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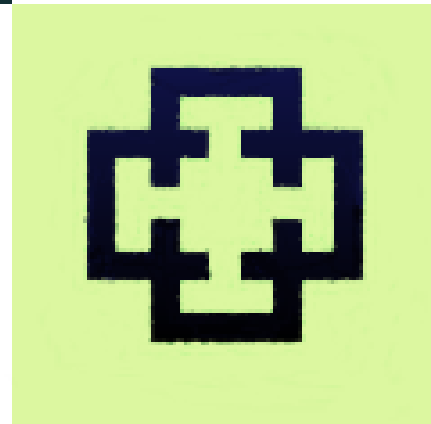
MET3R Solutions



Decentralised Energy Communities

The European Commission has formalised the concept of energy communities under the the REPowerEU Plan.

The aim of energy communities is to enable collective and citizen-driven energy actions to support the clean energy transition. They can contribute to public acceptance of renewable energy projects and make it easier to attract private investments in the clean energy transition. Energy communities can help in re-structuring existing energy systems and empowering citizens to pursue initiatives that accelerate the green transition regionally. However, for energy communities to succeed, they need to be able to move beyond isolated local initiatives, to achieve network effects and attract capital expansion internationally.

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01.

Energy communities need sophisticated grid controllers to bring about a more sustainable, resilient, and equitable energy future by empowering local stakeholders, promoting renewable energy adoption and increasing resilience through additional demand response flexibility.

02.

To achieve optimal integration of locally generated renewable energy, an AI-driven load flow model reliant on consumer data is essential. However, the stringent provisions of GDPR prohibit the collection of such data, as it encroaches upon personal privacy. Our proposition entails the adoption of decentralized identifiers, effectively segregating pertinent smart grid data from personal information. This approach empowers users to autonomously govern and monetize their data streams.

03.

A decentralized Energy Community with transparent transactions invites external investment in local energy infrastructure while ensuring majority ownership and governance remain within the community. Community-based (DAO like) decision-making empowers renewable energy community members to organize, vote on proposals, manage resources, and reinvest energy sales proceeds democratically.

Data Acquisition Devices

https://shop.decent.ec

Our secure element-hardened Crypto RTU devices form a radio mash network operating in the **868** MHz ISM range. The devices use their cryptochip based decentralised identifiers (DIDs) to authenticate and communicate their data streams on a blockchain immutably and transparently.

See attached:

- Dena-DIVE project
- Decentralized Identities

Crypto RTU

$150.00

– 1 +

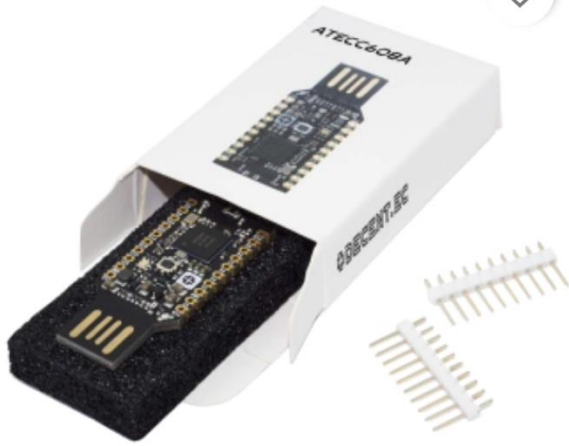
Battery (UPS)

$300.00

– 1 +

Crypto Gateway 4G/5G

$350.00



Pre-provisioned Secure Element (Microchip 608A)

$200.00

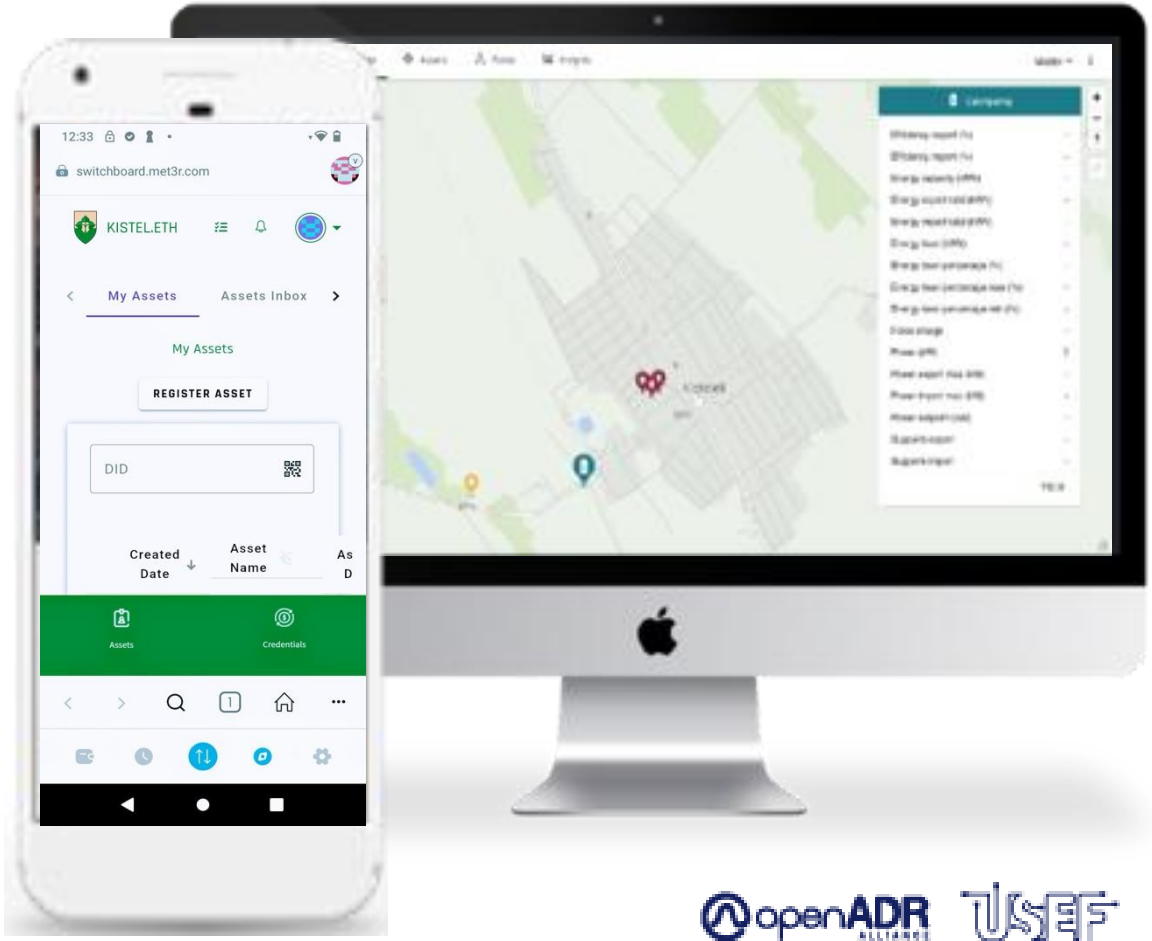
Standards compliant web3

https://switchboard.met3r.com/

Assets provisioned on the permissioned/permissionless blockchain use EIP712 signatures, ERC-20 tokens, ERC-725 DIDs under the hood. They expose and consume standard MQTT data streams so as to be managed with run-off-the-mill IoT tools.

See attached:

- Provisioning dApp
- Switchboard



openADR ALLIANCE

USEF

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Community Portal

https://portal.decent.ec

Wallet-integrated Community Portal for the tokenization of data and energy adds to the infrastructure for DAO–governed energy communities.
The transaction transparency inherent in blockchain–based energy management does not only enable decentralized rule-based decision-making but also provides an avenue for external investment.

See attached:

- Login-register
- Data market

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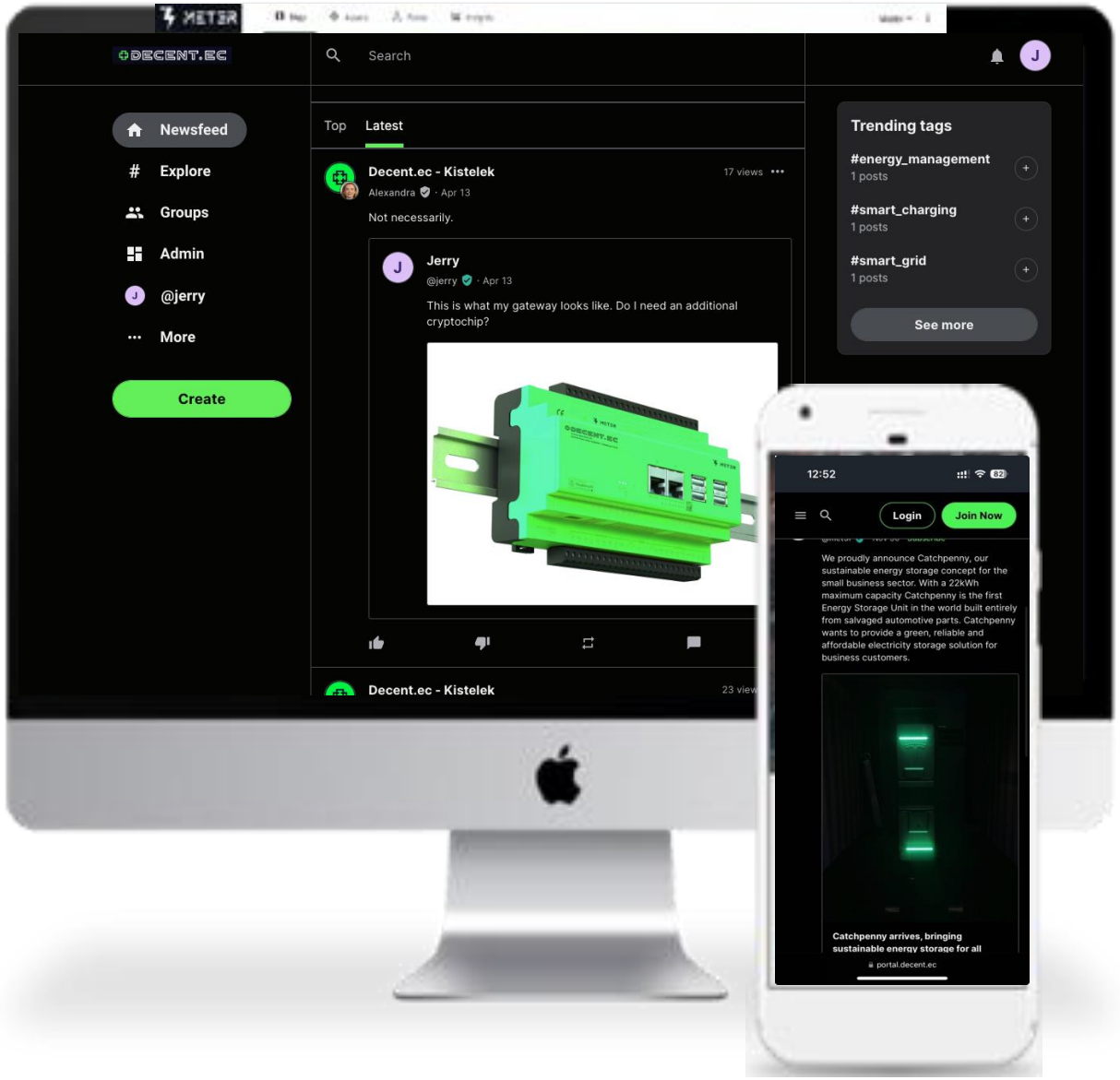


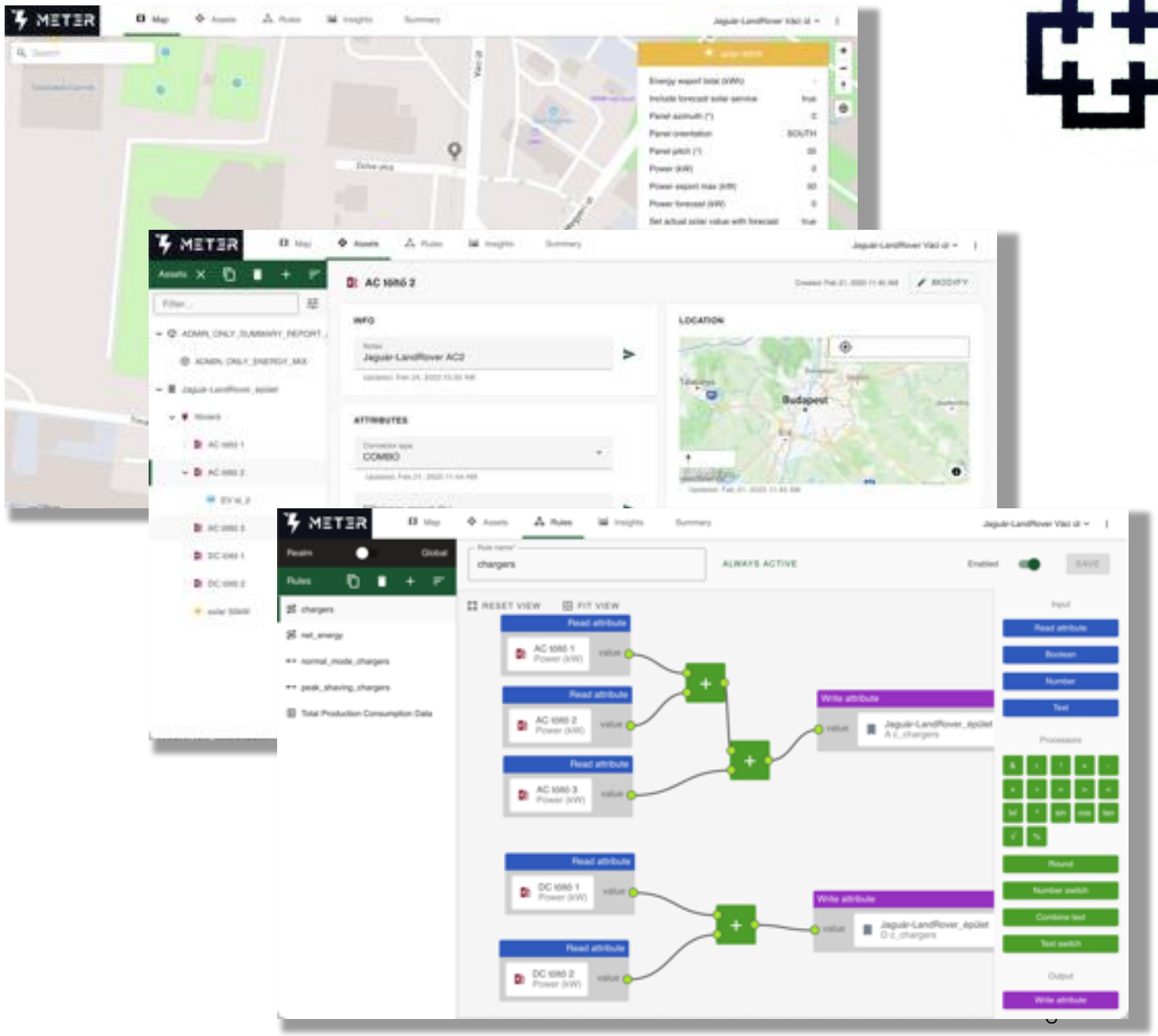
EMS Dashboard

https://zensite.met3r.com

We offer connectors for two open–source smart energy IoT platforms (ThingsBoard and OpenRemote) for Advanced Energy Management. Administrators can use these well documented tools for monitoring, controlling and managing the connected distributed energy assets.

See attached:

- IOT-Dashboard
- Forecasting
- Extensions
- Rules Editor



µSCADA Functions

https://zengrid.met3r.com

Our sensors and load-control provide functions for low voltage grid management as well. Strategically placed micro PMUs localize failures and monitor Power Quality events. The system offers predictive maintenance and local voltage control as well.

See attached:

- Local voltage regulation
- Load-flow modelling
- transactive grid
- Prioritizing Renewables

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Compute Terminal

https://awx.decent.ec

As a (prospective) administrator of a decentralized energy community you get access to the Compute Terminal. This interface lets you run computation intensive calculations, simulations, algorithms. Invoice calculation is a typical one but we also have a real-time adjusted recurrent neural network for load-flow modeling which informs our storage scheduler, etc.

See attached:

- Compute Terminal
- Real-time Load-Flow Modelling
- BESS optimization algorithm
- Custom dashboards

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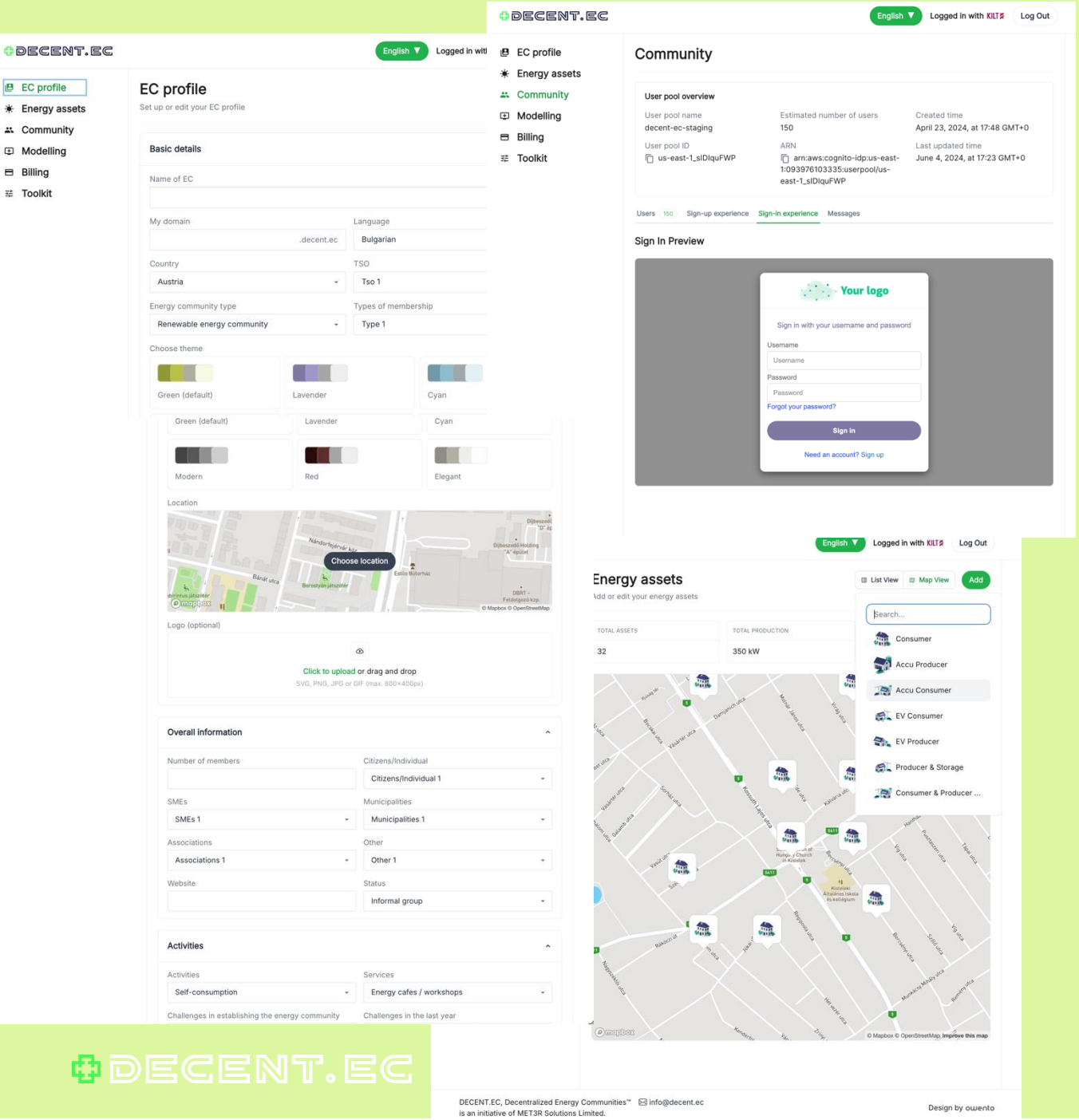
2.1.3 Execute functions for plotting the average consumption for each day of the week

```
# Plotting the data
plot_monthly_consumption_adjusted(avg_15min_weekly_monthly_consumption, all_consumption_columns)
plot_stacked_consumption(avg_hourly_weekly_monthly_consumption, all_consumption_columns, "Hourly", chart_type="monthly")
plot_stacked_consumption(avg_daily_weekly_monthly_consumption, all_consumption_columns, "Daily", chart_type="monthly")
```

[21] Python

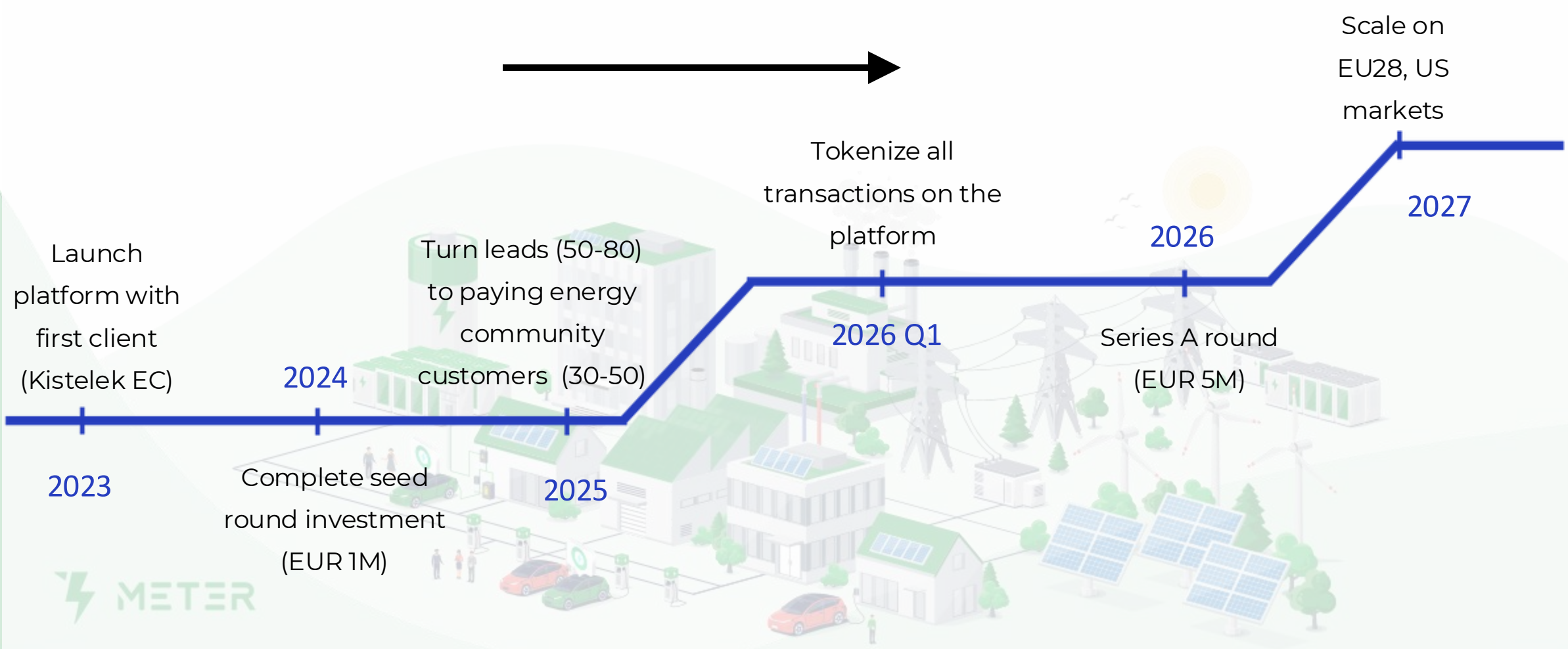


LAUNCH YOUR EC HERE
https://staging.decent.ec

Energy Community founders can create a EU EC-Repository compatible profile, generate a user pool, launch a community portal, add essets and generate simulations for ROI calculations with preconfigured profiles and simulated storage and production.

THANK YOU

MILESTONES


Launch platform with first client (Kistelek EC)
2023
2024
Complete seed round investment (EUR 1M)
Turn leads (50-80) to paying energy community customers (30-50)
2025
Tokenize all transactions on the platform
2026 Q1
2026
Series A round (EUR 5M)
Scale on EU28, US markets
2027

Vienna
Verbund

Ricziany
municipality

Brussels
Colruyt

Budapest
Jaguar

Budapest
Porsche Hu

Kistelek
Energy
community