

# The CoordiNet Roadmap

Final event presentation

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Disclaimer

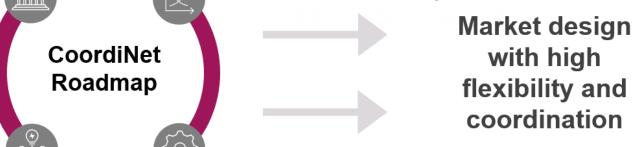
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### The CoordiNet Roadmap

### **FIT FOR GREEN CLEAN ENERGY** DEAL **FOR ALL EUROPEANS** Regulation Market

### **Current Market Design**

Urbanisation and electrification Congestion and balancing issues for TSO/DSO



**Technological** 

#### CoordiNet

Social

DSO/TSO flexibility markets for grid services

Previous and ongoing market innovation niches OneNet **EU-SysFlex** SthImFlex Interrface SmartNet Piclo

16/06/2022

CoordiNet Final Event



### Stop four

Adaptation of Market Phases for New Products and Actors



Stop one

Incentivising Flexibility
Market Implementation
and the Evolution of
System Operator Roles

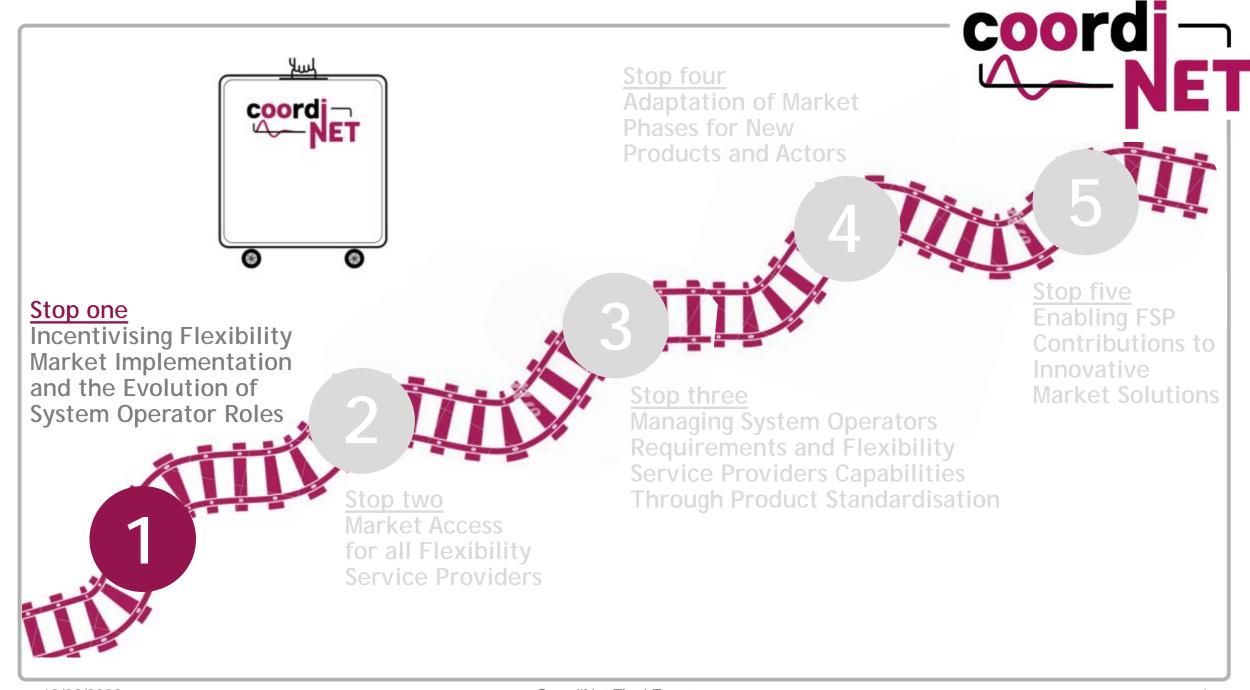


Managing System Operators Requirements and Flexibility Service Providers Capabilities Through Standardisation Stop five
Enabling FSP
Contributions to
Innovative
Market Solutions



Market Access for all Flexibility Service Providers





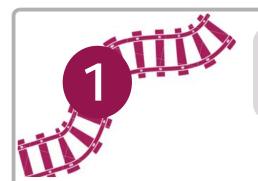


# Establishing and designing new flexibility markets comes with many challenges...



...and new roles and responsibilities

- Prioritise implementation of the Clean Energy Package and regulatory revision to establish support and incentives for SOs
- Clear roles and responsibilities should be agreed between all SOs in Member States



# Change in approach for DSOs in their business operation



### The CoordiNet Experience

Asset oriented DSO



Service oriented DSO

"The demo formed the starting point of a cultural change in the mindset of the operators [...]. The platform and market design enable and even force the operators to think and act more proactive."

- Swedish demonstrator

### **Actions**

Review and update incentive regulation



- Support a shift in business operation
- Work proactively with grid operation
- Internal education programs

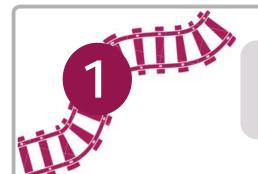




## NRAs and public institutions need to take a larger role in supporting implementation of flexibility services

- Public stakeholder meetings with a wide collection of market participants, government and municipality representatives
- Including workshops to gather feed-back on market design
- ·Identification of grid need
- ·Identification of impact factor
- Proactively contact and set-up individual meetings with significant grid users
- Contractual agreement with flexibility provider
- Ensure data protection and information security
- Training sessions ahead of market opening
- One-to-one interviews with all participant following first winter operation of flexibility markets
- Public stakeholder meetings to present additions for second winter operation, recruit new users and gather feed-back on market design
- Training on new market platform functionalities
- Repetition of last three bullets for final (third) winter operation in 2021/2022

Significant and necessary efforts were made to engage and educate FSPs



NRAs and public institutions need to take a larger role in supporting implementation of flexibility services



### The CoordiNet Experience

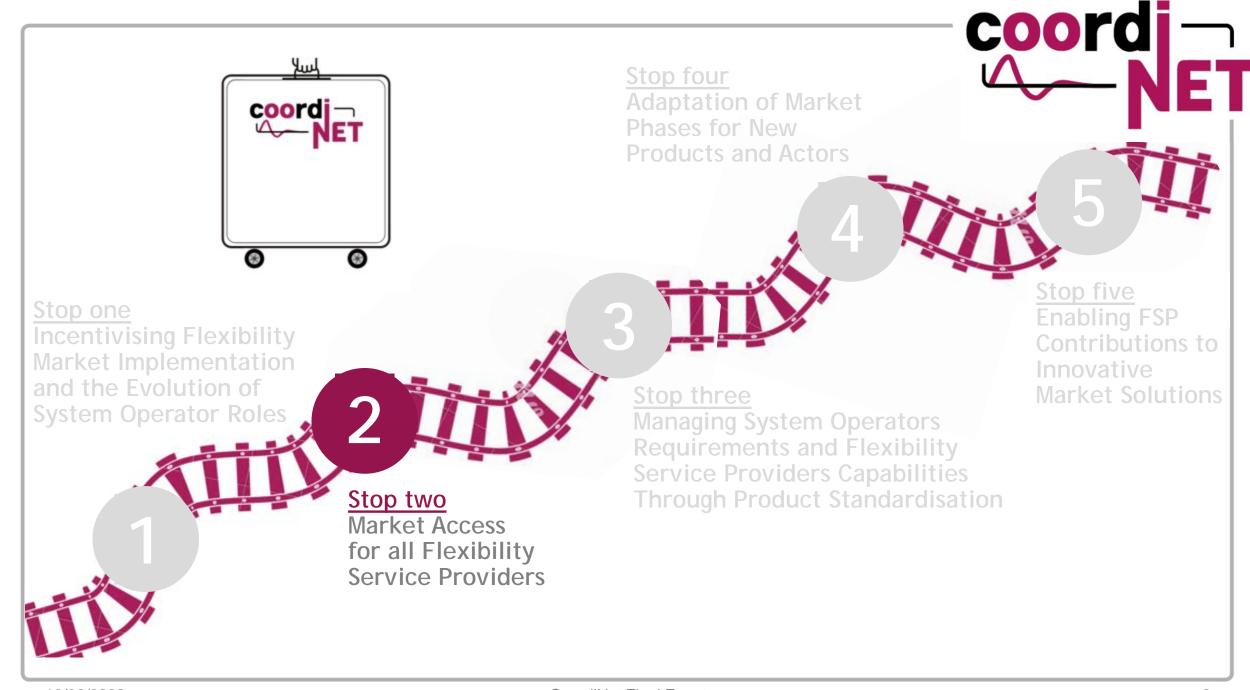
Flexibility comes with additional benefits:

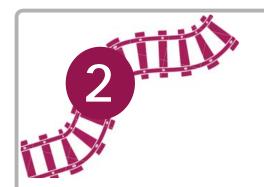
### Examples from Greece:

- Irrigation pumps:
   More effective management of water resources
- Office, households and schools:
   Provides better understanding of energy consumptive behavior

- Funds for R&D pilots
- Regulatory sandboxes



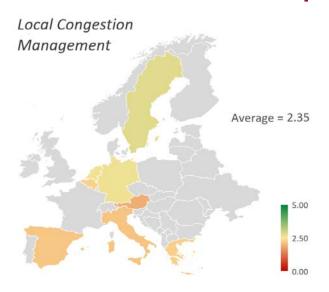




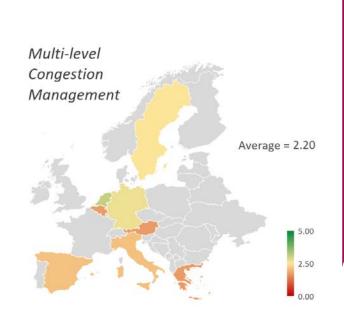
### Participation on equal terms for all FSPs



### The CoordiNet Experience

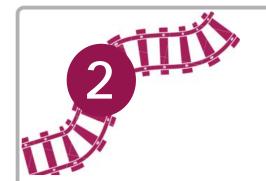


Regulatory Compatibility of Selected Generalized Use Cases. Green: Regulation allows and promotes UC. Red: Regulation prevents/prohibits the UC. Source: CoordiNet deliverable D6.4.



- Ensure the market is open for all different types of DER/FSPs
- A framework for the independent aggregator should be developed





### Viability of business case is a key factor



### The FSPs Experience in the demos

- Currently, high costs for FSPs to manage their market participation reduces their margins of profit significantly.
- FSPs suggested that automation could increase participation in the markets.
- Clearer communication of how much flexibility is needed and when it will be needed.

- Clear and reliable information for FSPs and independent aggregators, on how to access markets, as well as transparent market operation is key.
- National regulation should be revised to ensure that proper support and incentives are provided.

## We'd like your input!



What aspect do you find challenging with flexibility market implementation?

If you were to ask policy makers to help you navigate this challenge, what would you ask for?

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Adaptation of Market Phases for New Products and Actors



Stop one

Incentivising Flexibility
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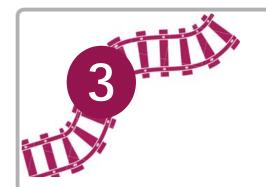


Stop three

Managing System Operators Requirements and Flexibility Service Providers Capabilities Through Standardisation Stop five Enabling FSP Contributions to Innovative Market Solutions

Stop two
Market Access
for all Flexibility
Service Providers





## Regulatory harmonisation of processes and requirements



### The CoordiNet Experience

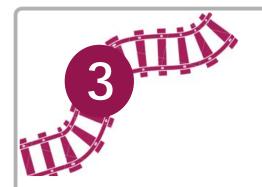
• Flexibility markets are too immature and context specific to set strict standards.

Regulatory harmonisation should be prioritised before product standardisation is possible

- Different terminology is used for flexibility products and services.
- General principles regarding competition, efficiency, and non-distortion, are missing.

### **Actions**

- A common list of product attributes is needed
- Review of regulatory frameworks for proper market function
- A common terminology should be developed and implemented



# Harmonisation needed for measurement data collection and interoperability between grid components and market platforms



### The CoordiNet Experience



Installation of monitoring and control devices for FSPs and LV network was one of the biggest challenges in the Spanish demonstration.



In Greece, some FSPs deemed it necessary to increase the rate of digitalisation of metering processes to guarantee their participation in a flexibility market.

- Promote an accelerated deployment of monitoring and measurement tools
- Formats for smart metering output should be standardised
- Standardised messages and communication protocols are necessary







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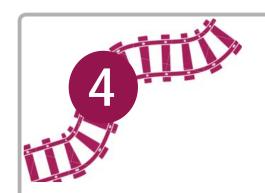
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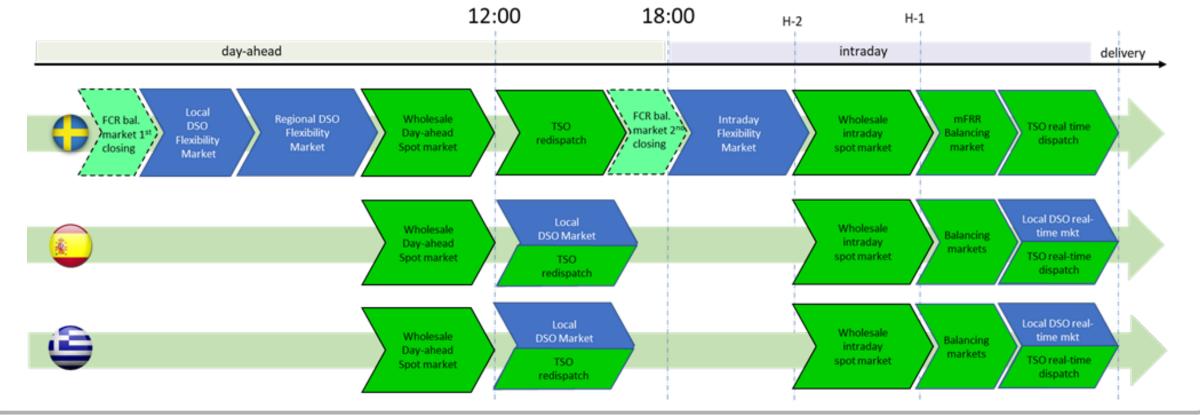


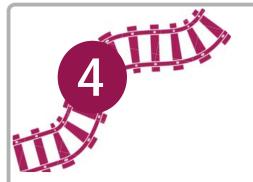


## Time aspects and integration of flexibility markets



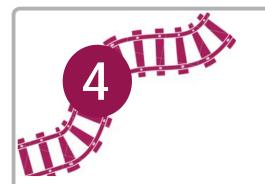
No standardisation of market timing on EU level is recommended as it depends on national and local context













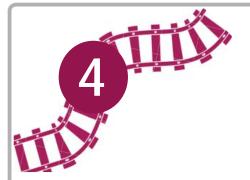
### Prequalification

### The CoordiNet Experience

- Strict prequalification criteria could be deterrent for FSPs
- Participation might come with time consuming, bureaucratic, prequalification processes
- Prequalification is closely related to stop 3.
   Demonstrations highlight that prequalification requirements should be included in product specifications

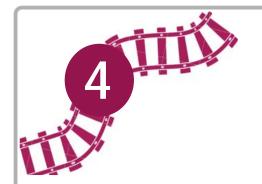
### Actions

- Harmonisation of requirements and processes to increase liquidity.
- Avoid duplicated processes - promote automation











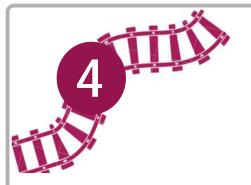
## Procurement and activation

### The CoordiNet Experience

- Network representation is needed
- Simplified representations must be dynamically updated
- Market transparency should be ensured
- Standardised processes are needed

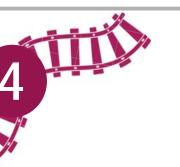
### **Actions**

- The inclusion of network representation has to be done while keeping the complexity of the clearing algorithm down
- An impact assessment is needed of methods to include network representation





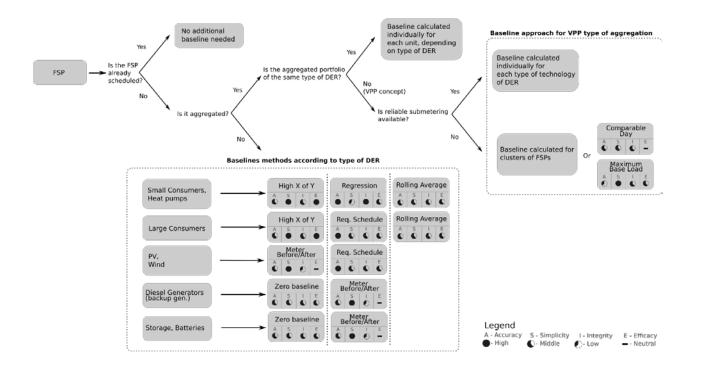






### Settlement

The CoordiNet Experience



### Actions

- Provision of baselines is important for a correct settlement.
- Roll-out of smart meters





### Stop four

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Stop five

Enabling FSP Contributions to Innovative Market Solutions



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### Markets and products for reactive power

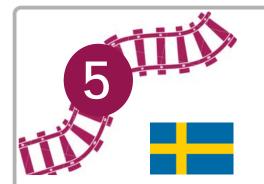


### The CoordiNet Experience

- The technical characteristics require the adoption of dedicated procurement mechanisms
- Third-party resources would implicitly compete with the SO owned assets

### **Actions**

- The coexistence of rules-based and market-based provision of services should be enabled
- Before deciding on a market framework, several market mechanisms need to be explored and evaluated further



# Assess the benefits and impacts of P2P markets for system service provision

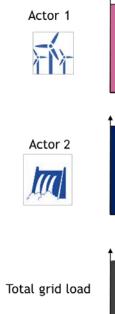


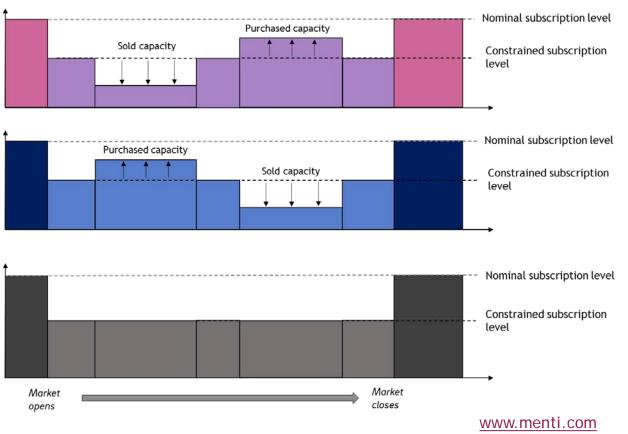
### The CoordiNet Experience

Novell approach to P2P markets:

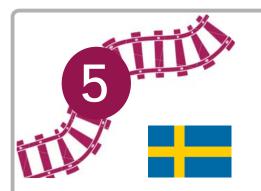
Reducing the need for curtailment in times of grid maintenance.

Trading "grid space" rather than trading energy between prosumers/consumers.





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# Assess the benefits and impacts of P2P markets for system service provision



### The CoordiNet experience merits further investigation

Creation of regulatory sandboxes is recommended to assess the benefits and impacts of P2P.

- Define objectives to assess benefits and impacts on the electricity grid.
- Investigate if more service markets, e.g., balancing market products, could be opened up to P2P.









Thank you for your attention!

Questions?