Energy Track and Trace

Partner Meeting – June 15th, 2023

European partnership on next generation energy tracking.

June 15th , 2023

June 15th, 2023 - Agenda

Intro

1. Welcome

Product Development

1. Status
2. Roadmap 2023

Pilot test

1. Welcome to Lichtblick and Granular Energy
2. Pilot test intro and presentation
3. Questions and dialogue

Closing and goodbye

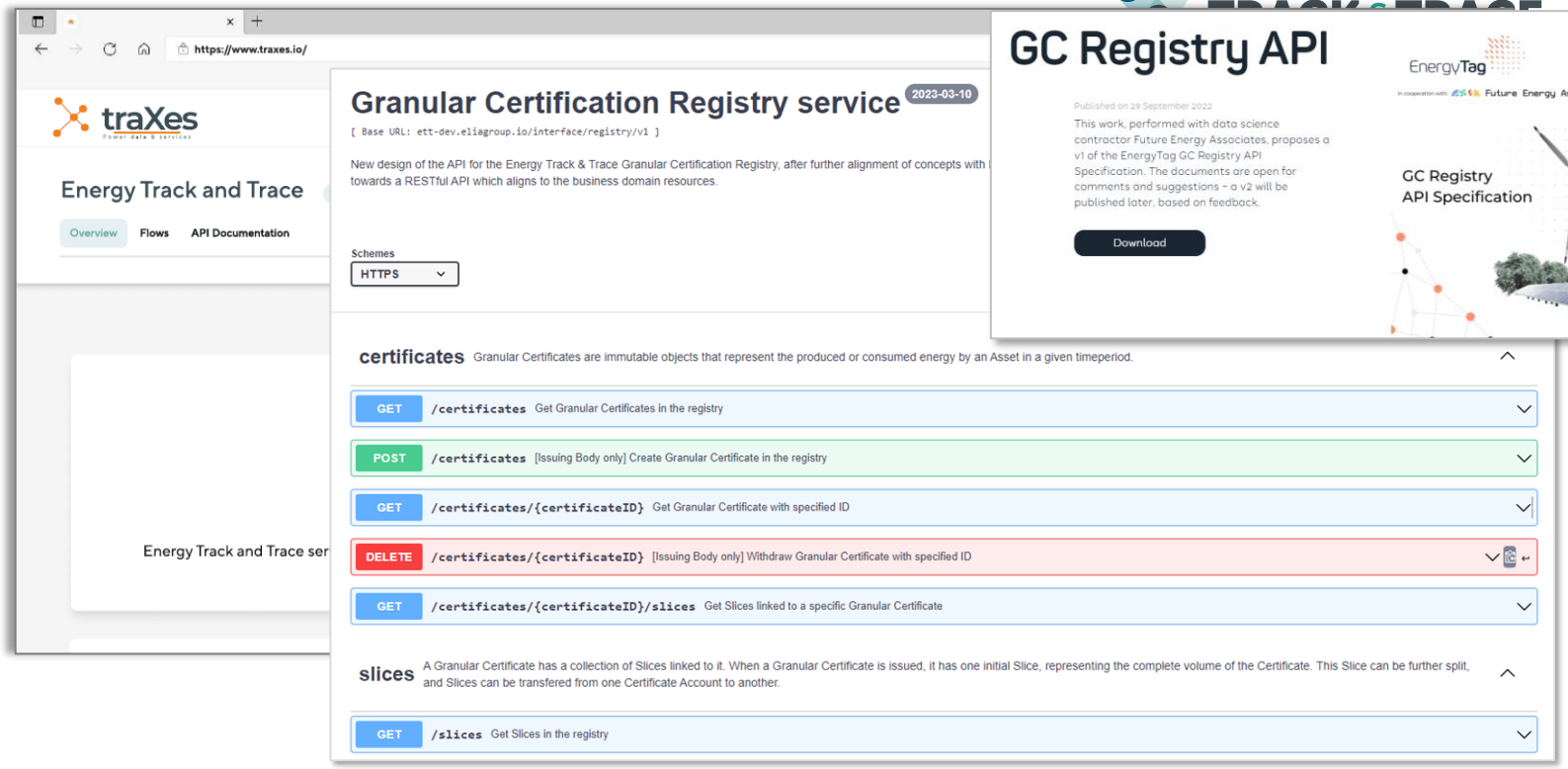
Product Development

1. Status
2. Roadmap 2023

Elia Group – Energy Track & Trace service
> Recap

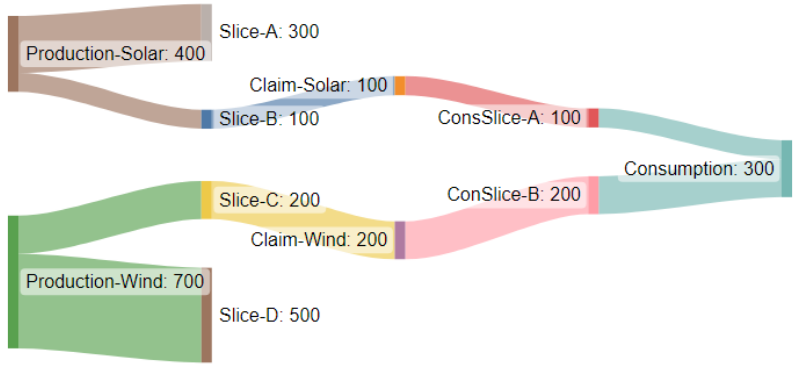
API-first approach

- First priority to API developer platform, enabling service providers to build services using granular certificates
- Alignment with EnergyTag on API standard



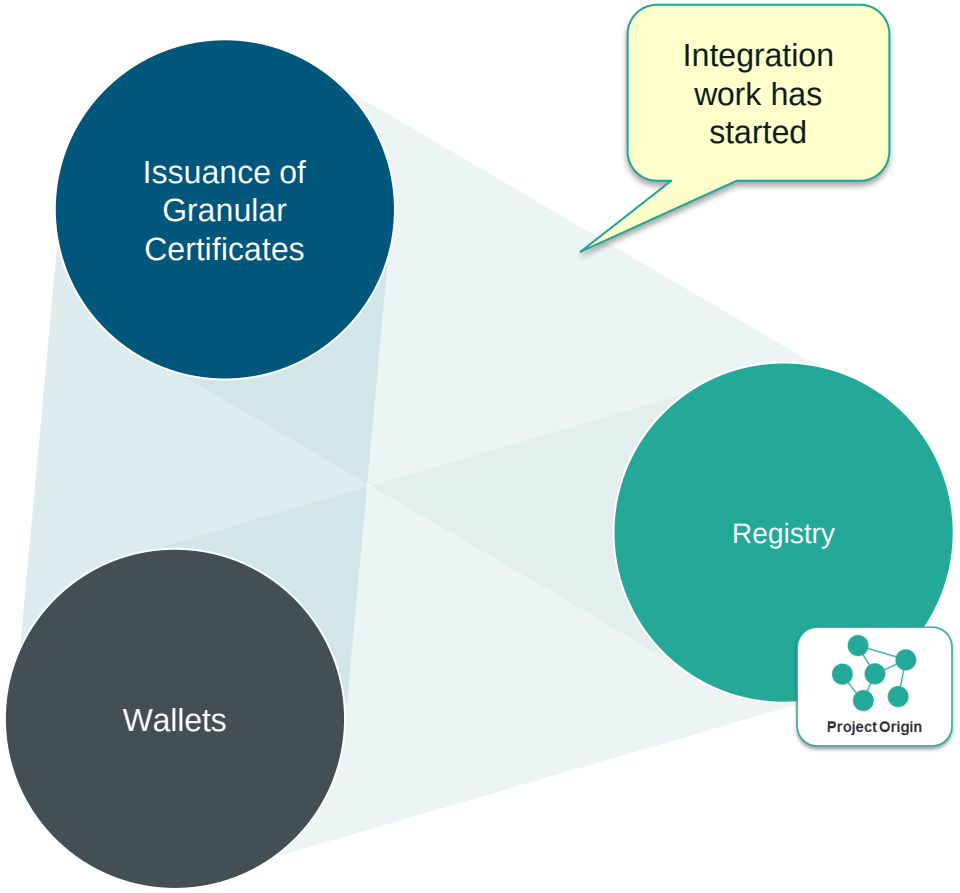
Alignment with Project Origin

- We further aligned on nomenclature and business concepts with Project Origin.
- We adopted the concept of Slices under immutable Granular Certificates



Energy Track & Trace has three main capabilities

- Onboarding of production & consumption assets/devices
- Connect to trustworthy metering data to issue granular certificates



- Certificates are kept in wallets
- Wallets can be owned by asset owners, energy suppliers, traders, etc
- Certificates can be transferred between wallets

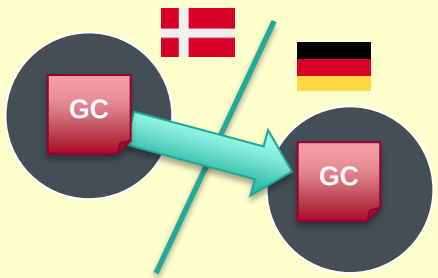
- Registry is single source of truth for immutable granular certificates.
- Registry is publicly verifiable, but sensitive data is obfuscated/encrypted (Pedersen commitments)
- Registry is auditable & tamper evident (Merkle trees & layer-2 blockchain)

Emerging design questions

Prerequisite: “*Granular Certificates can never leave a registry*”.

Issuance of Granular Certificates

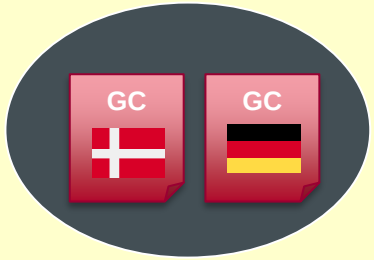
How can we allow users to freely transfer certificates (across borders)?



Wall

Registry

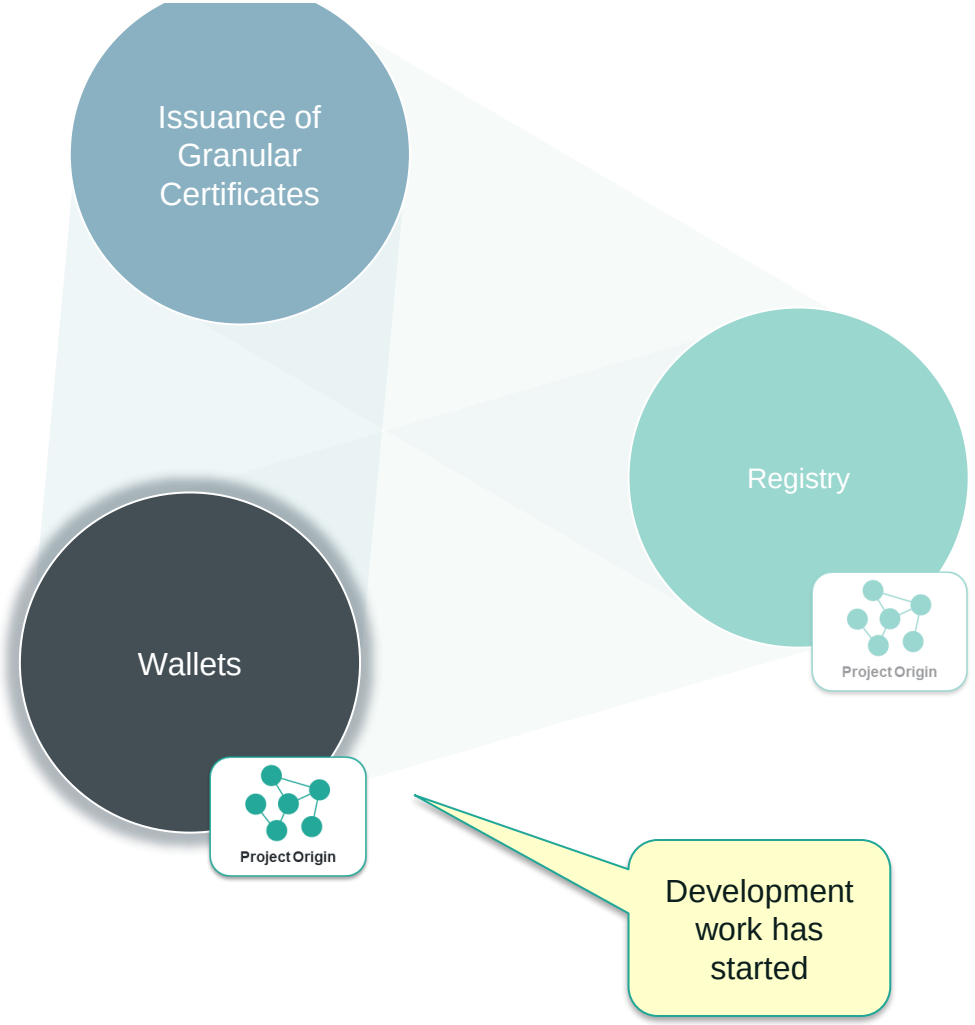
How can we allow users to keep certificates from different registries in one place?



How can a user claim production against consumption located in different registries (& countries)?

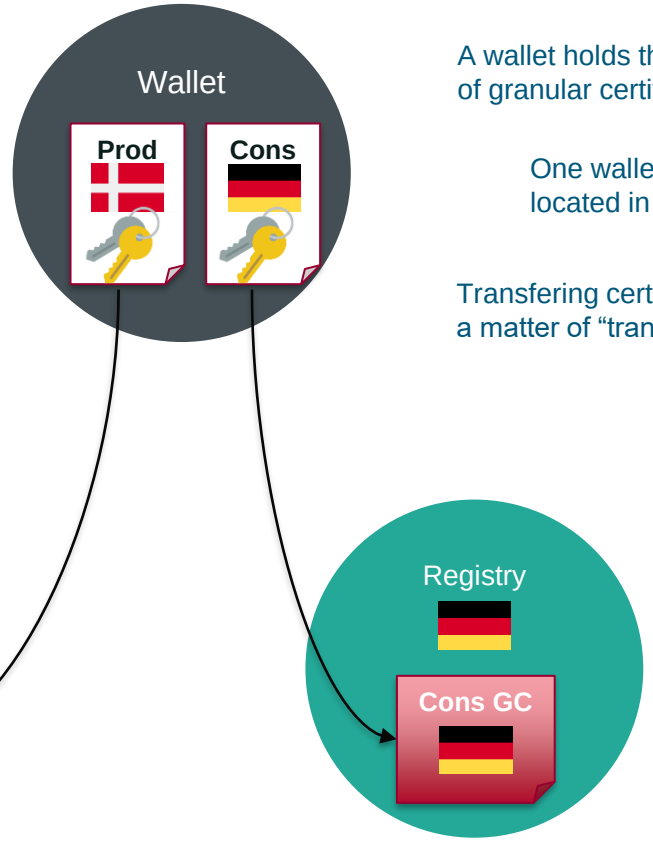
Unlocking cross-border cases

Clear need for a **common wallet concept**.
Project Origin will not only deliver an Open Source registry service, but as well an Open Source wallet service.



- Certificates are kept in wallets
- Wallets can be owned by asset owners, energy suppliers, traders, etc
- Certificates can be transferred between wallets
- **Wallets can contain certificates from multiple registries**

Unlocking cross-border cases



A wallet holds the owner keys to prove ownership of granular certificates.

One wallet can hold keys for granular certificates located in multiple registries.

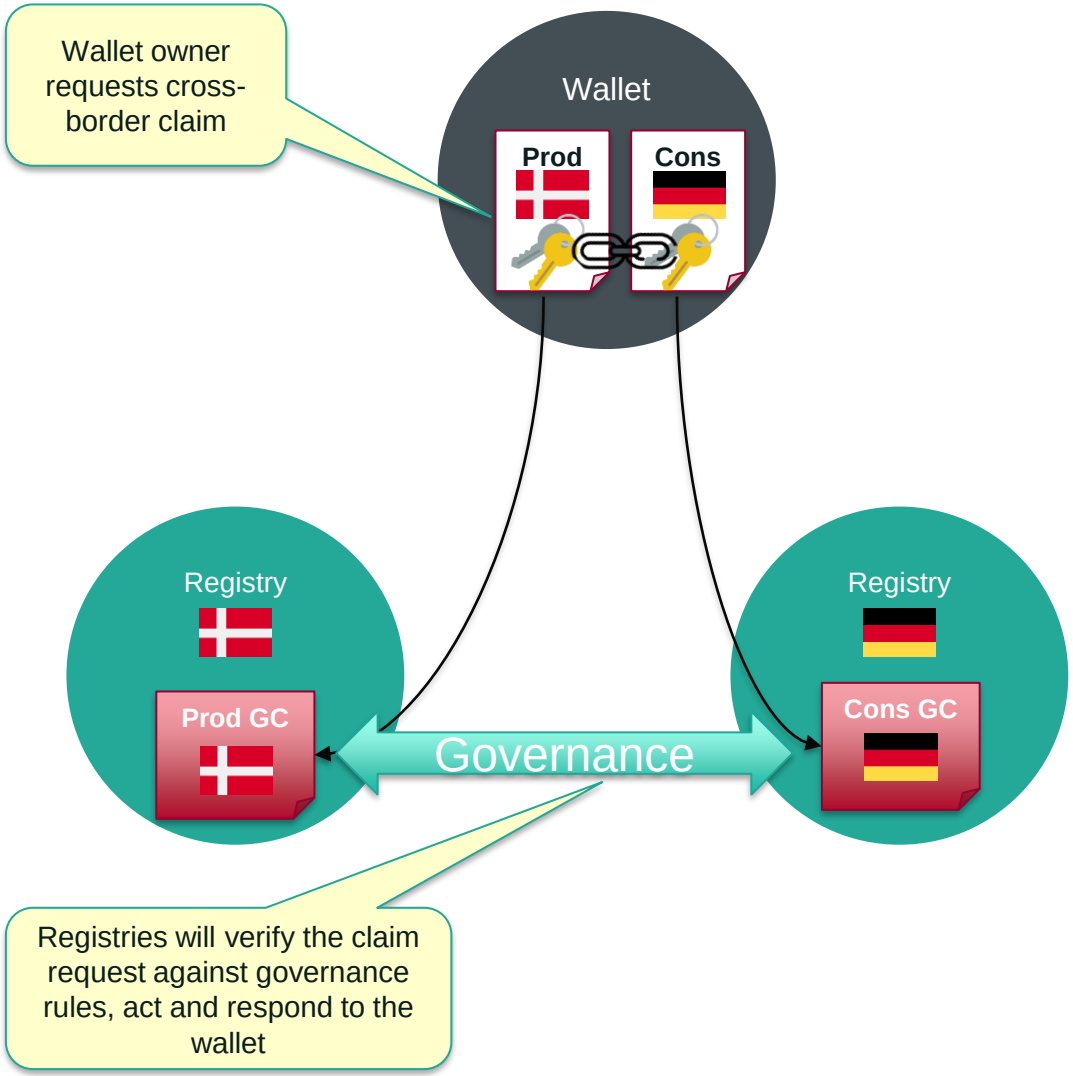
Transfering certificates to another wallet becomes a matter of “transferring the keys”.

The registry contains the **single source of truth** of granular certificates.

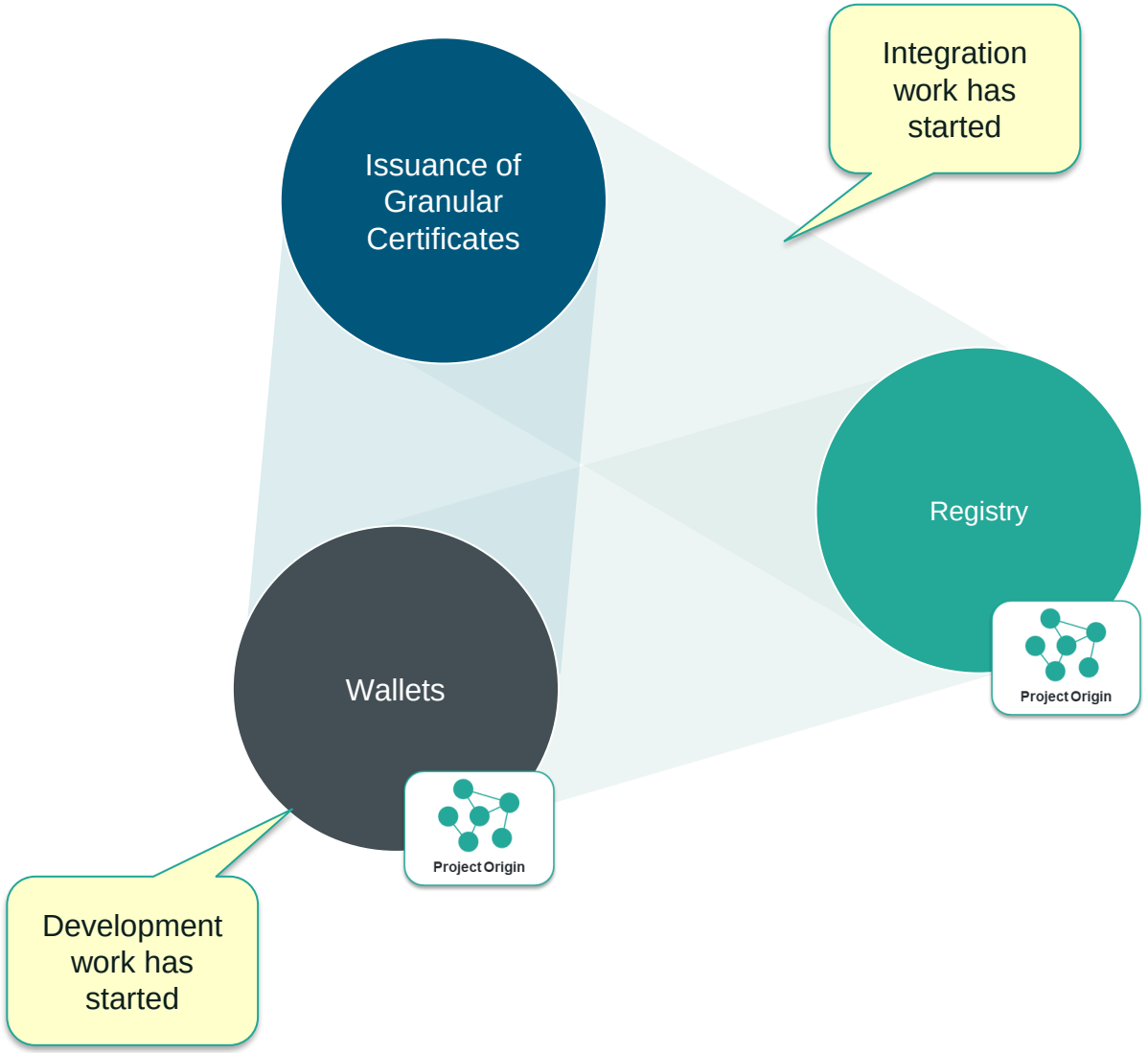
Granular certificates can never leave the registry during their lifecycle.

Ownership of Granular certificates is proven by owner keys.

Unlocking cross-border cases

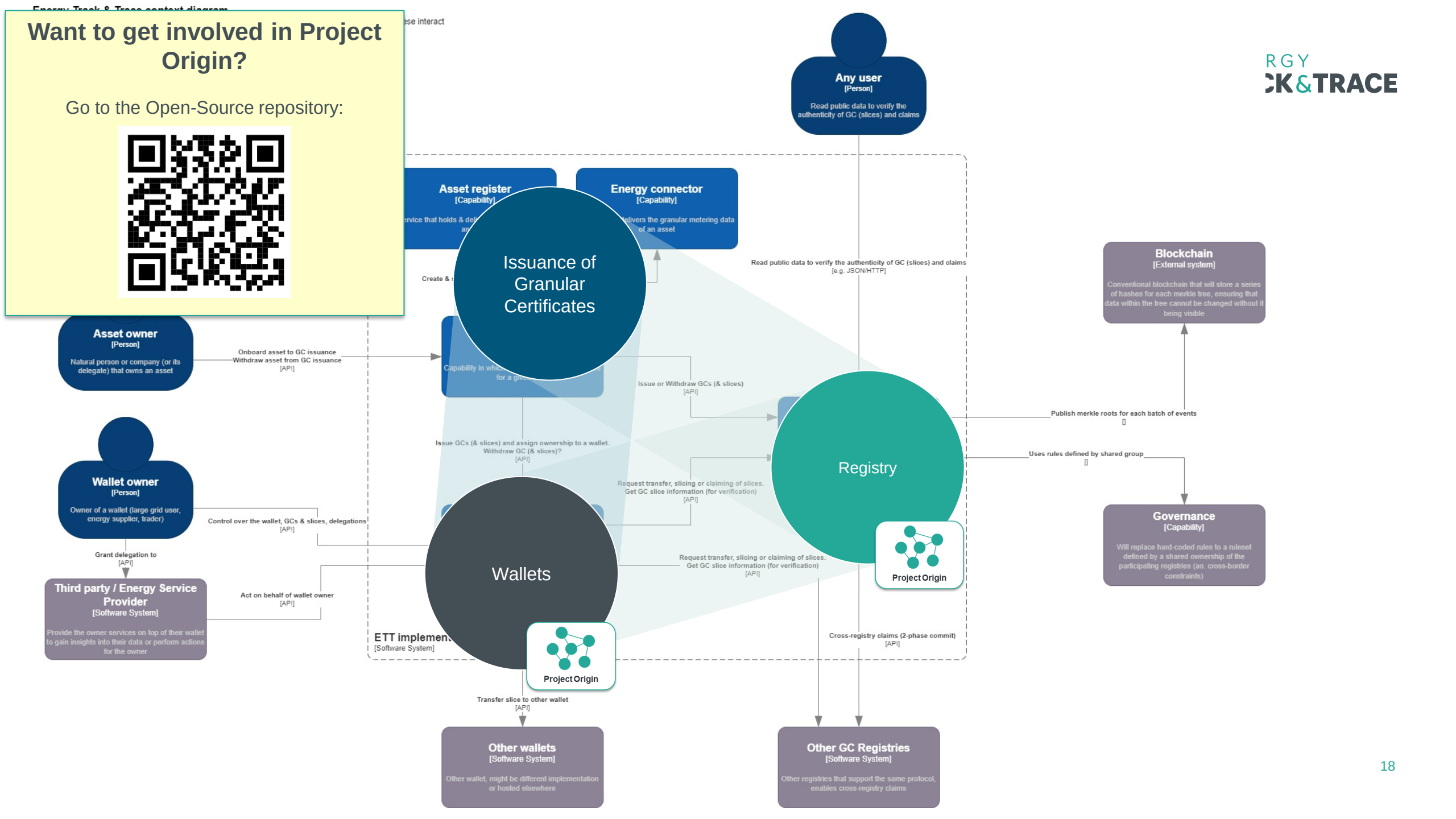


Work in progress!



Want to get involved in Project Origin?

Go to the Open-Source repository:



Elia Group – Energy Track & Trace service
> Roadmap 2023

Storage assets in Energy track & trace

GO-GC integration in Germany

GO-GC integration in Belgium

Current focus

Integration with the **proof layer** offered by **Project Origin**

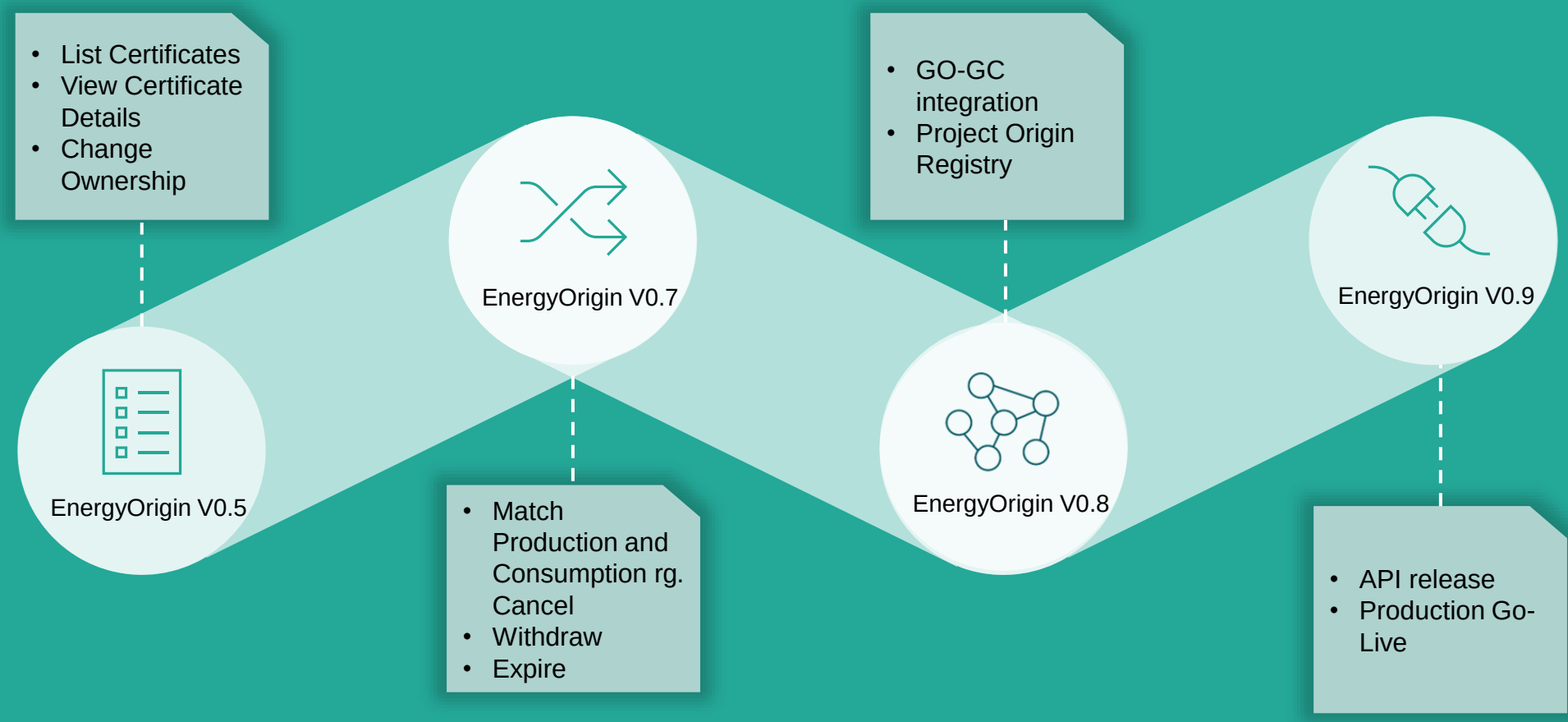
Cross-border claiming

Multiple scenarios to be tested, as stated in our concept note in 2022

“Market-based” CO2 intensity calculations based on Granular Certificates

Under consideration

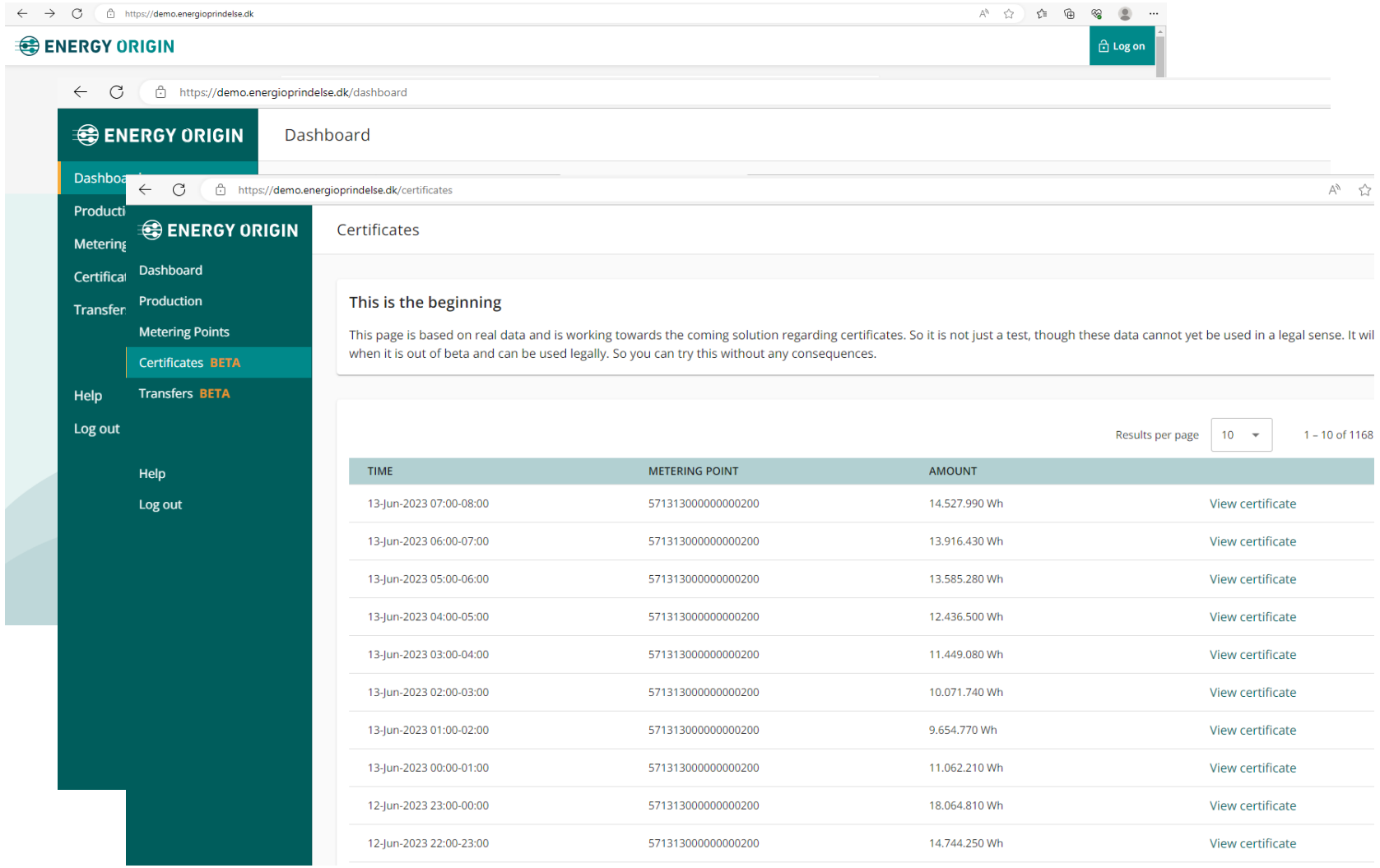
Development roadmap Energinet



Simple Match and Claim

Access to test of 3rd party API's for development

Project Origin Integration	GO GC	Cross border
Q2 2023	Q3 2023	Q4 2023



1-to-1 demo environment of current development level

Demo site with personas, where it is possible to explore simple use cases

Built on top of the coming EnergyOrigin Platform under development by Energinet

Accessible in "production" with Danish MitID Erhverv accounts

Features

- Issuance of example Granular Certificates
- Certificate overview
- Transfer Agreements

If you want to test or setup a pilot project

Belgium/Germany:
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Product Owner
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ENERGY TRACK&TRACE

ENERGY TRACK&TRACE

Pilot test

1. Welcome to Lichtblick and Granular Energy
2. Pilot test presentation

ENERGY TRACK&TRACE

We expect that detailed guarantees of origin for green electricity can contribute to the market-driven expansion of renewable energy.

In a pilot project, we want to enable hourly transparency about the origin of green electricity.

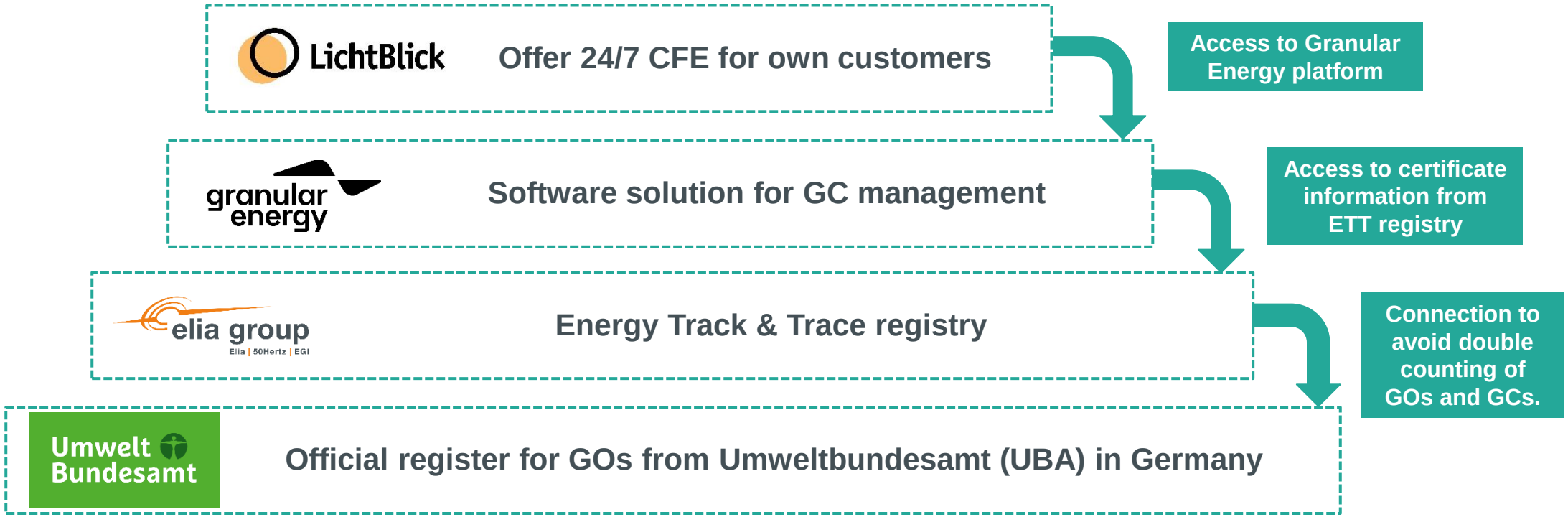
Elia Group, Granular Energy and Lichtblick have launched a pilot project on granular certificates together

- Transmission system operators in Belgium and parts of Germany
- Member of the Energy Track & Trace consortium
- Providing granular register into the pilot project

- Energy Startup located in Paris (France)
- Offering solutions for managing and trading clean energy with tools to support 24/7 energy certificats
- Operates as competitive service provider on Energy Track & Trace register
- Providing own platform including interested customers in the pilot.

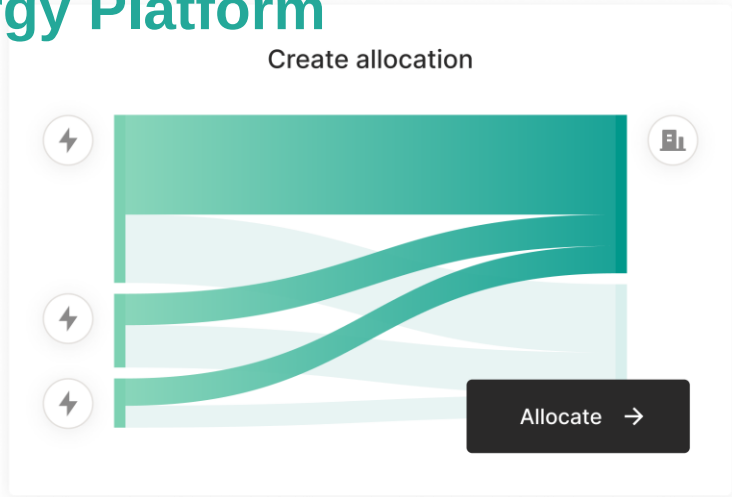
- One of the largest electricity providers on the German market
- Contracts always include 100% green electricity, according to its own statement completely from Germany
- Would like to pilot test and offer 24/7 tracking for first customers

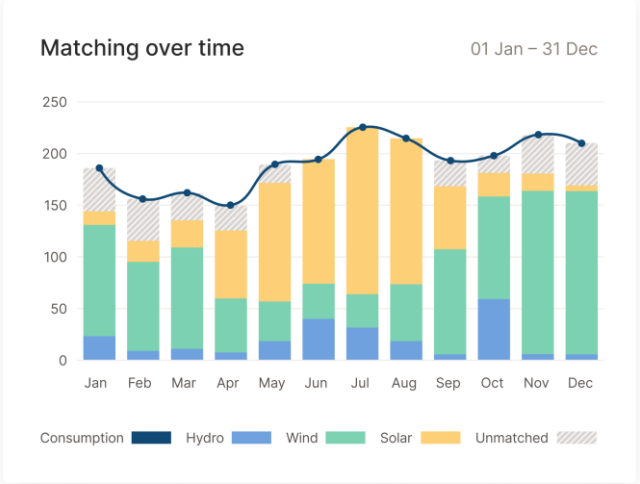
In our pilot project, we want to test 24/7 CFEs in Germany over their entire route with the official GO registry as basis

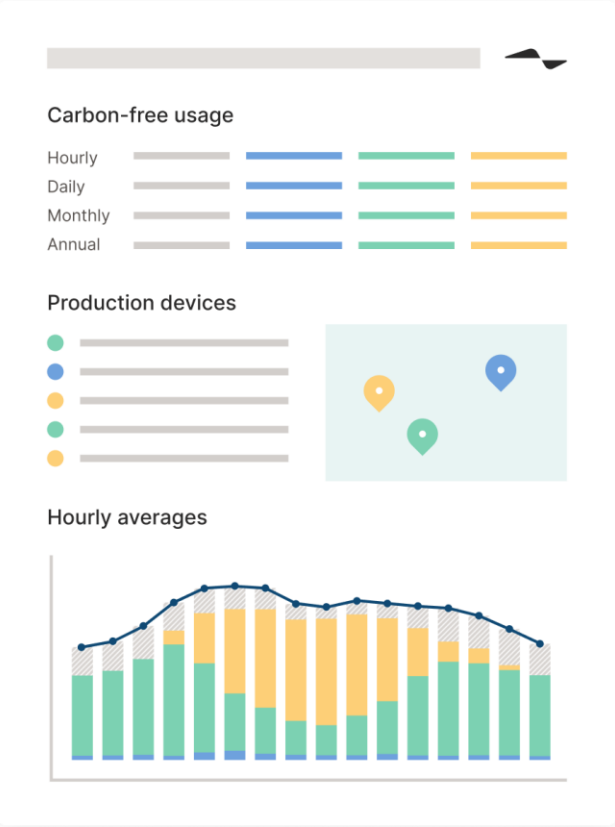


Insight into the Granular Energy Platform

- *Granular Energy* is providing a platform to energy suppliers to match generation to consumption with hourly granularity
- We are working with a few energy suppliers in Germany, including *Lichtblick*
- We have been working with *Elia Group* to bring an additional assurance layer on the matching by using the ETT registry

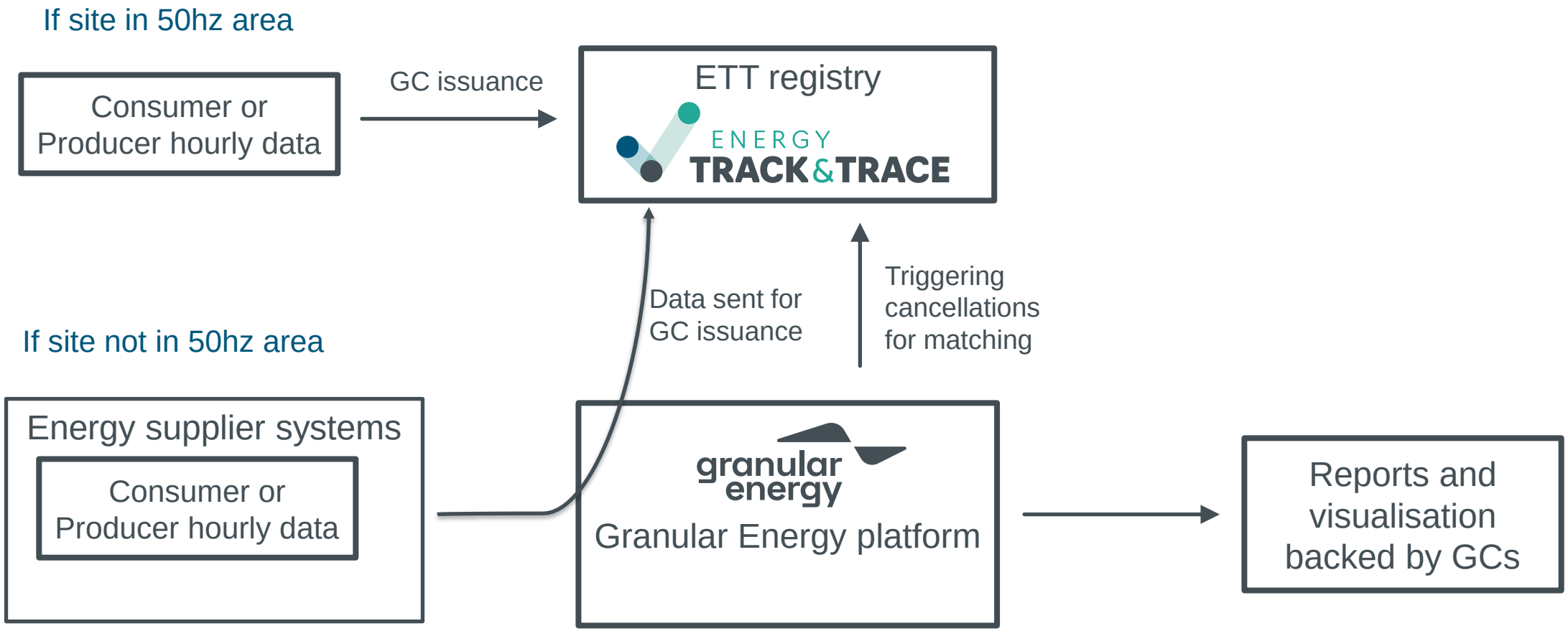




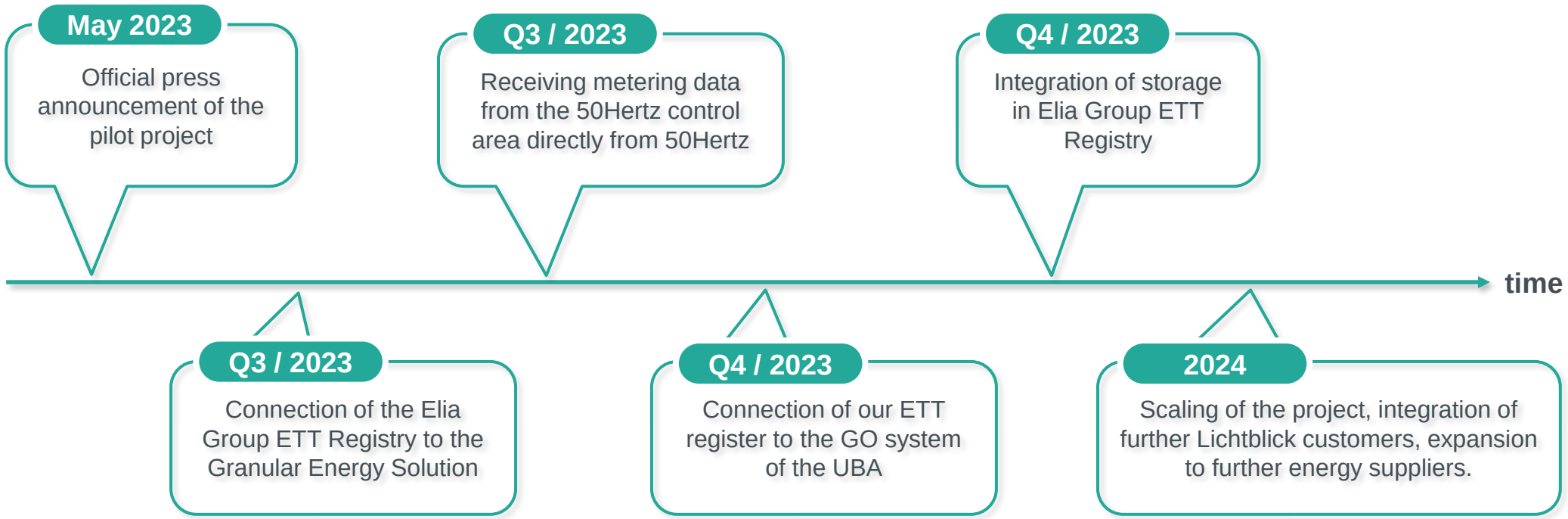


Set up before the integration with ETT registry

Set up after integration with ETT registry



In the course of the pilot project, we want to further develop various things towards productive use



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Questions and Discussion

THANK YOU FOR PARTICIPATING TODAY!

We look forward to see you all again next time

Find us online
at www.energytrackandtrace.com