WEBINARS · MAY 27 & 28, 2026 · HANDOUT

The Energy Coop Platform Demo Days

Truman Data has developed the Energy Coop platform for intelligent energy optimization and flexibility management solutions for large building operators, such as Cities, Municipalities, Retail & Grocery Chain Stores, Real Estate Portfolios, Shopping Centers, Manufacturers with Production Units, and other Built Environments that use large quantities of energy.

The **Energy Coop Platform** enables large building portfolio owners to:

- Make more money from a new revenue source
- Reduce electricity costs
- Optimize energy consumption automatically
- Participate in demand response markets on their own terms
- Lower CO_2 emissions
- Improve portfolio-wide energy visibility and control
- Fully control their own data
- A contract that can be terminated at any time without notice
- Engage with a company that is set to serve end-customers above all else

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Presented on the webinar on behalf of the Truman Data team by

- **Björn Hammar**, CEO,
- **Rauno Jokelainen**, CTO and
- **Csaba Ortutay**, Data Scientist

The webinar presented by the three key persons on behalf of the team that developed the platform solution is available via this YouTube link. The recording is 20 minutes long ➜ **https://youtu.be/1QlVoFzs140**

FROM THE CEO

Forewords

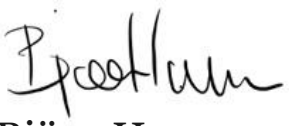
This handout provides comprehensive, in-depth information and screenshots from the Energy Coop platform DEMO webinar.

To save your time - and that of any colleagues of yours who couldn’t attend - the executive summary with key images, found right after this introduction, may well be all you need.

Following the summary and table of contents, the rest of the document is a deep-dive section. At the end, you'll find what may be the most valuable part: the Q&As from the webinar, followed by additional screenshots for those who want to explore the details further.

For discussions about becoming a pilot partner, other partnership opportunities, energy assessments for entire real estate portfolios, investments, or general inquiries, feel free to reach out by email or by messaging me directly on my mobile: +358 46 930 40 57

Have a good read!



Björn Hammar
Truman Data CEO
Email: bjorn@truman.cloud
LinkedIn: linkedin.com/in/bjornhammar

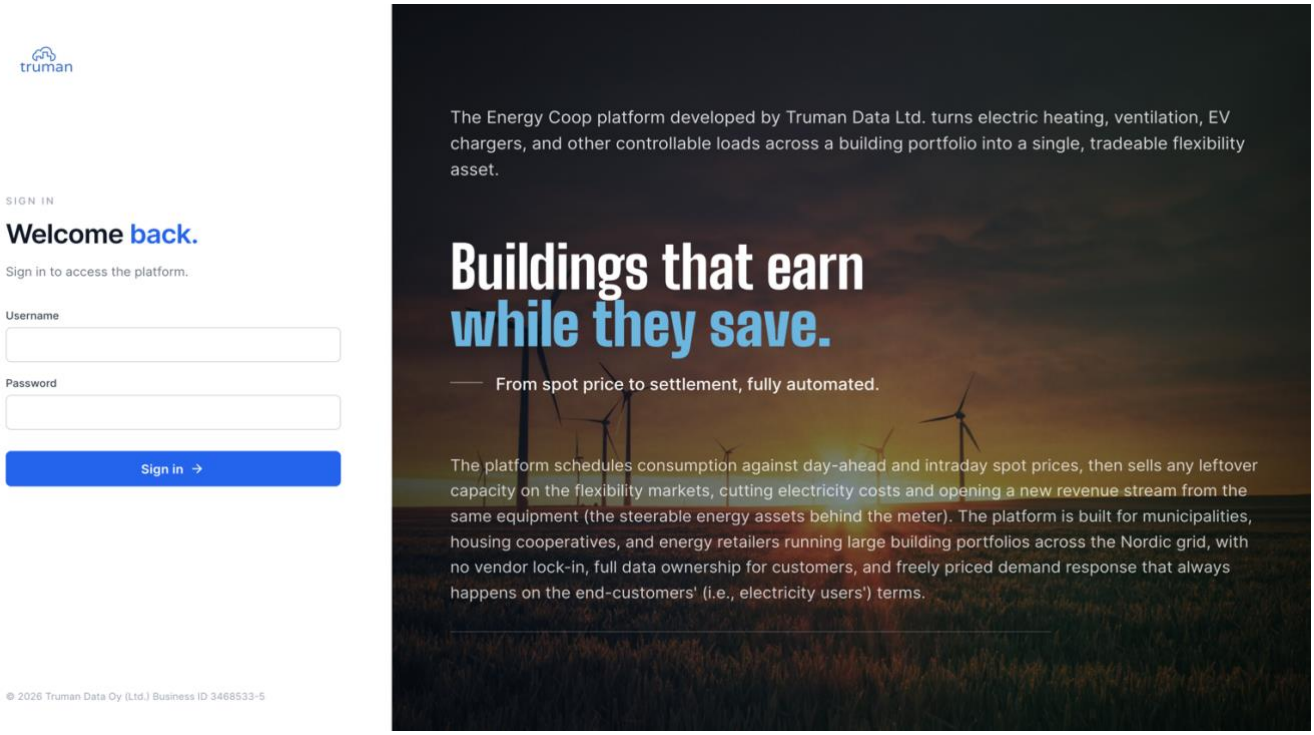
OVERVIEW

Executive Summary

The Nordic energy market, along with the rest of the EU and other major economies such as the US, is entering a period of structural transformation driven by several obvious forces: the accelerating adoption of AI and the rapid growth of renewable energy production.

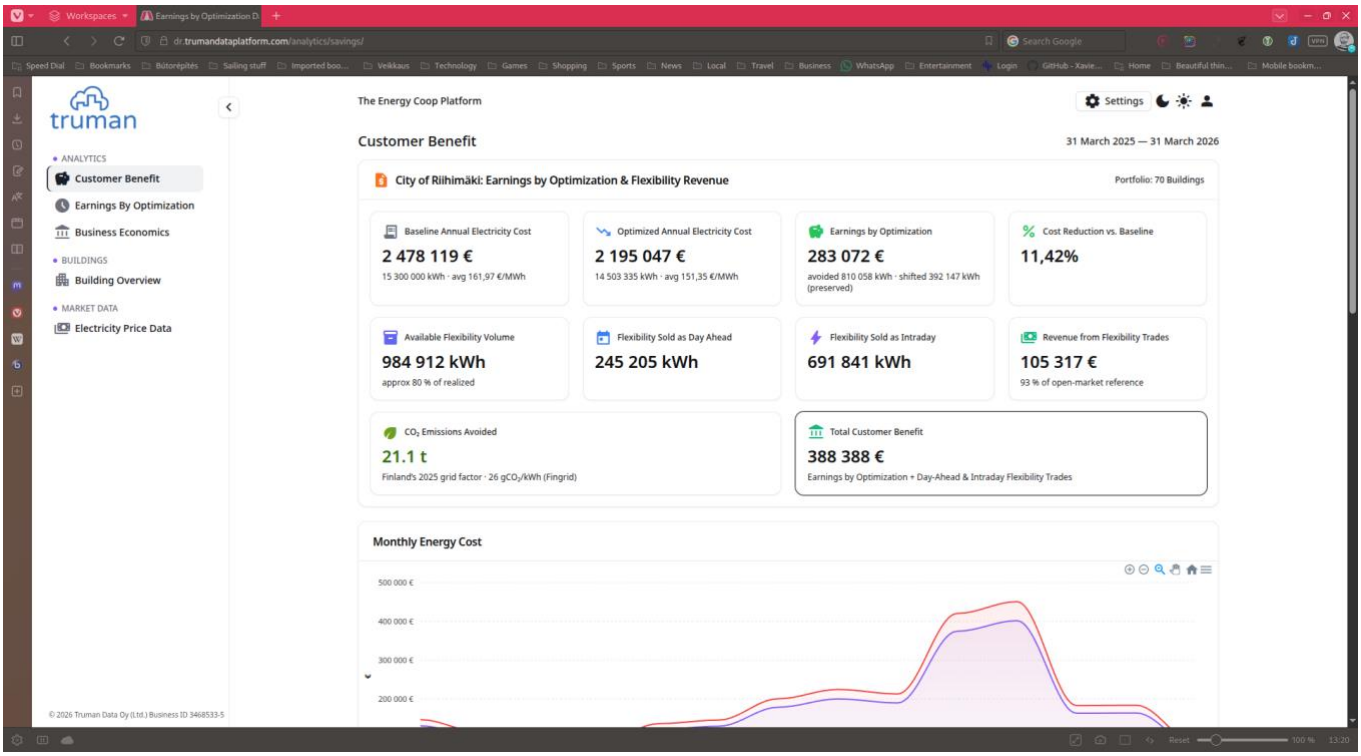
Increasing volatility in electricity prices, rapid electrification, growing renewable energy generation, and rising balancing requirements are fundamentally changing how energy must be managed and traded. At the same time, buildings remain among the largest underutilized sources of energy flexibility. According to the IEA and leading industry estimates, buildings account for approximately 40% of total energy consumption in Nordic countries such as Finland. A significant portion of that demand can be shifted, optimized, or temporarily reduced without compromising operational continuity or occupant comfort. This represents a significant opportunity that large-scale building owners cannot afford to ignore.

Truman Data's Energy Coop platform was developed specifically to address this opportunity, designed around the needs of energy consumers rather than the commercial interests of electricity producers or utilities. The platform enables municipalities, real estate portfolios, grocery chain property owners, industrial operators, and other large building owners to transform their existing energy infrastructure into an active, tradable flexibility resource while simultaneously reducing their electricity costs.



Screenshot 1 — Customers Dashboard:

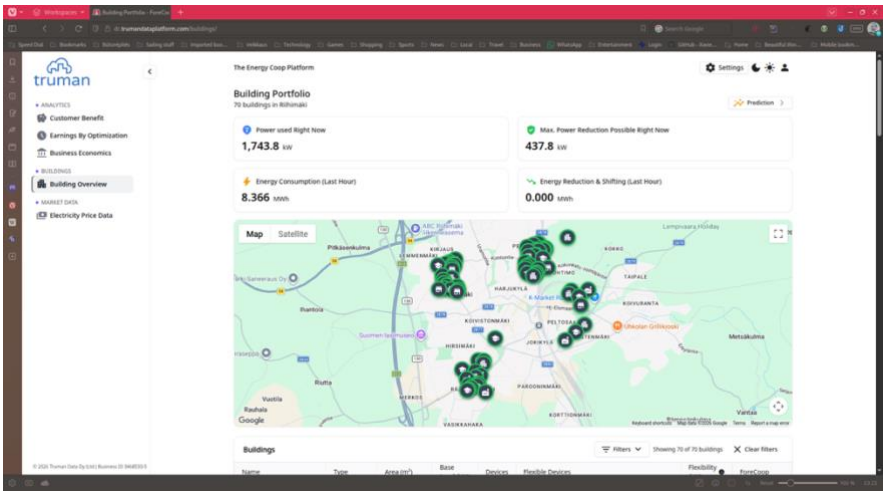
The core innovation of the Energy Coop model lies in portfolio-level aggregation and automated optimization. Using a lightweight edge device installed alongside existing building automation systems by a growing partner network of electricians, the platform continuously monitors and controls flexible electrical loads: heating systems, ventilation, boilers, de-icing systems, solar production, battery storage, EV charging, and any electrical load in the cloud-connected building. Real-time electricity market data from exchanges such as Nord Pool is combined with predictive optimization algorithms to shift consumption away from expensive periods and toward lower-cost time slots.



Screenshot 2 — Earnings by Optimization view

Unlike many existing market solutions, the Energy Coop platform was designed to minimize complexity for the customer. The building owner does not need energy market expertise, manual operational intervention, or major infrastructure replacement projects. Customers retain ownership of their own data, define the operational boundaries under which flexibility can be used, and can terminate participation without vendor lock-in. The platform itself handles the optimization, forecasting, dispatch logic, and market interaction automatically.

The Energy Coop model also addresses a structural problem faced by electricity sellers operating as Balance Responsible Parties (BRPs). Energy suppliers increasingly struggle with volatile balancing costs, forecasting uncertainty, and shrinking margins. The Energy Coop platform allows BRPs to source flexibility directly from their own customer base at lower cost and with better predictability than purchasing equivalent balancing capacity from external markets.



Screenshot 3 — map overview

The platform's technical feasibility has already been demonstrated in a Finnish municipal pilot involving **70 city-owned buildings**. The pilot validated real-time measurement, optimization, flexibility estimation, and demand response simulation across a diverse building portfolio using real operational data. Truman Data estimates that automated optimization and flexibility participation together can reduce overall energy costs by **10–20%** while simultaneously creating a new recurring revenue stream from flexibility trading.

Summarizing the results of the Energy Coop pilot based on end-customer earnings and outcomes, as shown in the dashboard image above (*screenshot no. 2*).

BASELINE ANNUAL ELECTRICITY COST **2 478 119 €** 15 300 000 kWh, avg 161,97 €/MWh. The baseline against which all optimization and new revenue are measured.	OPTIMIZED ANNUAL ELECTRICITY COST **2 195 047 €** 14 503 335 kWh, avg 151,35 €/MWh. The cost after AI-driven optimization.
EARNINGS BY OPTIMIZATION **283 072 €** The direct financial gain from shifting and avoiding consumption.	COST REDUCTION VS. BASELINE **11.42%** A double-digit reduction, validating the platform's core value proposition.
AVAILABLE FLEXIBILITY VOLUME **984 912 kWh** The volume of flexible capacity that could be offered to energy markets.	FLEXIBILITY SOLD AS DAY-AHEAD **245 205 kWh** Volume of flexibility sold as day-ahead trades.
FLEXIBILITY SOLD AS INTRADAY **691 841 kWh** Flexibility volume sold as Intraday trades.	REVENUE FROM FLEXIBILITY TRADES **105 317 €** Monetized value of flexibility traded across both Day-Ahead and Intraday markets.
CO_2 EMISSIONS AVOIDED **21.1 t** An environmental co-benefit delivered alongside the financial returns.	**TOTAL CUSTOMER BENEFIT** **388 388 €** Earnings from Optimization + Day-Ahead & Intraday Flexibility Trades.

Ending Executive Summary with the Webinar's Final Words

From this moment onward, Truman Data is set up to respond to any building owner's invitation to conduct an energy asset assessment and, ***within days, provide the client with a real-time, data-based estimate of their earning potential on the Energy Coop platform*** *. . . in exact the same manner as it was calculated for the pilot city, and reporting the results as shown above* ***with a cost of 20,000 or less*** *if the client's portfolio is just a few buildings.*

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MARKET CONTEXT

Why This *Matters Now*

The Nordic energy market is undergoing rapid transformation:

- Electricity prices are becoming more volatile
- Renewable energy production is increasing
- Forecasting consumption and production is becoming harder
- Reserve markets require more distributed flexibility
- Buildings remain one of the largest underutilized flexibility resources

According to the IEA, buildings account for approximately **40% of total energy consumption in the Nordics**. Much of this demand is flexible and can be optimized or shifted in time.

The Problem the Platform Solves

Two parties face structural problems in the current energy market, and neither is solved by existing services.

For building owners and energy end-users (cities, property owners, enterprises): they pay the electricity bill but have no real influence over pricing, contract terms, or how their own flexibility is used and traded. Monetizing that flexibility typically requires substantial upfront investment, complex system integrations, or long-term vendor lock-in contracts with unfavorable terms, making genuine market participation inaccessible to most customers.

For electricity sellers acting as Balance Responsible Parties (BRPs), margins are under extreme pressure as the cost of procuring flexibility rises. Flexibility must be sourced quickly, often at premium prices from external markets, thereby increasing cost volatility and risk exposure precisely when margins are at their lowest.

> The Energy Coop platform addresses both problems simultaneously: it enables end-users to reduce energy costs and earn flexibility revenue from their existing assets with no new capital expenditure, while giving BRPs a way to procure flexibility directly from their own customers, faster and at lower cost than external markets, without hardware-heavy retrofits or long-term lock-in on either side.

What the *Energy Coop* Platform Does

The platform aggregates flexibility from multiple buildings and turns it into an active, tradable energy resource.

REAL-TIME PORTFOLIO OPTIMIZATION

The platform continuously:

- Monitors electricity consumption
- Predicts the available flexibility at building level and portfolio level.
- Optimizes and controls flexible loads automatically
- Aggregates flexibility amounts across the entire portfolio.
- Reduces usage during expensive periods
- Shifts consumption toward cheaper time slots

DEMAND RESPONSE PARTICIPATION

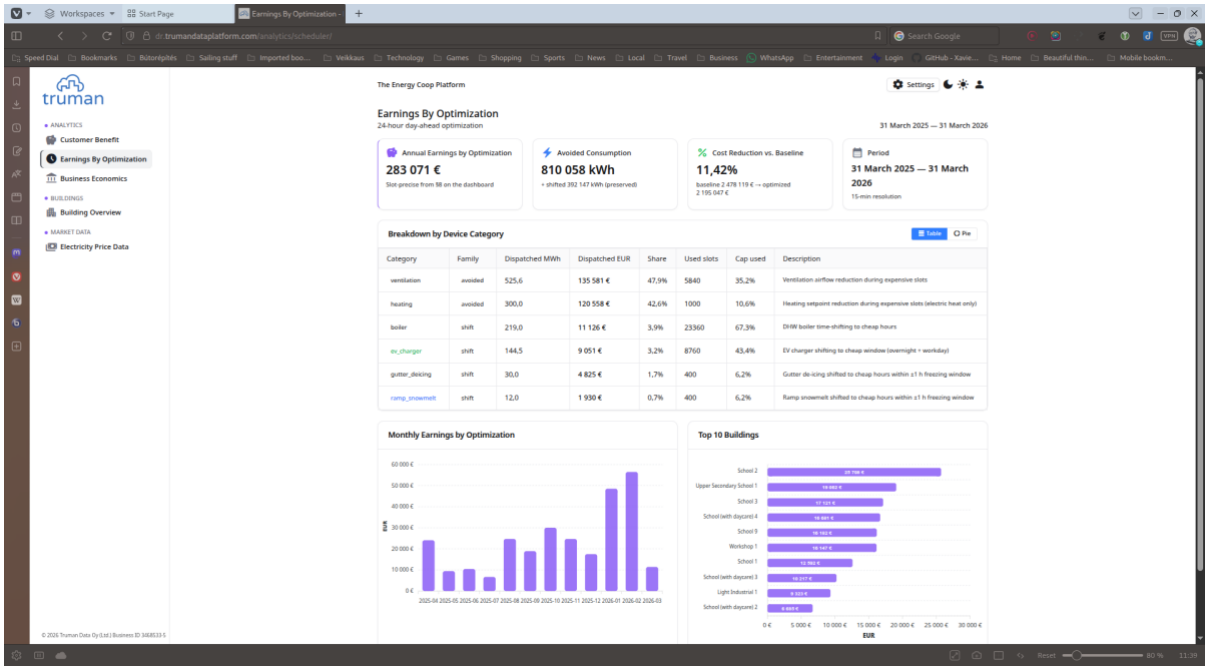
The system aggregates building-level flexibility into a market-scale resource that can participate in:

- Day-ahead markets
- Intraday markets
- Demand response programs
- Future reserve market participation

AUTOMATED OPERATION

The platform is designed for minimal customer workload:

- No manual optimization required
- No energy market expertise required
- Buildings respond automatically
- Customer-defined operating boundaries are respected



Screenshot 4 — Building overview and automated optimization in action

ASSETS & WAY OF BUSINESS

Typical *Flexible Assets*

The platform can connect to and optimize:

Heating Systems	Ventilation Systems	Boilers	De-icing Systems
Solar Production	Battery Storage (BESS)	EV Charging	Other Flexible Loads

How the Market Mechanism Works

The Energy Coop platform operates through two integrated systems. The first is a cloud database that connects each building to real-time Nord Pool market data. The second is the ForeCoop device-level software that controls every energy load at a granular level across all connected buildings. Together, they enable the creation of tradable batches of flexibility that a building portfolio owner can offer directly to their energy supplier.

The building portfolio owner can sell intraday flexibility directly to their own energy supplier at a price slightly below the prevailing Nord Pool rate, for example, at a 7% discount. The energy supplier benefits because the price remains favorable, and the building owner benefits because the previously unrewarded flexibility now generates income.

This arrangement can also strengthen the building portfolio owner's negotiating position when renewing their electricity supply contract. The model is described by Truman Data as **consumption-driven rather than production-driven**: value flows to the building owner rather than being captured solely by the energy producer or market intermediary.

THREE QUESTIONS ANSWERED

Why the BRP *Accepts the Model*

A logical question following any explanation of the Energy Coop model is: why would an electricity seller willingly accept an arrangement that gives the customer pricing power? The following three points, validated by an independent senior energy market and regulation specialist, answer that question.

Why 1) Energy Coop makes the customer commercially more attractive to the BRP

Without the Energy Coop solution, a large building portfolio customer is commercially difficult for an electricity seller to manage: its consumption profile is harder to read, forecasting errors are larger, and balance and deviation risk is higher. With the Energy Coop solution connected, the same customer's consumption becomes more visible, load can be managed more effectively, balance and deviation risk decreases, and the customer therefore becomes commercially more attractive rather than more demanding. The BRP does not need to increase its own capital expenditure to gain these benefits; the investment is at the customer's end.

Why 2) The BRP gains flexibility value with zero capital expenditure of its own

The value of the arrangement does not come from the BRP owning any technology. It comes from the BRP gaining better predictability, lower balance and deviation risk, and higher commercial quality from its customer base without any investment in the customer's equipment, API solutions, balance reporting systems, or deal-making processes. Most significantly, the BRP's complex and expensive derivative settlements related to the energy delivered and balance handling for customers connected to the Energy Coop solution reduce to near zero in cost, because the accuracy of consumption prediction for those customers improves substantially.

Why 3) The value of flexibility never goes to zero

An electricity seller can learn a customer's consumption patterns over time, but actual consumption never becomes fully predictable. Weather and seasons change, space utilization changes, equipment and operations change, and human behavior is not constant. As long as actual consumption deviates from forecasts — and it always will — flexibility retains high commercial value. The International Energy Agency (IEA) projects that the global flexibility market will grow tenfold by 2035. The commercial value of well-managed flexibility is therefore structural and growing, not temporary.

LIVE PILOT — CITY IN FINLAND · 70 BUILDINGS

The First Pilot: *A City in Finland*

The demonstration used real pilot data from 70 municipal buildings.

PILOT OBJECTIVES

The pilot focused on:

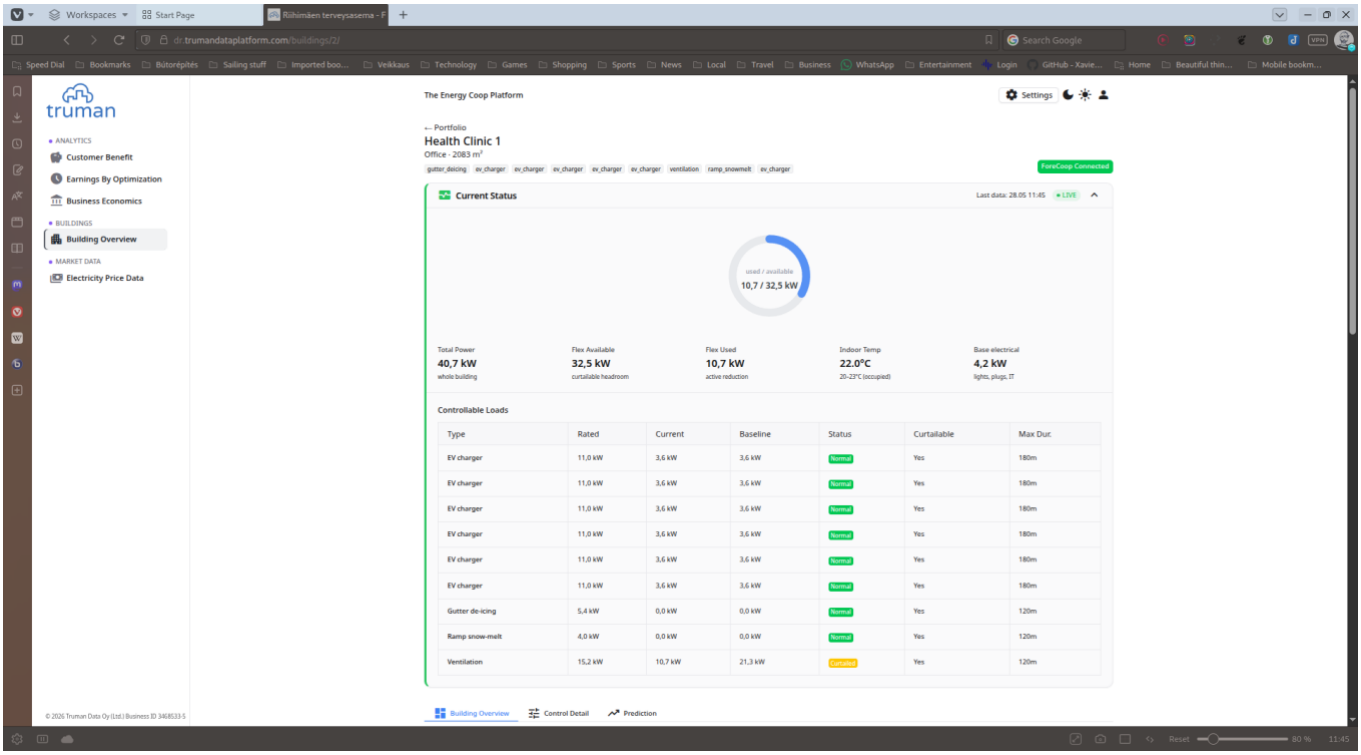
- Technical validation
- Load control algorithms
- Optimization modeling
- Demand response simulation
- Benchmarking against electricity prices

RESULTS DEMONSTRATED

The pilot showed:

- Portfolio-wide flexibility aggregation
- Automated optimization
- Demand response event handling
- Building-level visibility
- Revenue potential estimation

Example building-level demonstration included: historical optimization performance, predicted optimization for the following day, demand response event history, and real-time device-level monitoring.



Screenshot 5 — Building-level optimization performance and demand response event history

Assessment from the City's Technical Department

Following the Phase 1 pilot, the City's Electrical Management Office prepared an internal assessment of the Energy Coop solution. The key findings of the report are summarized below.

The pilot demonstrated that electricity consumption measurement, forecasting, and cost optimization can be implemented without major changes to existing building automation systems, and that load flexibility available for time-shifting can be identified and quantified from real measured data. The system's architecture is, in principle, scalable across large building portfolios.

From an electricity procurement perspective, the Technical Department observed that the model could provide procurement specialists with a concrete tool to require energy suppliers to purchase aggregated flexibility from the City's own building stock, delivered in batches to the balance responsible party. The ability to price that flexibility close to prevailing Nord Pool intraday rates was noted as a meaningful strengthening of the City's negotiating position in future electricity supply contract renewals.

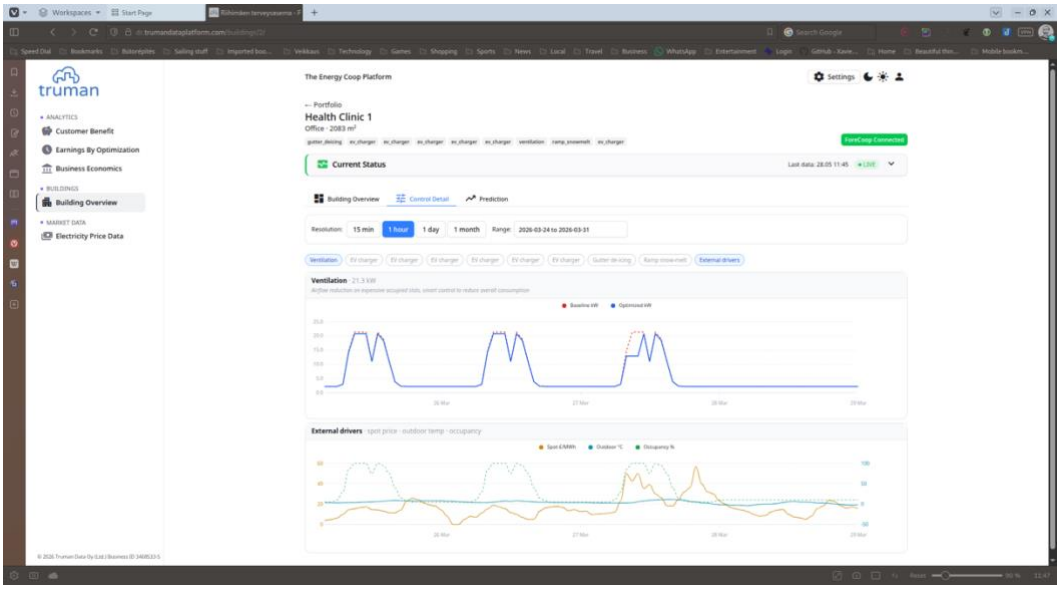
PHASE 2 FOCUS AREAS

The Technical Department identified the following items for resolution before broader deployment:

- Alarm management: how load control actions are displayed in building monitoring systems and distinguished from genuine faults
- Roles and responsibilities: formal documentation of technical, operational, and decision-making responsibilities
- Data governance: cloud service continuity, data ownership, and data protection obligations
- Scope extension: ventilation and heating optimization were not included in Phase 1, which limited the total measurable benefit

STRATEGIC DEVELOPMENT OPPORTUNITIES

- District heating integration: joint optimization of electricity and district heating (sector coupling solution) would reduce total energy costs and improve peak power management
- Battery Energy Storage Systems: viewed as a strategic path that could improve cost optimization, operational flexibility, and security of supply
- Ventilation integration: including ventilation systems in the optimization scope would further increase cost-effectiveness

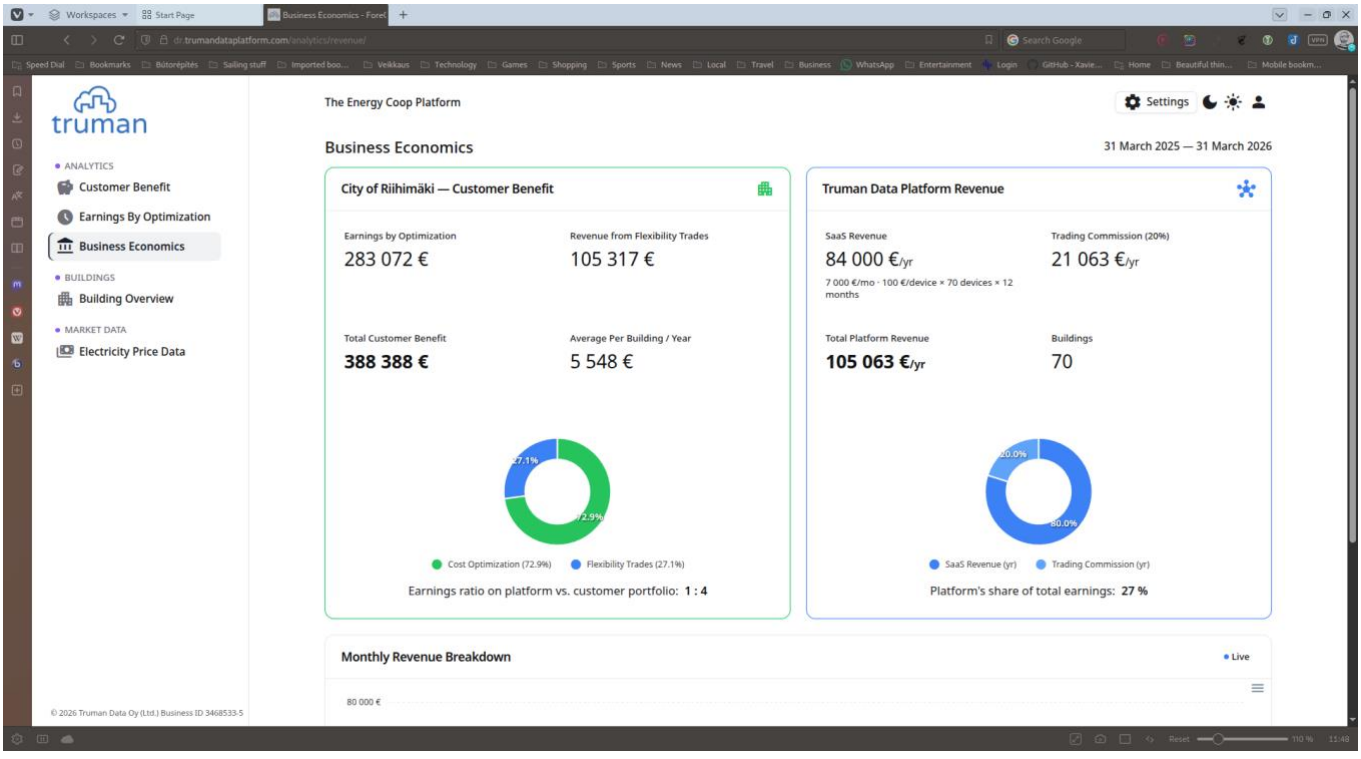


Screenshot 6 — Customer benefits and portfolio performance view

VALUE DELIVERED

Customer Benefits

1	**Lower Energy Costs** The platform reduces costs by avoiding expensive consumption periods, shifting loads to lower-priced periods, and continuously optimizing consumption. Based on the platform's design and the Riihimäki pilot findings, Truman Data estimates that the combined effect of automated energy efficiency and flexibility optimization can reduce a building portfolio's total energy costs by approximately 20%. The flexibility revenue generated also covers the cost of the IoT solution that enables those savings.
2	**New Revenue Streams** Additional revenue may be generated through: Intraday market participation, Day-ahead flexibility trading, and future reserve market integration.
3	**Reduced CO_2 Emissions** Optimization and load shifting support more efficient energy use, better utilization of renewable production, and lower overall emissions.
4	**Operational Simplicity** Customers can define operational boundaries, maintain comfort and operational constraints, and let the system handle optimization automatically.



Screenshot 7

DEVELOPMENT & ROADMAP

AI-Assisted Development & *Technology Roadmap*

AI-Assisted Development

Truman Data highlighted the use of AI-assisted engineering during development. AI agents are being used to:

- Accelerate software development
- Explore optimization approaches
- Assist in flexibility estimation algorithms
- Support trading algorithm design
- Reduce engineering costs

Technology Roadmap — 2026 Objectives

PRE-COMMERCIAL RELEASE

Targeted by the end of 2026.

ADDITIONAL MUNICIPAL PILOTS

Three new Finnish municipal pilots are planned.

KEY TECHNICAL FOCUS AREAS

Flexibility Estimation Algorithm — Real-time estimation of reliably tradable flexibility.

Trading Integration — Automated (AI-assisted) market participation and settlement.

Commercial Readiness — Fully deployable solution, cloud-based scalability, automated onboarding (AI-assisted), and supportable production environment.

Business Model Highlights

Low Deployment Cost: Estimated onboarding cost per property **is 2,000–4,000** (lower at a larger scale).

Cloud-Based Architecture: Fast deployment, minimal on-site infrastructure, scalable growth, and centralized management.

Customer-Centric Design: The platform was designed from the building owner's perspective rather than from the perspective of electricity production companies or traditional utility infrastructure.

Future Vision

Truman Data presented a broader long-term vision where:

- Building portfolios becomes an active energy asset with neighboring cities and municipalities, creating a “large energy community” between the willing parties.
- Battery storage integration increases revenue potential
- Flexibility becomes a tradable portfolio-level resource

Municipalities and property owners gain greater energy autonomy

Competitive Landscape: *An Independent Assessment*

In January 2026, the Chief Commercial Officer of Lumme Energia prepared a confidential memo for Truman Data assessing a set of Finnish companies that a Finnish investment banker had identified as potential competitors. Lumme Energia is one of Finland’s leading energy service companies with more than 800,000 customers. The memo is reproduced here in summary with permission.

“These market actors are playing on the same old field, while Truman Data seems to play on a different one.” - CCO, Lumme Energia

The COO’s conclusion was clear: none of the six listed prop-tech companies reviewed are in direct competition with Truman Data; they present more opportunities for collaboration than threat. All six operate under vendor lock-in models and are coupled with the interests of energy producers or sellers. Truman Data’s model, by contrast, **transfers pricing power and value creation to the customer**.

The COO identified the more significant strategic opportunity as the electricity retail market, where competition among sellers has become intense, and margins are under pressure. He noted that innovative, non-conservative electricity sales companies are actively seeking services that deliver genuine added value to their customers without requiring capital investment or market risk. Truman Data’s model could serve as a differentiating offering for such companies: it improves customer retention, enables additional revenue for the building owner, and reduces the energy company’s own hedging costs because demand response sourced internally from a customer portfolio is less expensive than purchasing equivalent flexibility on Nord Pool.

The COO concluded that the primary challenge for Truman Data is not competition from existing players but rather the work of creating a new market. He expressed personal interest in exploring a potential collaboration and noted that Truman Data’s open, customer-centric model represents a category of its own in the energy services landscape.

NEXT STEPS

Engagement Opportunities

Truman Data is now available for:

Energy Asset Assessments Full flexibility potential analysis for your building portfolio. Assessment pricing typically starts around EUR 20,000 for larger portfolio analysis, and lower for smaller building portfolios.	**Municipal Pilot Integration** Pre-commercial platform integration discussions for municipalities and cities ready to participate in the next phase of Finnish municipal pilots.
Portfolio Optimization Evaluation Portfolio-level optimization evaluations for real estate portfolios, retail chains, and other large building operators.	**Investments** Discussions with investors aligned with the long-term vision of a customer-centric, consumption-driven energy market.

Key Takeaways

- Buildings contain significant untapped flexibility
- Aggregation enables smaller buildings to participate in energy markets
- Automated optimization can reduce costs and generate revenue
- Cloud-based architecture enables scalable deployment
- The Energy Coop Platform combines optimization, flexibility trading, and portfolio management into one system

The End . . .

For any additional questions or contact regarding the engagement opportunities, you can contact us either by email hello@truman.cloud or by messaging me directly on my mobile: +358 46 930 40 57

Björn Hammar
Truman Data CEO

Appendix 1

The most relevant questions, along with the team's answers, that came up and were addressed in both webinars

QUESTION	ANSWER
The Riihimäki pilot was not commercially active. How can potential customers assess the actual revenue potential if the market-trading component has not yet been fully validated in production?	Every dispatch in Riihimäki was benchmarked continuously against live Day Ahead and Intraday prices. The revenue figures are not projections; they are calculations based on actual market prices at the time of flexibility events. The settlement step was not executed commercially. The optimization and quantification are fully validated. Phase II pilots with live trading are planned to start this autumn.
How defensible is your competitive advantage? What prevents a larger player from replicating your platform once the market opportunity becomes obvious?	Three things. First, the aggregation model and customer ownership structure are genuinely different… large incumbents are structurally incentivized to own the data and the relationship, not to hand it back. Second, we are building portfolio depth and customer contracts now, which becomes a switching-cost moat. Third, the ForeCoop EDGE integration layer and the flexibility estimation algorithms represent years of domain-specific development. Replicating the product is one thing; replicating the customer base and the real-world calibration data is another.
How dependent is the business case on Nordic electricity volatility remaining high? If prices stabilize, does the financial attractiveness weaken significantly?	Volatility amplifies returns but is not the foundation. Demand response value comes from the spread between peak and off-peak prices, and from capacity payments in reserve markets, both of which persist even in lower-volatility environments. The EU's structural shift to 15-minute markets also creates ongoing arbitrage opportunities independent of absolute price levels. Lower volatility reduces upside; it does not eliminate the value proposition.
What kind of ROI should a customer realistically expect? What would typical payback times or annual savings look like under current Nordic market conditions?	The value-to-cost ratio is 1:4 to 1:5 in the customer's favor. Onboarding costs EUR 2,000–4,000 per property. Under current Nordic price conditions, payback is typically within the first year of trading. Exact figures depend on asset mix, portfolio size, and market conditions… we calculate a property-specific estimate as part of the onboarding process.
How important will battery storage become in your future roadmap? Do you see batteries becoming a standard part of the platform strategy over the next few years?	Batteries are already in the roadmap and are among the most valuable flexibility assets the platform can aggregate. They already participate in Fingrid's reserve markets as large standalone assets… Energy Coop extends that capability to smaller building-level batteries by aggregating their volumes across a portfolio.
Can the customer, e.g., a city, achieve the value of the platform if the city has a fixed energy price contract instead of a spot price-dependent energy purchase contract?	Yes. Even with a fixed-price electricity contract, the customer can still generate value through the Energy Coop platform. In that case, the main benefit shifts from price-based consumption optimization to maximizing sellable flexibility. Since the customer is not exposed to spot price fluctuations, flexibility can be created and sold whenever market demand is high, without concern for electricity price penalties. This means the customer may lose some spot-price optimization benefits but gains greater freedom to generate and monetize demand-response capacity.

What are the cybersecurity and operational risks associated with controlling building infrastructure via an Energy Coop cloud platform? How do you handle failure scenarios and liability?	The Solution-integrated EDGE device operates within strict parameters set by the building operator; it cannot override safety systems or exceed defined limits. In the event of a connectivity failure, the device defaults to the building's normal operating state; no action is taken without a confirmed signal. Cloud security follows standard industry practices with encrypted communications and role-based access. Liability for building operations remains with the building operator; Energy Coop's liability is limited to its own platform actions within the agreed parameters.
What happens if the optimization or trading algorithms make poor decisions, such as incorrect flexibility estimates, unprofitable trades, or control actions that negatively affect building operations? Who carries responsibility?	Algorithmic decisions operate within hard limits set by the building operator… comfort boundaries and asset constraints are non-negotiable. For trading decisions, the platform uses conservative flexibility estimates with built-in safety margins to avoid over-committing capacity. Human oversight is available at the portfolio level; operators can pause or override at any time. For financially unprofitable trades, the risk is borne within the agreed commercial terms. This is precisely why Phase I focused on validating the estimation accuracy before any live trading… we only trade what we can reliably deliver.
Is this real-time data you are showing us?	Yes. Every connected load is tracked behind the meter moment data is generated as we speak. The platform aggregates all loads instantly into demand response orders, ready for the Day Ahead and Intraday markets.
How does the energy seller set its demand response price bids, and how does the platform act on behalf of end users' ask prices?	No bidding process needed. The energy seller and the city pre-agree that when the seller needs flexibility, it buys from the city at the live market reference price, which, in the Riihimäki case, was −7%. The exact and final prices are settled the next day automatically via Nord Pool and other connected markets.
What are the platform's competitive advantages, simplified? Why has nothing comparable come to market earlier?	Scale and the cost model. Onboarding a property, which includes all its steerable assets, costs EUR 2,000-4,000, and the per-property cost falls as the portfolio grows. After that, the value-to-cost ratio is 1:4 to 1:5 in the customer's favor, versus the industry's typical 50/50. No vendor lock-in, full data ownership stays with the customer, and the contract is cancellable at any time.
Why is the service being launched now?	The EU has moved to 15-minute electricity markets… exactly the resolution Energy Coop was built for. Price volatility is rising structurally as renewables grow. Energy Coop turns that volatility into savings and revenue. The window to act is now.
Why would electricity sellers want to participate in this model and agree to interact through a customer-centric, customer-owned flexibility platform?	Zero CAPEX, zero build cost… they get a ready-made flexibility mechanism. In Finland alone, ten electricity sellers are actively interested because it gives them a competitive edge with no investment required. It also strengthens their balancing position and improves margins.
Why was flexibility trading not executed during the pilot? Why was the commercial flexibility dimension simulated but not implemented?	The pilot was intentionally technical: validate the load control algorithms, benchmark every dispatch against live Day Ahead and Intraday prices, and prove the full customer value. In that we succeeded. Commercial trading was planned for the pilot, but Riihimäki paused it after refocusing on a NATO defense technology hub. Phase II pilots with full commercial trading have been planned with three other Finnish cities, starting this autumn.

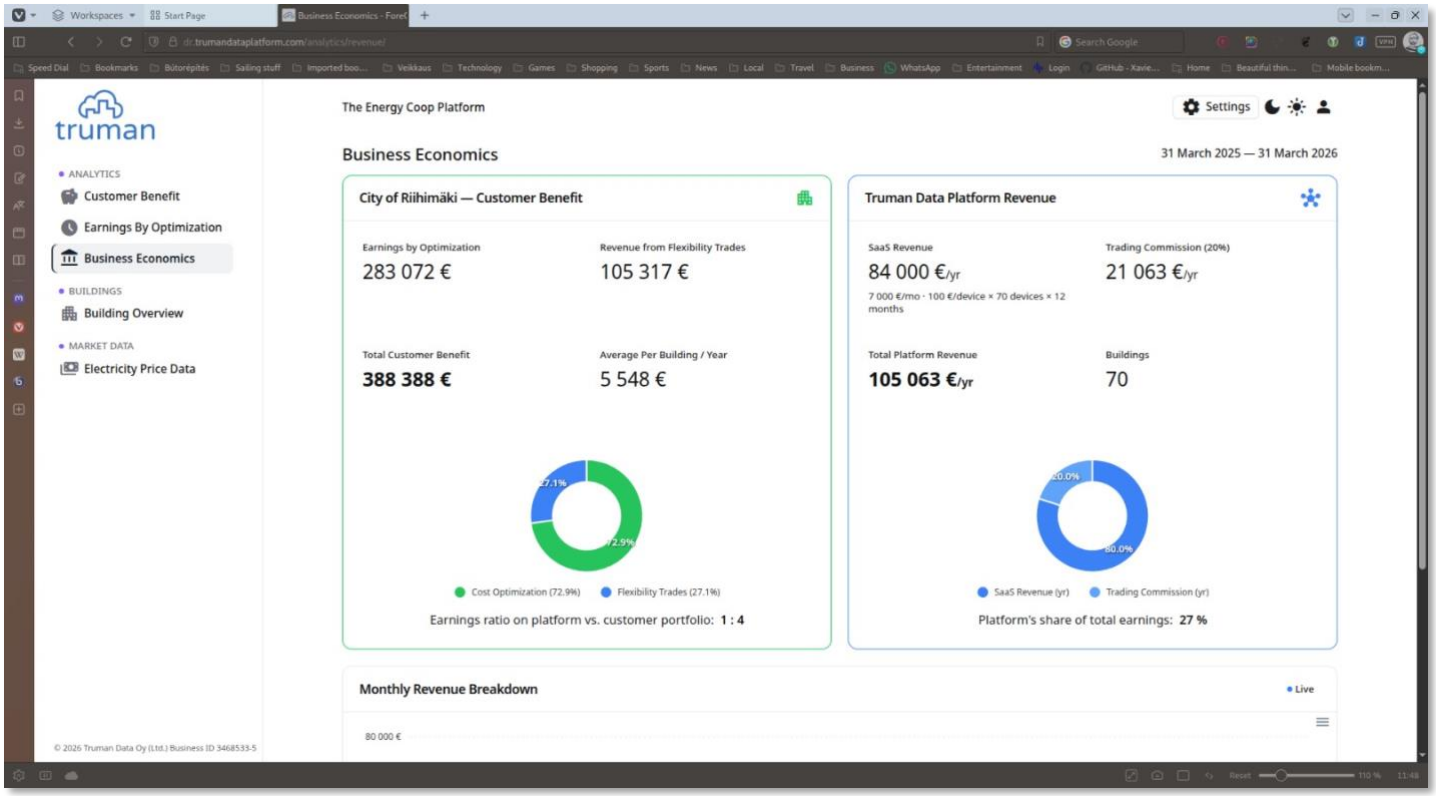
Does your platform operate alongside existing building automation systems, or does it replace them?	Alongside… it never replaces. The ForeCoop EDGE device connects to existing building automation and reads data in real time without interfering with any existing controls. Building managers keep full control of their systems. Energy Coop adds a layer on top.
Does the platform support ventilation and HVAC control, and how is that integration implemented?	Yes. Ventilation and HVAC loads are among the most valuable flexibility assets because they can reduce consumption without affecting comfort, provided they remain within the temperature and air quality limits set by the building operator. Integration is handled through the ForeCoop EDGE device, but integration was not implemented in the pilot.
How quickly could a municipality or real estate company realistically onboard their first buildings? What does a realistic rollout timeline look like for a portfolio of 20–50 buildings?	First buildings can go live within days of the EDGE device installation. For a portfolio of 20–50 buildings, a phased rollout over 4–8 weeks is realistic; the process is the same each time and scales linearly. The main variable is coordinating physical access to each site and flexible devices to be connected.
Which building types have shown the greatest potential for optimization and demand response: schools, offices, retail, warehouses, or residential?	Buildings with large, schedulable thermal loads and predictable occupancy patterns give the most flexibility. Schools and offices are strong candidates… heating and ventilation loads can shift significantly without affecting occupant comfort. Industrial and warehouse buildings with process loads are also highly attractive. Residential is viable at scale but requires more granular control logic.
How do you ensure occupant comfort while optimizing electricity usage? How do you prevent issues such as poor air quality, temperature complaints, or operational disturbances?	Comfort boundaries are set by the building operator and are hard limits; the platform never overrides them. Temperature ranges, air quality thresholds, and operational hours are defined per building, per asset. Demand response events are dispatched only when the available flexibility remains within those boundaries. The building operator can tighten or widen limits at any time.
Can the customer, e.g., a city, achieve the value of the platform if the city has a fixed energy price contract instead of a spot price-dependent energy purchase contract?	Yes. Even with a fixed-price electricity contract, the customer can still generate value through the Energy Coop platform. In that case, the main benefit shifts from price-based consumption optimization to maximizing sellable flexibility. Since the customer is not exposed to spot price fluctuations, flexibility can be created and sold whenever market demand is high, without concern for electricity price penalties. This means the customer may lose some spot-price optimization benefits but gains greater freedom to generate and monetize demand-response capacity.

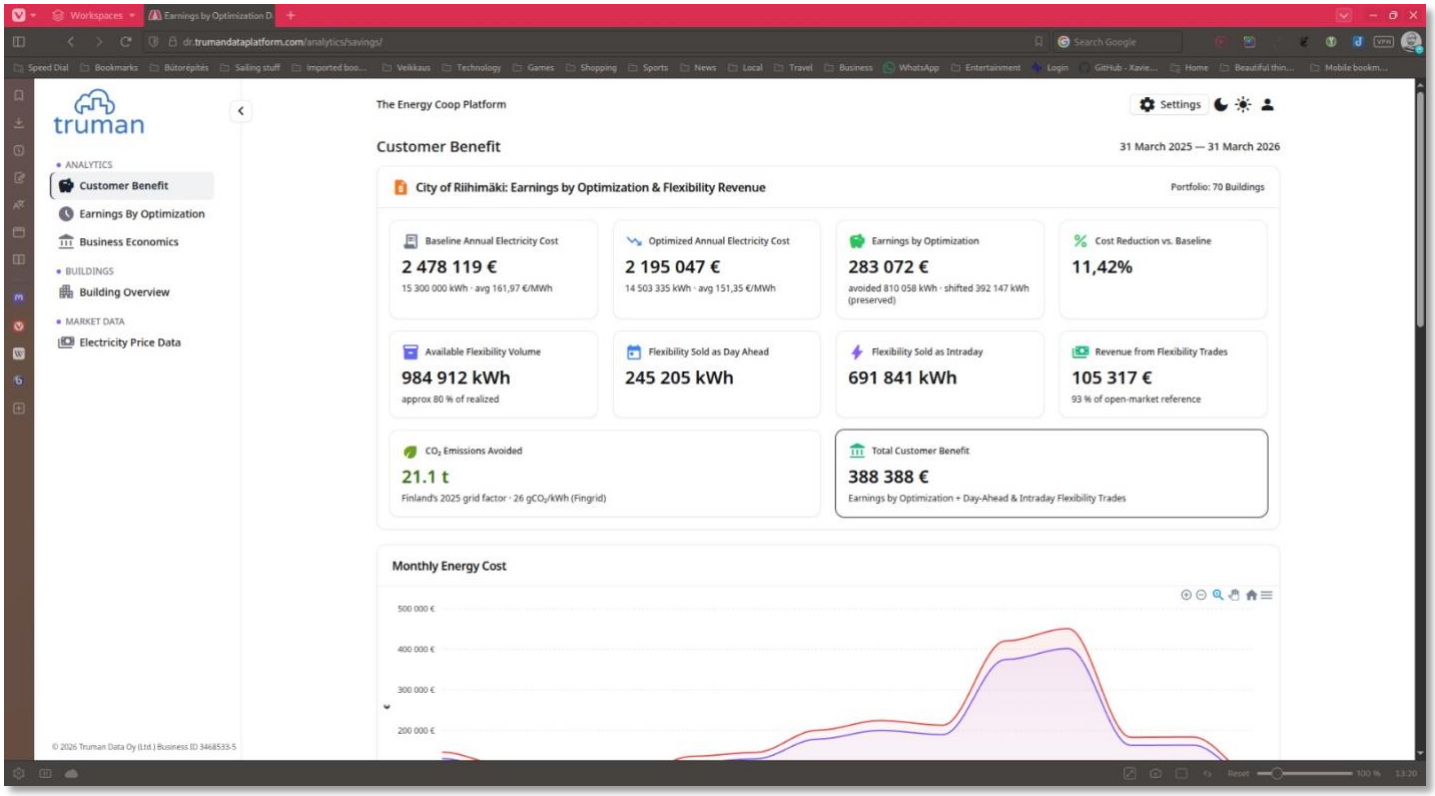
Appendix 2

Screenshots from the Energy Coop platform's closed-beta as presented in the 27th and 28th webinars. The images illustrate the solution's key attributes, including ML- and AI-driven electricity consumption steering based on each end customer's energy optimization strategy.

Decision-making relies on two inputs: real-time spot prices cross-referenced against the client's power purchase agreement (PPA) to calculate ongoing and next-day market price changes for the prediction model, and price-point load shifts that generate demand-response batches for continuous trading against Day-Ahead and Intraday market prices.

Reserve Market functions and the platform's calculation of potential demand-response earnings from that market were not yet included in the closed-beta demo, but are planned for the full release.




truman
ANALYTICS
Customer Benefit
Earnings By Optimization
Business Economics
BUILDINGS
Building Overview
MARKET DATA
Electricity Price Data
The Energy Coop Platform
Settings
Customer Benefit
31 March 2025 — 31 March 2026
City of Riihimäki: Earnings by Optimization & Flexibility Revenue
Portfolio: 70 Buildings
Baseline Annual Electricity Cost
2 478 119 €
15 300 000 kWh · avg 161,97 €/MWh
Optimized Annual Electricity Cost
2 195 047 €
14 503 335 kWh · avg 151,35 €/MWh
Earnings by Optimization
283 072 €
avoided 810 058 kWh · shifted 392 147 kWh (preserved)
Cost Reduction vs. Baseline
11,42%
Available Flexibility Volume
984 912 kWh
approx 80 % of realized
Flexibility Sold as Day Ahead
245 205 kWh
Flexibility Sold as Intraday
691 841 kWh
Revenue from Flexibility Trades
105 317 €
93 % of open-market reference
CO₂ Emissions Avoided
21.1 t
Finland's 2025 grid factor · 26 gCO₂/kWh (Fingrid)
Total Customer Benefit
388 388 €
Earnings by Optimization + Day-Ahead & Intraday Flexibility Trades
Monthly Energy Cost
500 000 €
400 000 €
300 000 €
200 000 €
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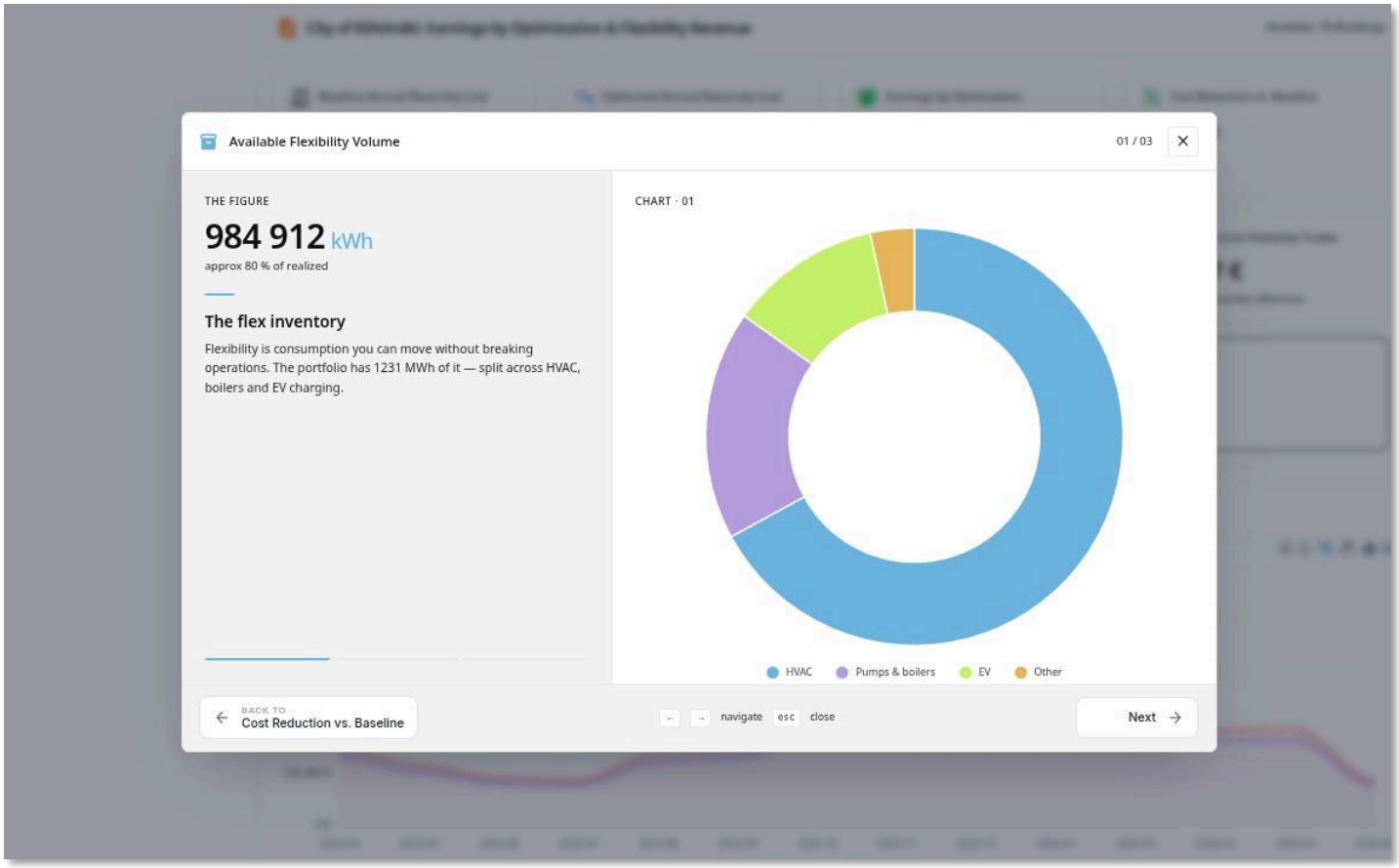
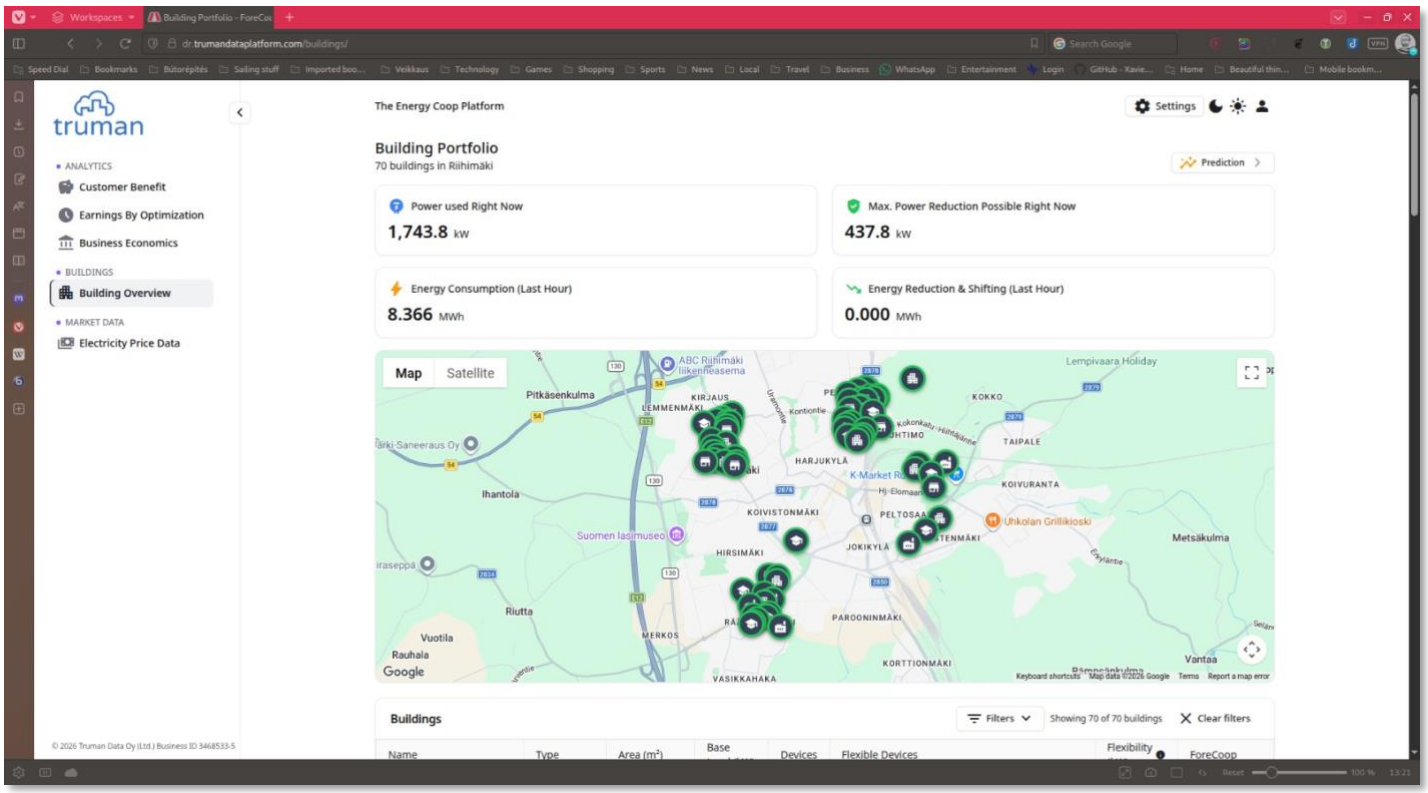
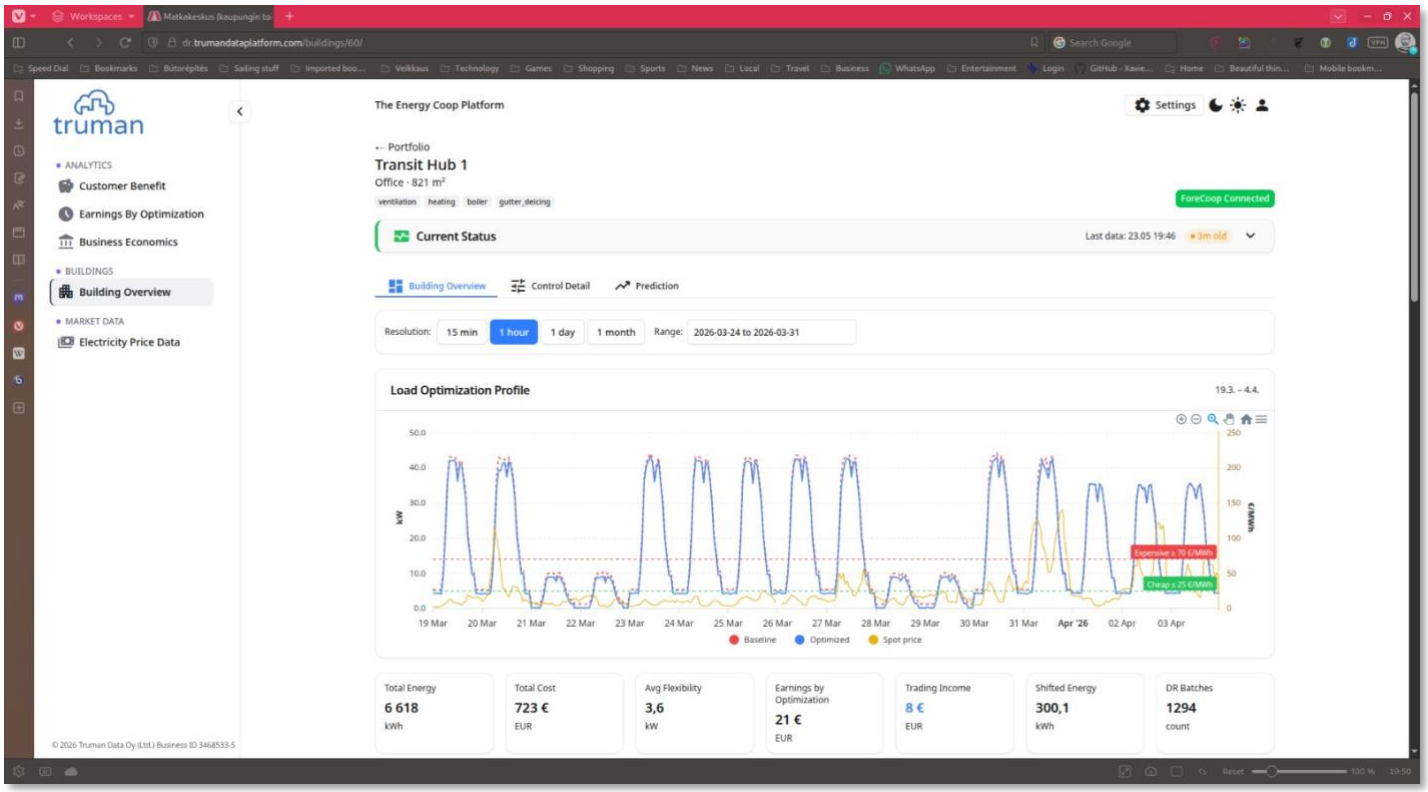
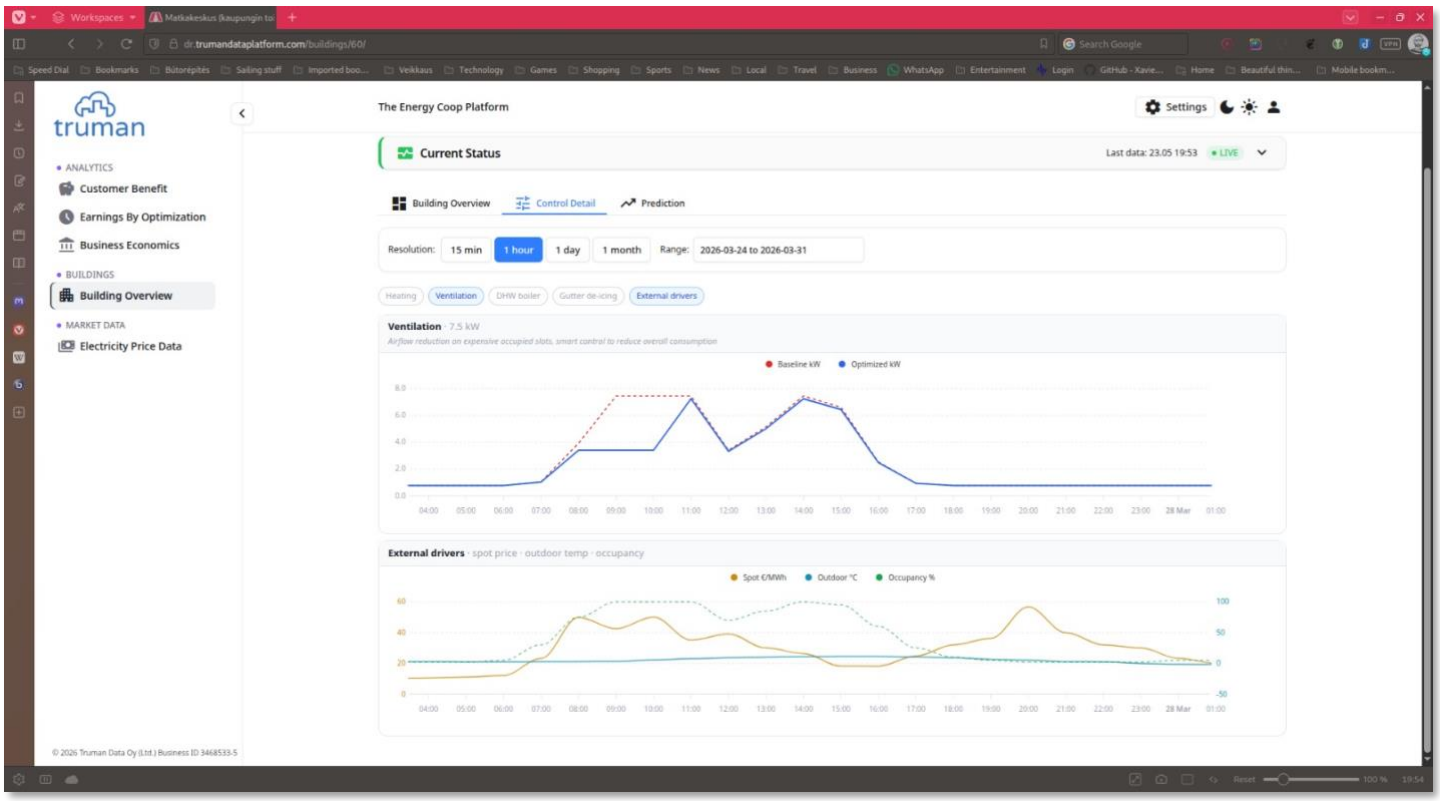
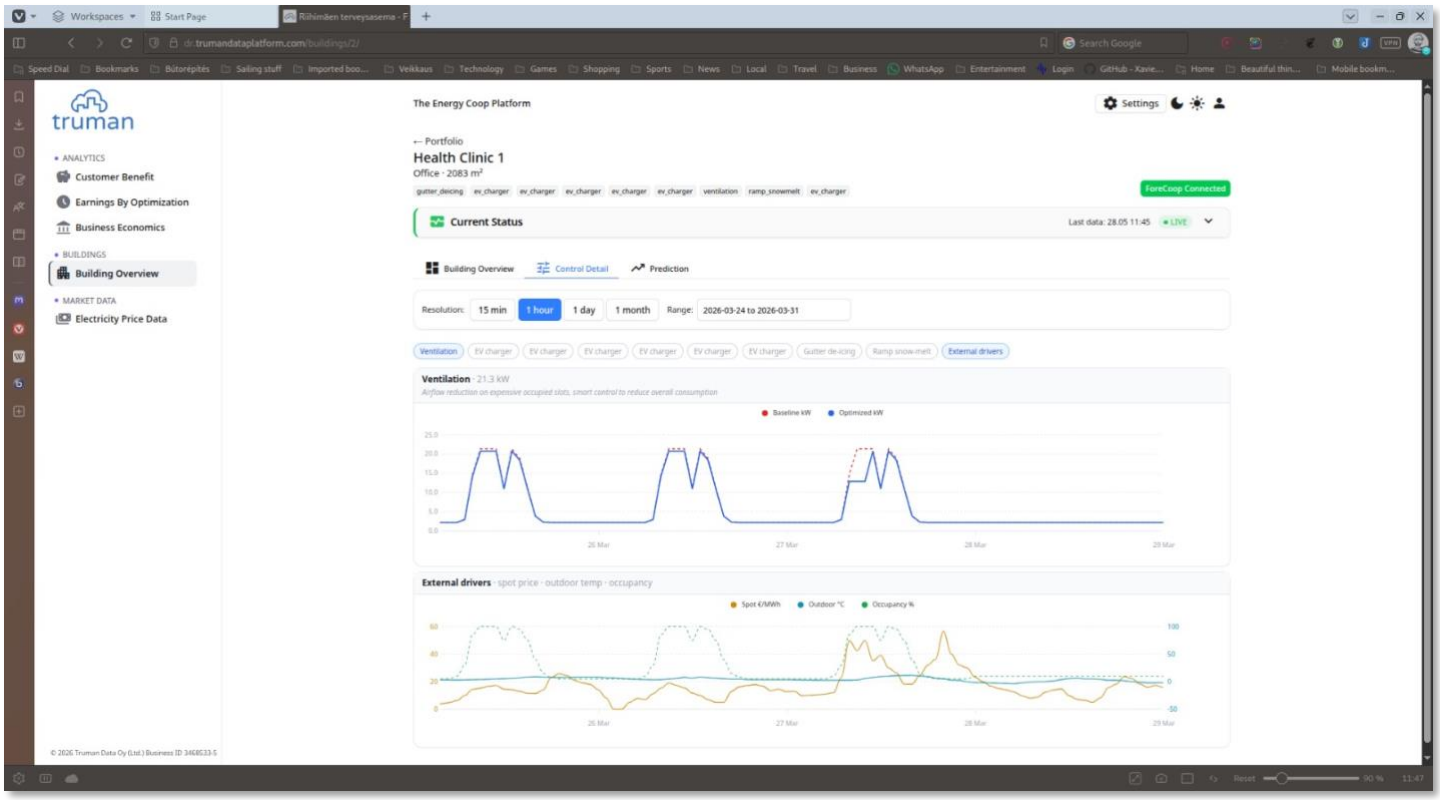
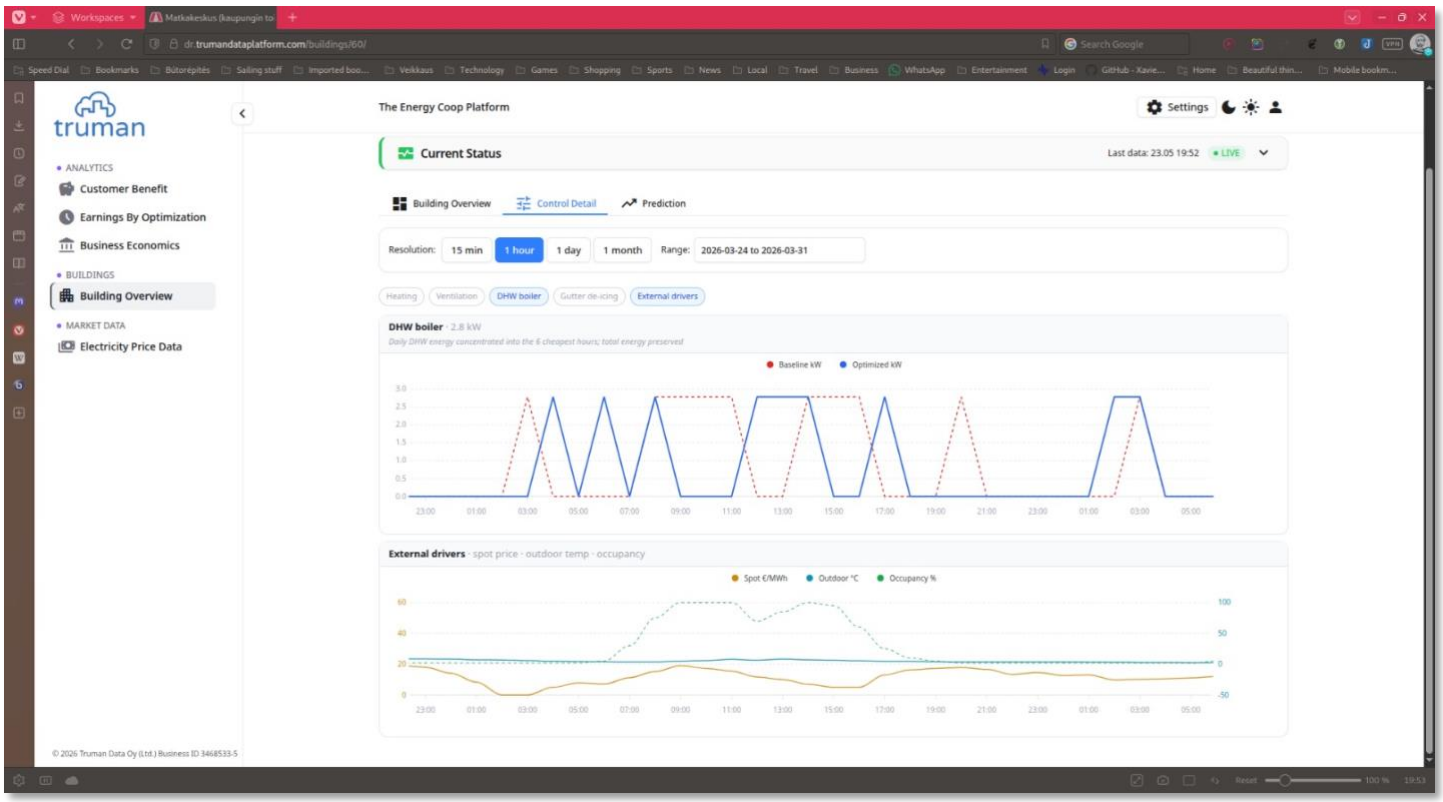

Available Flexibility Volume
01 / 03
THE FIGURE
984 912 kWh
approx 80 % of realized
The flex inventory
Flexibility is consumption you can move without breaking operations. The portfolio has 1231 MWh of it — split across HVAC, boilers and EV charging.
CHART · 01
HVAC
Pumps & boilers
EV
Other
BACK TO
Cost Reduction vs. Baseline
navigate
esc
close
Next


truman
The Energy Coop Platform
Settings
Building Portfolio
70 buildings in Riihimäki
Prediction
Power used Right Now
1,743.8 kW
Max. Power Reduction Possible Right Now
437.8 kW
Energy Consumption (Last Hour)
8.366 MWh
Energy Reduction & Shifting (Last Hour)
0.000 MWh
ANALYTICS
Customer Benefit
Earnings By Optimization
Business Economics
BUILDINGS
Building Overview
MARKET DATA
Electricity Price Data
Map
Satellite
Buildings
Filters
Showing 70 of 70 buildings
Clear filters
Name
Type
Area (m²)
Devices
Flexible Devices
Flexibility
ForeCoop


truman
The Energy Coop Platform
Settings
← Portfolio
Transit Hub 1
Office · 821 m²
ventilation
heating
boiler
gutter_deicing
ForeCoop Connected
Current Status
Last data: 23.05 19:46
Building Overview
Control Detail
Prediction
Resolution:
15 min
1 hour
1 day
1 month
Range:
2026-03-24 to 2026-03-31
Load Optimization Profile
19.3. - 4.4.
kW
€/MWh
Baseline
Optimized
Spot price
Total Energy
6 618
kWh
Total Cost
723 €
EUR
Avg Flexibility
3,6
kW
Earnings by Optimization
21 €
EUR
Trading Income
8 €
EUR
Shifted Energy
300,1
kWh
DR Batches
1294
count


truman
The Energy Coop Platform
Settings
Current Status
Last data: 23.05 19:53
Building Overview
Control Detail
Prediction
Resolution: 15 min 1 hour 1 day 1 month
Range: 2026-03-24 to 2026-03-31
Heating
Ventilation
DHW boiler
Gutter de-icing
External drivers
Ventilation · 7.5 kW
Airflow reduction on expensive occupied slots, smart control to reduce overall consumption
Baseline kW
Optimized kW
External drivers · spot price · outdoor temp · occupancy
Spot €/MWh
Outdoor °C
Occupancy %
ANALYTICS
Customer Benefit
Earnings By Optimization
Business Economics
BUILDINGS
Building Overview
MARKET DATA
Electricity Price Data


truman
The Energy Coop Platform
Settings
← Portfolio
Health Clinic 1
Office · 2083 m²
ForeCoop Connected
Current Status
Last data: 28.05 11:45
Building Overview
Control Detail
Prediction
Resolution: 15 min 1 hour 1 day 1 month
Range: 2026-03-24 to 2026-03-31
Ventilation
External drivers
Ventilation · 21.3 kW
Airflow reduction on expensive occupied slots, smart control to reduce overall consumption
Baseline kW
Optimized kW
External drivers · spot price · outdoor temp · occupancy
Spot €/MWh
Outdoor °C
Occupancy %
ANALYTICS
Customer Benefit
Earnings By Optimization
Business Economics
BUILDINGS
Building Overview
MARKET DATA
Electricity Price Data


truman
The Energy Coop Platform
Settings
Current Status
Last data: 23.05 19:52
LIVE
ANALYTICS
Customer Benefit
Earnings By Optimization
Business Economics
BUILDINGS
Building Overview
MARKET DATA
Electricity Price Data
Building Overview
Control Detail
Prediction
Resolution:
15 min
1 hour
1 day
1 month
Range:
2026-03-24 to 2026-03-31
Heating
Ventilation
DHW boiler
Gutter de-icing
External drivers
DHW boiler · 2.8 kW
Daily DHW energy concentrated into the 6 cheapest hours; total energy preserved
Baseline kW
Optimized kW
External drivers · spot price · outdoor temp · occupancy
Spot €/MWh
Outdoor °C
Occupancy %
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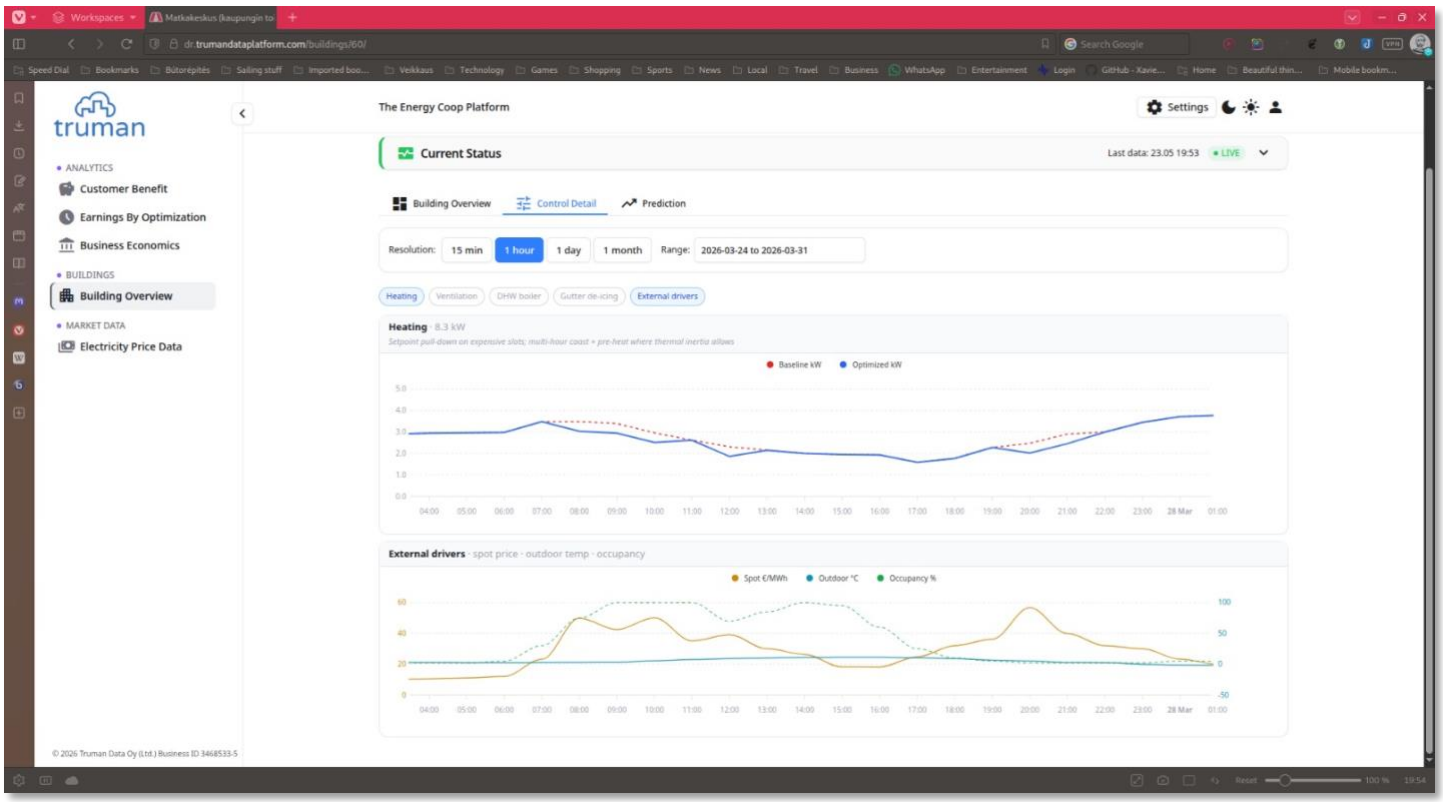
truman
The Energy Coop Platform
Settings
Current Status
Last data: 23.05 19:53
LIVE
ANALYTICS
Customer Benefit
Earnings By Optimization
Business Economics
BUILDINGS
Building Overview
MARKET DATA
Electricity Price Data
Building Overview
Control Detail
Prediction
Resolution:
15 min
1 hour
1 day
1 month
Range:
2026-03-24 to 2026-03-31
Heating
Ventilation
DHW boiler
Gutter de-icing
External drivers
Heating · 8.3 kW
Setpoint pull-down on expensive slots; multi-hour coast + pre-heat where thermal inertia allows
Baseline kW
Optimized kW
External drivers · spot price · outdoor temp · occupancy
Spot €/MWh
Outdoor °C
Occupancy %
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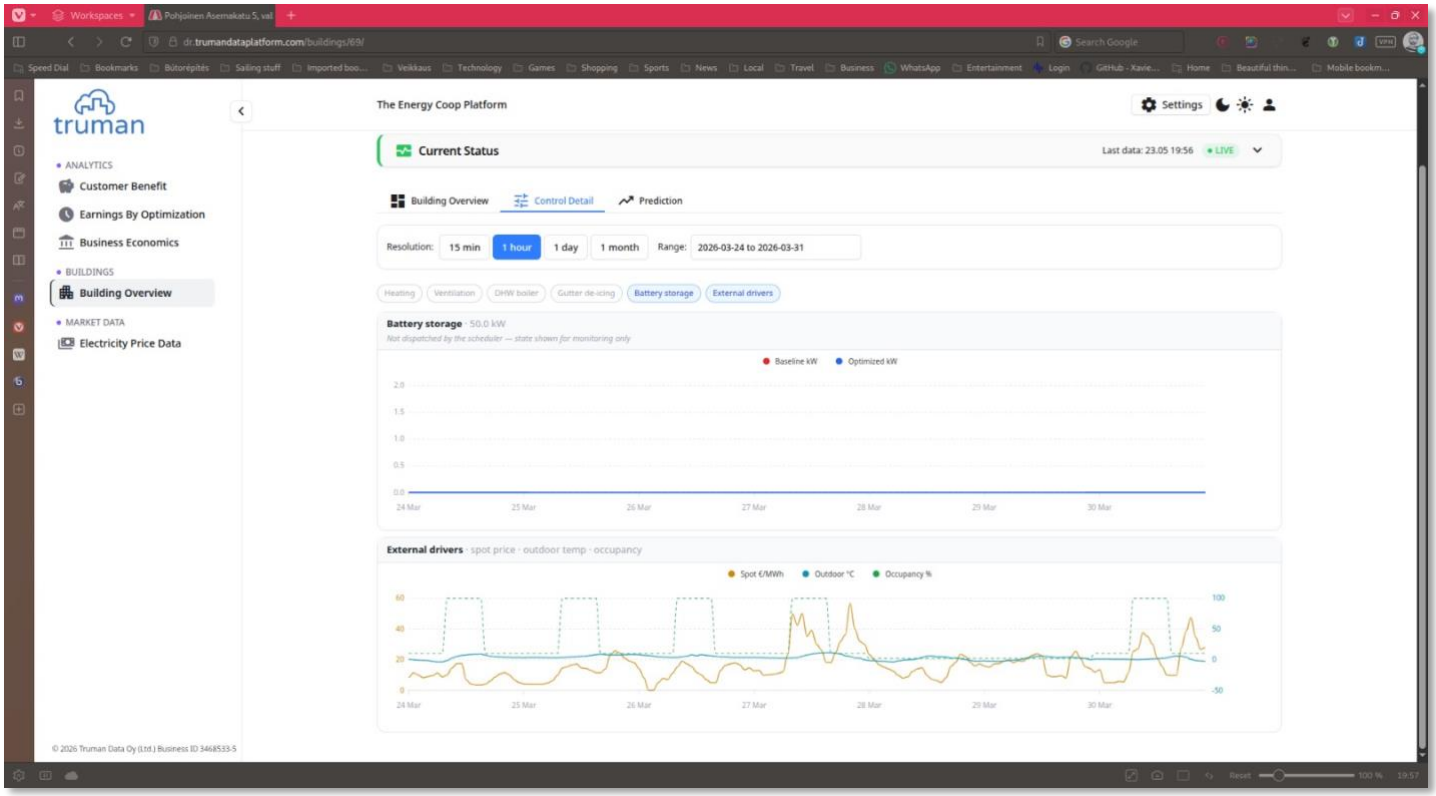

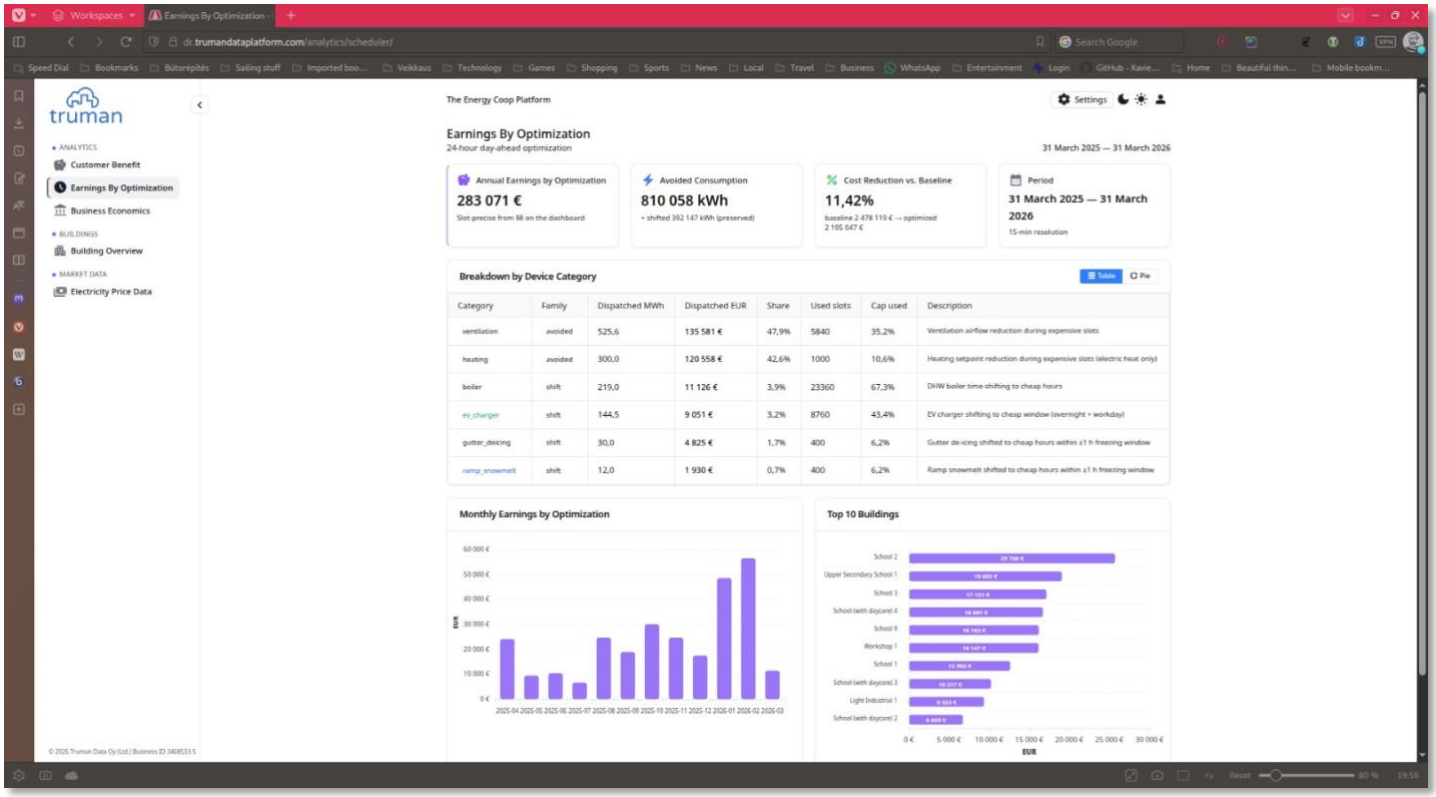

Appendix 3

The invitation to the May 27th and 28th Energy Coop platform webinar

YOU ARE INVITED

The *Energy Coop* Solution — Demo Days

Virtual power plant & critical electricity infrastructure · Truman Data Oy · via Google Meet

Truman Data is building a cloud platform that delivers an AI-driven consumption management system incorporating end-user-tailored flexibility prediction models that enable end customers to trade demand response, i.e., flexibility into energy markets on their own terms.

The solution delivers significant **new earnings through energy cost optimization** and **trades in flexibility** sourced from the built environment; together, these **reduce CO_2 emissions for large built-environment owners**.

The platform is purpose-built to support **critical electricity infrastructure**, ensuring the highest standards of security, data sovereignty, and operational resilience, and will be hosted exclusively in EU-based data centers, independent of major US hyperscalers. The platform guarantees end customers' full data ownership.

The core concept of Energy Coop is simple, as you can **see for yourself here**. Beyond that short overview, we'll gladly share more detailed information. It's a compelling read, as the Energy Coop solution is set to transform the production-driven energy market into one driven by consumption and users… a market that benefits first and foremost the end customers!

Björn Hammar
CEO, Truman Data
hello@truman.cloud

LIVE PILOT

> The Energy Coop — a virtual power plant and automated flexibility trading system — has been piloted on the City of Riihimäki's owned property portfolio electricity. Real data, real optimization, in production.

PICK ONE SESSION — BOTH COVER IDENTICAL CONTENT

The two sessions below are **independent of each other** and cover exactly the same demonstration. Please choose whichever time suits you best 👇 There is no need to attend both.

27
May · Option A

3:00 pm (EEST)
Finland time · Europe/Helsinki

Video	meet.google.com/anv-upgk-tna
Phone	+358 9 85691592 · PIN: 875 122 625#
More	tel.meet/anv-upgk-tna

Join — May 27, 3:00 pm →

28
May · Option B

9:00 am (EEST)
Finland time · Europe/Helsinki

Video	meet.google.com/ipi-qcee-jzr
Phone	+358 9 85691671 · PIN: 665 784 441#
More	tel.meet/ipi-qcee-jzr

Join — May 28, 9:00 am →

🕐 Up to **1 hour** per session — with an optional additional **30 minutes** reserved for those who want a comprehensive deep-dive and Q&A.

WHAT YOU WILL SEE

We show how the sausage is made. The demonstration uses real data to walk through how the cloud solution trades and performs optimization in real time — illustrating how the Energy Coop functions as both a virtual power plant and a critical electricity infrastructure tool for large built environments.

After the demo, you will understand how the Energy Coop platform connects all energy assets across the built environment and turns them into a unified, fully automated flexibility trading system that generates value continuously.

EVs · Heating & ventilation · BESS · Lighting · Cooling · All flexible consumption

WHAT IT CREATES

- Earnings through continuous portfolio-wide cost optimization
- Entirely new revenue from aggregated flexibility sold automatically on Intraday and Day-Ahead markets via the automated flexibility trading system
- Verified CO_2 emissions savings across the entire portfolio
- Fully automated for the end customer — no manual intervention required

WHO THIS IS FOR

Cities, municipalities, shopping centers, large energy-consuming businesses, and major real estate holders such as investment funds and mutual pension insurance companies, etc., that can use a closed PaaS platform to maximize energy efficiency and unlock new income from their flexibility capacity.

SOME OF THE CONFIRMED ATTENDEES

VTT	**VTT Technical Research Centre of Finland** VTT (Technical Research Centre of Finland) is one of the leading research and innovation organizations in Europe. VTT operates as a visionary R&D partner, commercializing deep-tech innovations and solving major global challenges. VTT coordinates key European initiative, the EU superconducting quantum technology pilot.
Fingrid	**Fingrid Oyj** Finland's sole national electricity transmission system operator (TSO), responsible for the technical functionality, system security, and balance of the Finnish power system.
DLA Piper	**DLA Piper Finland** The Finnish office of DLA Piper, one of the world's largest global business law firms with offices in more than 40 countries, ranked #1 in Nordic M&A. DLA Piper Finland Attorneys Ltd advises on corporate, energy, real estate, technology, and regulatory matters.
IEA	**International Energy Agency** The International Energy Agency is a Paris-based autonomous intergovernmental organization, established in 1974, that provides policy recommendations, analysis, and data on the global energy sector. The 32 member countries and 13 associate countries of the IEA account for 75% of global energy demand.
BRPs	**Two large Finnish energy companies** Balance responsible parties (BRPs) active in the Finnish electricity market.
EK	**Confederation of Finnish Industries** EK's main task is to make Finland an internationally attractive and competitive business environment since successful business activities are the foundation for the Finnish welfare society.
Seed-investors & Stakeholders	The invitation for this DEMO presentation is circulating among various industry decision-makers: end-customer representatives and persons with investment interests in the energy sector.