

Elia Group - Hackathon 2024

Pre-session 2

22/03/24 | The Hackathon Team

Welcome

About us



Valentina Annoscia

Product Lead
IDEA



Mathieu Antoine

Product Lead
Portals and Platform



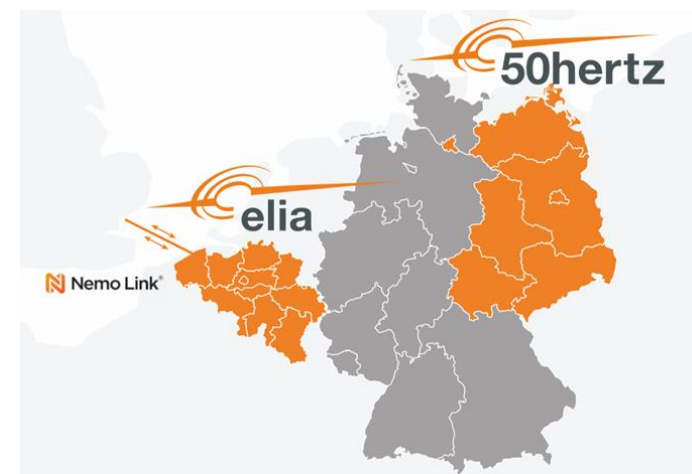
Elodie Ciciriello

Product Owner
CC Energy Solutions

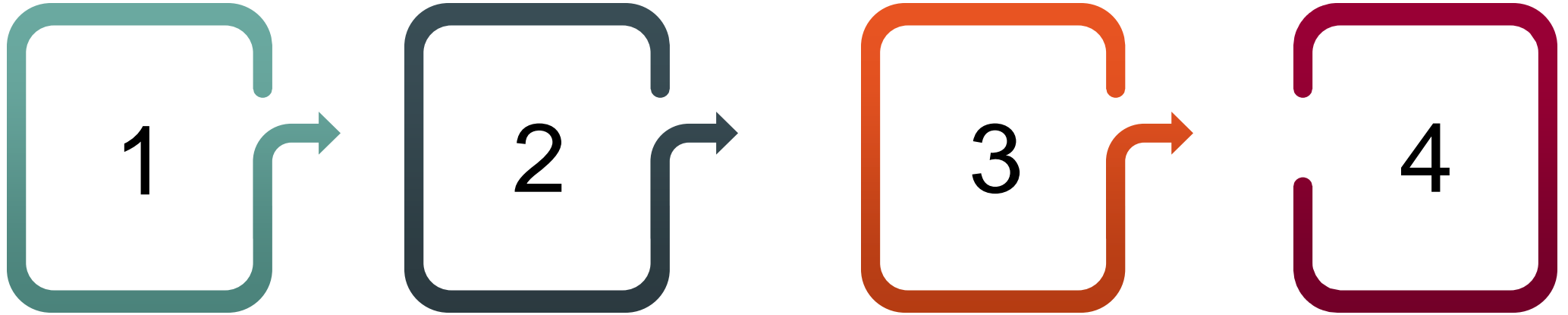
Elia Group

Elia: Transmission system operator (TSO) for Belgium

50Hertz: One of four German TSOs responsible for eastern Germany, including Berlin, and in the Hamburg area



Agenda



Hackathon 2024

Short recap of Hackathon
(**Valentina**) and
explanation of the
challenges (**Elodie**)

Technicalities

Explanation on:

- Datasets (**Elodie**)
- Platform (**Antoine**)
- Teams channels set up (**Antoine**)

Practicalities

Explanation on:

- Agenda
- Practicalities (teams' composition, badges)
- Jury evaluation criteria
- Reimbursement process (**Valentina**)

Q&A



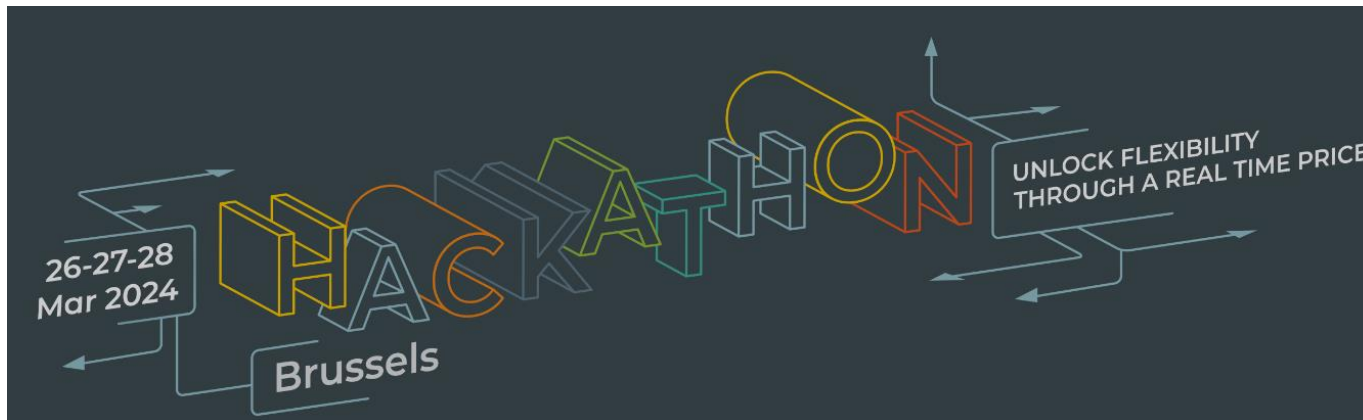
Session recording

1. We will be recording this session following this slide
2. This is a non-public recording for those who can't attend this pre-session or for you, if you want to rewatch this afterwards.
3. The release of the video, will only be shared with the registered & selected participants of this Hackathon.
4. The recordings will be deleted after the hackathon.
5. If you do not want to be recorded, please switch off the camera now.



1 Recap Hackathon 2024

- A 3-day Hackathon taking place on 26-27-28th of March
- Location: Brussels, [Quartier Papier](#)
- You'll work in teams of 6 people
- Theme: Unlock flexibility through a **real-time price**
- Be on time (8.00 AM)
- You'll receive your badge at the door





Don't forget to provide your consent, food & travel preferences



Thank you for participating in Elia Group's Hackathon 2024!

Please take a moment to provide us with some additional information to help us better accommodate your needs during the event.

Name *

First Name

Last Name

Next





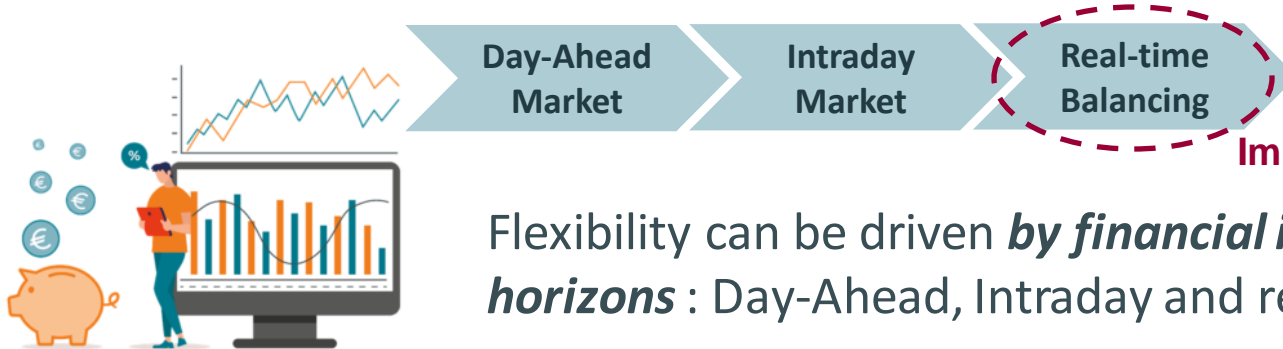
1 Hackathon 2024 – Real-Time Price

Flexibility
“price based”

Financial incentive (“implicit flexibility”)



BRPs are incentivized by the imbalance price to be balanced or even to deviate from a balanced position in real-time to help the system and are remunerated @imbalance price



Imbalance price as incentive

Flexibility can be driven *by financial incentives over different time horizons* : Day-Ahead, Intraday and real-time balancing timeframe

Financial incentives result in a *simple decision* for the customer *based on the price level and availability* :
“I do participate only if I want to”

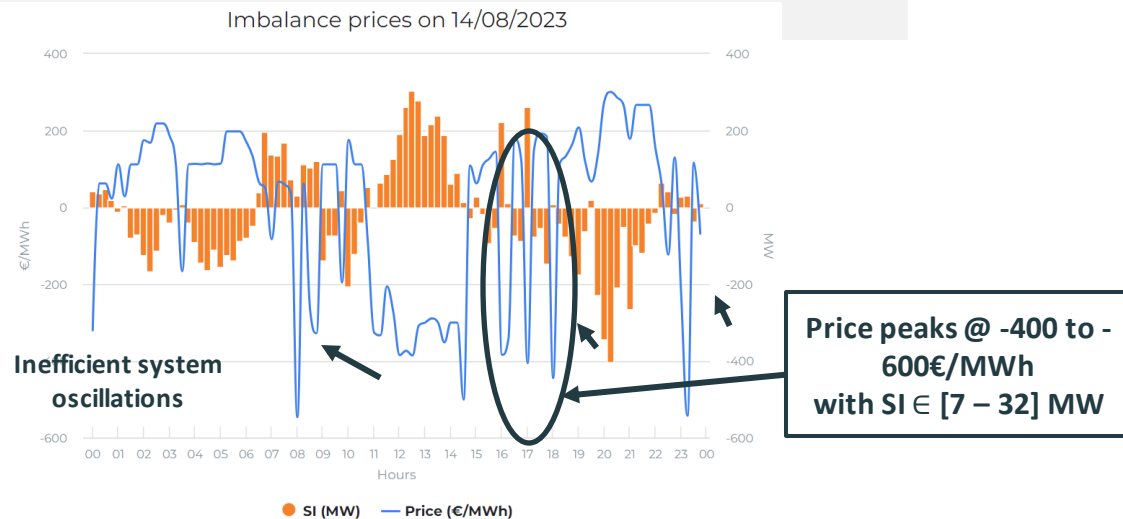




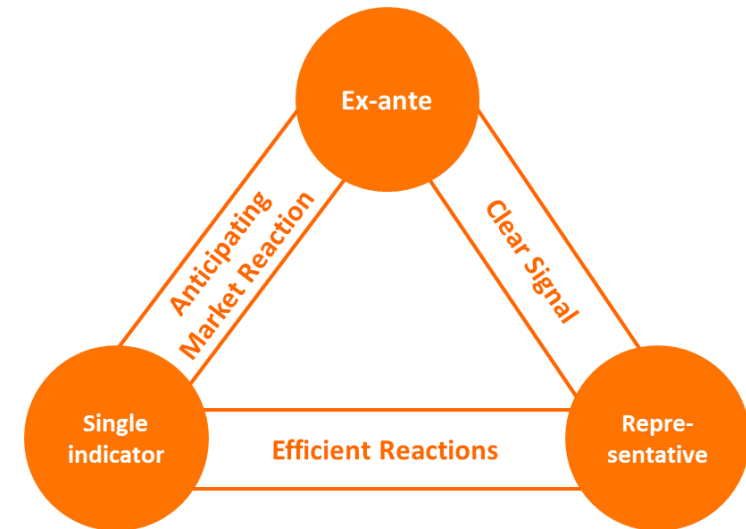
1 Hackathon 2024 – Real-Time Price

Current Imbalance Price

- Not representative of the system needs
- Characterized by inefficient oscillations (induced by inadequate price signal)



Imbalance Price as a Real-Time Price





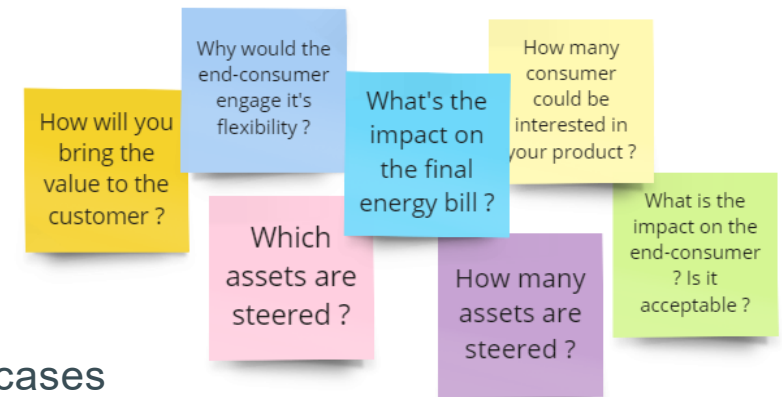
1 Hackathon 2024 – Challenge

– Challenges

1. Challenge 1: Develop a product to optimize flexible assets in **households** or **office buildings**
2. Challenge 2: Bring your own use case

– Our expectations

- Come up with an innovative business model & product
- Make sure it can handle a live, real-time scenario
- Be CREATIVE, don't hesitate to elaborate further on the given use cases



A **simulation** will be run Thursday morning, before the pitching sessions (**9.30AM-2.30PM**). Your algorithm should be ready before the simulation. Results of the simulation will be shown to the jury for participants of the 1st challenge. For participants of challenge 2, it'll be an opportunity to test your product.





2

Technicalities - Datasets

Hackathon Time

The hackathon runs in hackathon time, 20x faster than real-life time.

You'll be able to:

- Get the current **hackathon time**
- Convert real-life time into hackathon time

Real-Time Prices

The first forecast of the Real-Time Price for a quarter-hour is given 3 minutes before the quarter-hour. It is updated each minute until the end of the quarter-hour.

You'll be able to:

- Get past* and current **Real-Time Price** forecasts
- Get the **day-ahead price**, available in day-ahead, as an estimation of the Real-Time Price

Asset data and steering

Participants of the 1st challenge will be able to steer the flexible assets of their use case.


You'll be able to:

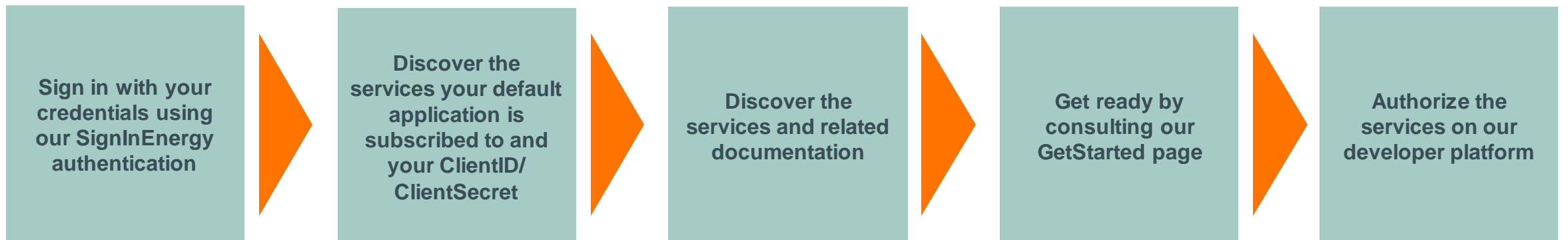
- Get past* and current **asset states** of the assets
- Get past and current **site states**
- **Steer** the flexible assets





2 Technicalities - Platform

- The traXes developer portal will be available in pre-production
 - <https://prprd.traxes.io/>

- Each team is given credentials to access our traXes developer portal the day of the hackathon
 - One user ID per team (e.g. team31@traxes.io)
 - One password per team





3

Agenda

March 26	March 27	March 28
7.30 AM: Arrival Elia Team on site	5 AM: Opening doors	5 AM: Opening doors
8 AM: Breakfast + registrations	7.30 AM: Arrival Elia Team on site	7.30 AM: Arrival Elia Team on site
8.30 AM: Official opening	8 AM: Breakfast	8 AM: Breakfast
9.15 AM: Get the teams together		
10.30 AM: Kick-Off	8.30 AM: Second day kick-off	8.30 AM: Last day Kick-off
12 PM: Lunch	10.30 AM: Teamwork	10 AM: Pitch preparation
1 PM: Inspiration session: Decentralized Energy	12 PM: Lunch	12 PM: Lunch
1.30 PM: Teamwork	2 PM: Inspiration Session: Incompressibility	1.30 PM: Pitching dry run sessions
4 PM: Inspiration Session: Eco-To-Grid	3 PM: Teamwork	5 PM: Pitching Session 1
7 PM: Dinner	4 PM: Inspiration Session: Eco-To-Grid	6.15 PM: Break
9 PM: Teamwork	7 PM: Diner	6.30 PM: Pitching Session 2
12 AM: Doors closed	9 PM: Teamwork	7.30 PM: Entertainment
	12 AM: Doors closed	8 PM: Winner Ceremony & Closing Speeches
		8.30 PM: Drinks & Walking Dinner
		10 PM: The end

A simulation will run on March 28 between 9.30 AM and 2.30 PM.





3 Practicalities

- Every team will have its own Teams channel: [Elia Group Hackathon 2024 Communication | General | Microsoft Teams](#)
- We'll be present at the info point: pass by in case of questions!

The screenshot displays the Microsoft Teams interface. On the left, the 'Teams' sidebar shows a channel named 'Elia Group Hackathon 2024 Communication'. Under this channel, the 'General' and 'All participants' sub-channels are circled in red. Below them, 'Hackathon Team 03' is also circled in red. A red arrow points from this channel to a smaller inset screenshot of the channel list, where 'Hackathon Team 03' is highlighted. The main chat area shows a welcome message from Mathieu Antoine: 'Welcome to the Elia Group Hackathon 2024 Communication Channel' with a link to 'Elia Group - Hackathon 2024'. Below the message, there is a 'Reply' button and a small '2' in a fire icon. At the bottom right, there is a 'Welcome to your new private channel' message with the text 'Let's start the conversation.' and an illustration of three people.



3

Practicalities: Meet Your Jury Members



Catherine Vandendorre

Ad Interim CEO Elia Group



David Zenner

Head of Customers



Pascale Van Damme

Vice President EMEA VMware at
Dell Technologies



Béatrice De Mahieu

CEO BeCode





3 Practicalities: Evaluation Criteria

— **Real-Time Price utilization: How effectively does the solution allow the customer to control energy costs using the real-time price?**

The solution uses elements of the real-time price, showing:

- Assets can be steered in an optimized way based on RT data
- Impact of steering assets based on the real-time pricing data

— **Product appeal: Is the product user-friendly, engaging, and innovative?**

- The solution is appealing to the customer and engages him/ her, it is user-friendly, understandable and innovative
- The solution motivates the user to adapt his/her behavior and addresses a consumer need

— **Technology implementation: Is the product based on state-of-the art, scalable and reusable technology?**

- State-of-the-art technology is used for the solution. Platform thinking is applied, the service/solution is scalable
- There is ready-to-use code and a running prototype instead of only beautiful slides

— **Scalability and impact of the solution: Can the product be easily used by a wide range of customers? Is it designed to scale up to larger groups, maintaining its effectiveness and user experience?**

- The presented solution can be scaled to larger groups of customers

— **Bonus point: Live Demo of the solution (prototype): Bonus points will be awarded for teams that present a working prototype.**

- The team can present a demo tool. Instead of just slides, the team pitches a real tool (perfect functionality is secondary)
- There is strong commitment to turn the idea into a prototype





3 Practicalities: Pitches

March 28
5 AM: Opening doors
7.30 AM: Arrival Elia Team on site
8 AM: Breakfast
8.30 AM: Last day kick-off
10 AM: Pitch preparation
12 PM: Lunch
1.30 PM: Pitching dry run sessions
5 PM: Pitching Session 1
6.15 PM: Break
6.30 PM: Pitching Session 2
7.30 PM: Entertainment
8 PM: Winner Ceremony & Closing Speeches
8.30 PM: Drinks & Walking Dinner
10 PM: The end

A simulation will run on March 28 between 9.30 AM and 2.30 PM. Your algorithm should be ready before the simulation!

- Pitch
 - 4 slides per team
 - 3 min Pitch
 - 3 min Q&A
 - Jury rating

**Dry run with agile coaches as of 1.30 PM.
Book a 15 min slot with them!**





3 The reimbursement process

Reimbursement of the travel expenses is exclusively available for students

Students in Belgium will receive 50 euros, while those coming from abroad will receive 200 euros to assist with their travel expenses.

Reimbursement Process

1. **Keep a copy of your travel expenses**
2. **Fill out the reimbursement form:** Include your name, description of the item (travel expense), amount paid, and your IBAN number for reimbursement.
3. **Provide proof of residence:** Upload a document that serves as proof of your residence location. This could include a copy of your ID card, another invoice with your address, or any other suitable document.
4. **Upload your travel expense:** Attach the relevant document or receipt for each travel expense incurred. Ensure that all uploaded documents are clear and legible.
5. **Submission and processing:** Once you have filled out the reimbursement form and uploaded all necessary documents, we will submit your request in our system. A member of the Elia Hackathon team will then process your reimbursement request.

Please note that reimbursement requests will be reviewed and processed by our team after the event.



Q&A

