



A novel smart grid architecture that facilitates high-RES penetration through innovative markets towards efficient interaction between advanced electricity grid management and intelligent stakeholders

## Final e-Demo Event

### **Pitch: Automated Trading Platform (ATP)**

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## Mrs. Elena Leal



Project Manager for ETRA INVESTIGACION Y DESARROLLO SA

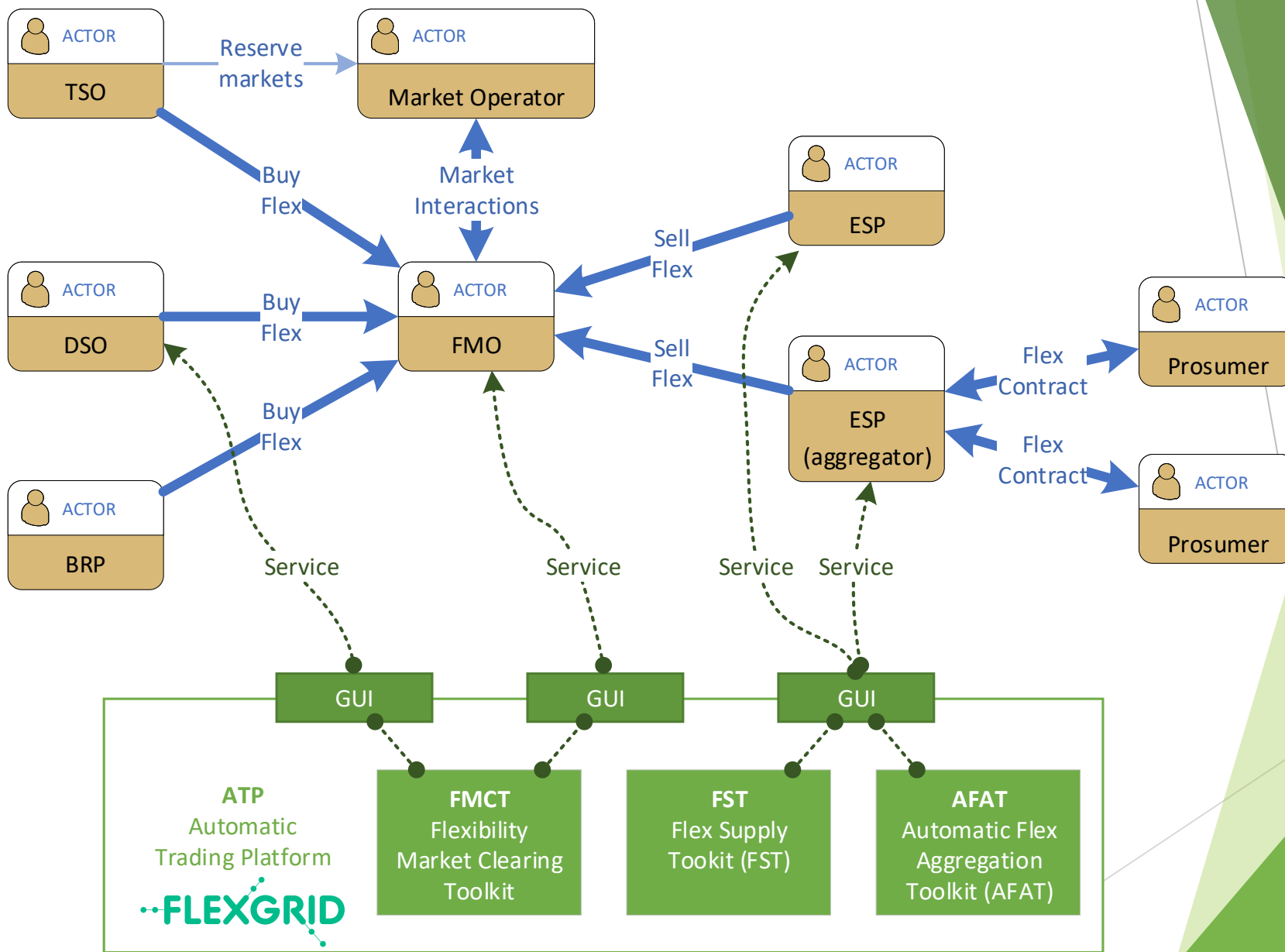
Having experience of working in Power system design and planning of distribution networks.

Academic qualification: Master energy technologies for sustainable development and another Master in Business Administration.

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# Problem

1. Lack of communication between actors
2. Integration with different platforms
3. Less efficient Distributed Level Flexibility Markets (DLFM)
4. Difficulty for Market actors in taking decisions

# Solution

## FLEXGRID ATP Platform's key value proposition

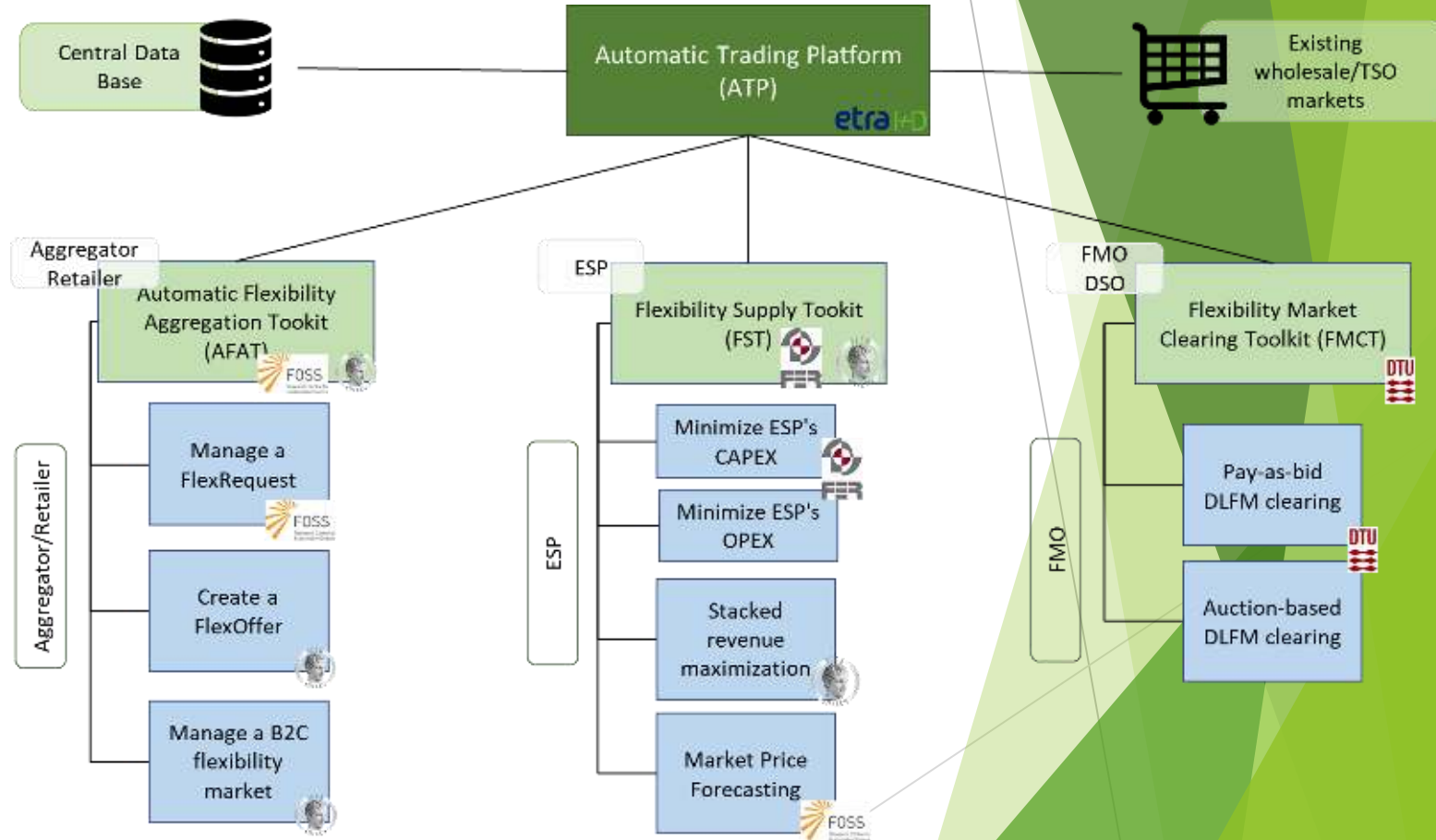
- ▶ FLEXGRID ATP enables **more efficient operation** of a DLFM\* and its **integration** in today's market architecture and regulatory framework
- ▶ FLEXGRID enables DSOs to **better leverage flexibility** to accommodate a larger share of RES in the Distribution Network and also **confront local congestion and voltage control** issues
- ▶ FLEXGRID enables **aggregators to improve business case** of Flex Suppliers
- ▶ Modular by design allows the **integration** of the different modules in **current applications** adding value

\*DLFM: Distribution Level Flexibility Market

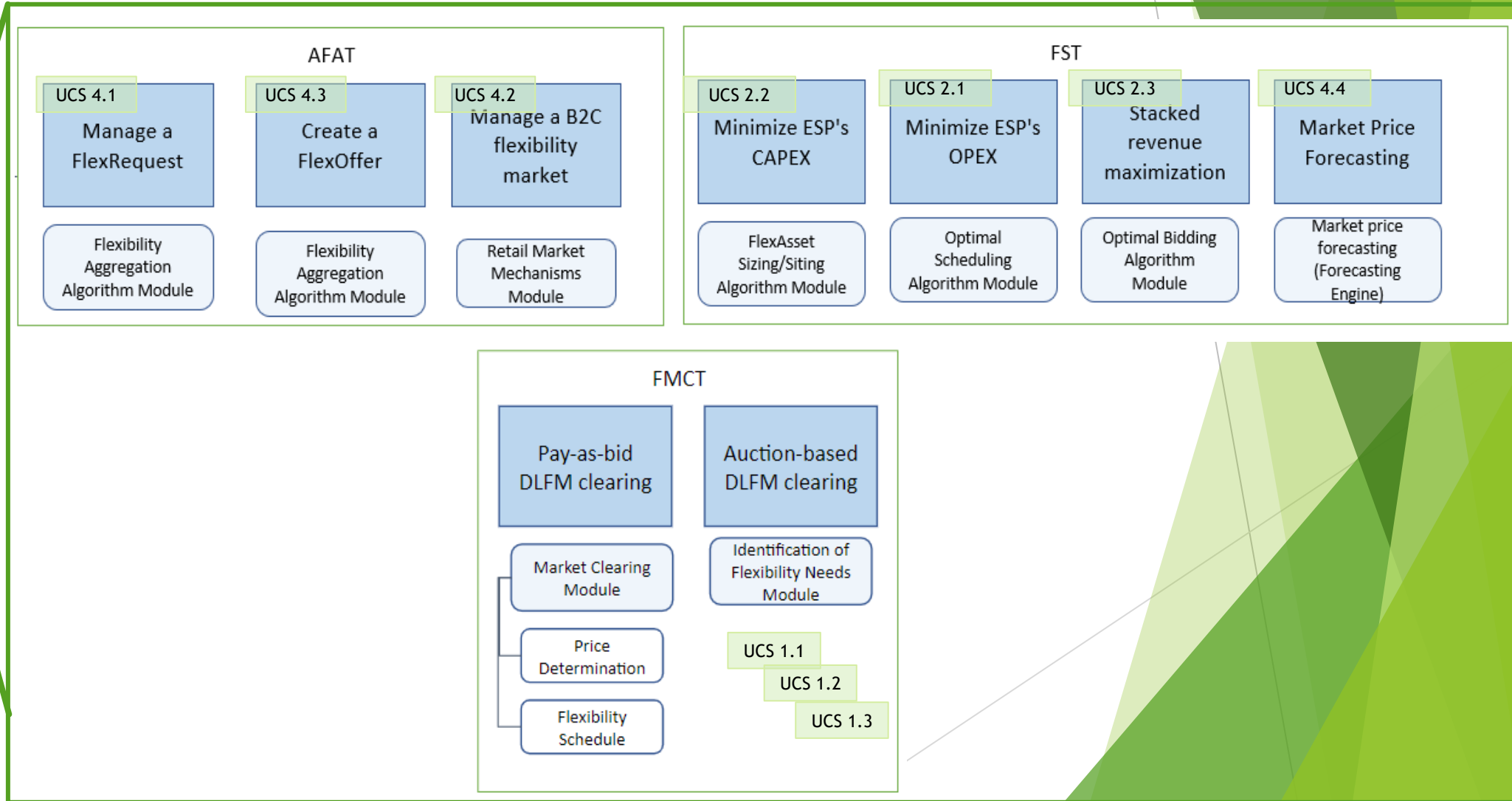
# Technology /Product

FLEXGRID ATP with 3 main services:

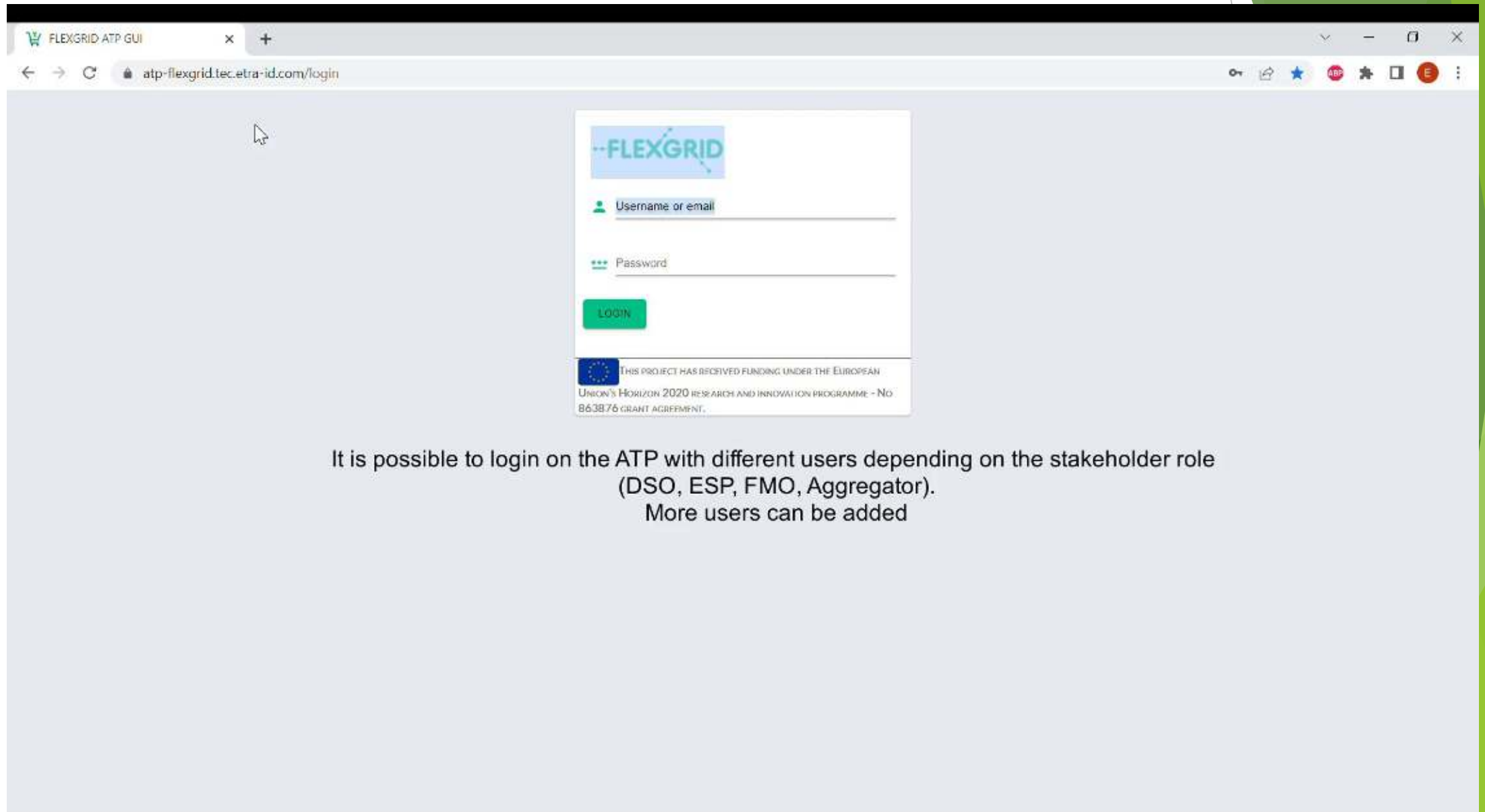
- ▶ AFAT: Automatic Flexibility Aggregation Toolkit
- ▶ FST: Flexibility Market Clearing Toolkit
- ▶ FMCT: Flexibility Supply Toolkit



# Technology /Product



# DEMO



It is possible to login on the ATP with different users depending on the stakeholder role (DSO, ESP, FMO, Aggregator).  
More users can be added



# Competitive Advantages

FLEXGRID ATP with the following main benefits

- ▶ Better DLFM clearing → matching of Offers and Requests in an essay way
- ▶ Interaction between market actors allowing a better communication and exchange of data
- ▶ Prepare for future flexibility markets with the integration of novel algorithms
- ▶ Modular by design and open source

# Exploitation pathway

Firstly, increase the TRL of both algorithms and application:

- ▶ Change from offline simulation to real time simulation (computing time, available data)
- ▶ Training models to solve making decision problems
- ▶ Real datasets that are fed automatically into the FLEXGRID database: collaboration with specific companies (DSO, retailers..)

Agreements and other projects:

- ▶ Transfer the FLEXGRID background knowledge of 'ICTs for the energy sector' to new innovative project
- ▶ Reach new EU project opportunities for enhance development and integration
- ▶ Add the current developments to market tools providing more accurate results



# THANK YOU !!

## Questions?

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Visit our website!

<https://flexgrid-project.eu/>

YouTube channel:

<https://www.youtube.com/channel/UCepdrFhiltkGTi7dmNL--yg>

GitHub area:

<https://github.com/FlexGrid>



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