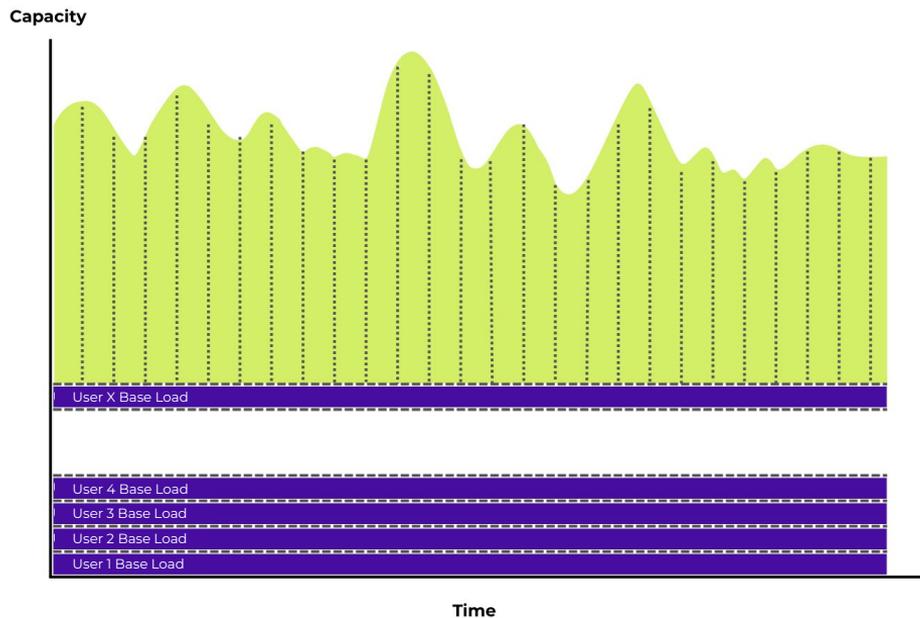
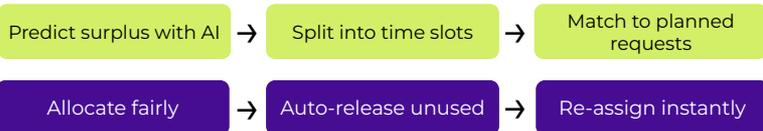
The key point is that capacity technically available on the grid remains unused due to contractual limitations.

*For example, when one user requires high energy during a night shift, that demand cannot be met even if another user's capacity sits unused during the day, even that night.*

This leads to:

- **Inefficient investments**
- **Unmet needs** on the user side

# Capacity Sharing System



## Flexible Pool & Reservation Engine

**What it is:** Reservation-driven capacity sharing that secures base loads and allocates surplus in real time.

**Visual cues:**

- **Green** band: Total accessible flexible capacity.
- **Purple** band: Guaranteed base load per user.

**How it works:** Users schedule capacity against planned needs; unused slices auto-release and can be re-assigned temporarily to where they create the most value.

Utilization ↑  
New connections are enabled without grid expansion

# Proof from the Market: Our Users Tell Our Story

alllander

**“We are testing solutions from ABB and Euto Energy.”**

- Sander Jansen, Product Owner, Alllander



Source: LF Energy Summit Presentation

A leading DSO's Product Owner explains the critical need for virtualized substations to solve their core challenges.

 [Watch the Presentation](#)

 [View on LinkedIn](#)

Cleantech Park  
Arnhem

**“The technology behind the system: Euto”**

- Cleantech Park Arnhem Official  
Announcement

Capacity sharing system: smart  
balancing instead of grid  
reinforcement

Throughout the Netherlands, grid congestion is the biggest obstacle for the energy transition. Businesses seeking to grow or become more sustainable are facing obstacles because new connections are impossible. At Cleantech Park Arnhem, we've broken this deadlock with a unique capacity-sharing system: a cloud-based smart software, real-time monitoring, and scheduled appointments between users.

From administrative problem to technical system.  
“The core is that we no longer think in terms of fixed connections, but in terms of shared capacity,” says Sander Bink, project leader for energy and construction projects at Schipper Bosch, owner of Cleantech Park Arnhem. “Where the grid elsewhere is supposedly ‘full’, we show that there’s still plenty of capacity – provided you organize

Source: Official Website & LinkedIn

Announcing our live system that makes grid capacity 'visible, plannable, and shareable' to maximize utilization.

 [Read the Article](#)

 [View on LinkedIn](#)

PAMPUS  
IMPACTEILAND®

**“Euto is the brain of the smart grid”**

- Martin Verweij, Technical Manager, Pampus  
Island



Source: Official Social Media Channels

A deep-dive into how our AI-Powered Microgrid Controller enables a fully self-sufficient, carbon-neutral island.

 [Watch the Video](#)

 [View our LinkedIn Post](#)