RE-ENERGISING EUROPE

Discussions, high-level panels, poster session and field visit organised by 7 EU-funded projects!

25 October 2023

Atelier 29, Brussels (Belgium)

BECoop MICAT Multiple Impacts Calculation Tool newTRENDs NRG2PEERS NUDGE UP-STAIRS Uplifting Energy Communities W4RES

These projects have received funding from the European Union's Horizon 2020 research programme. The sole responsibility for the content of this event lies with the BECoop, MICAT, newTRENDs, NrG2peers, NUDGE, UP-STAIRS and W4RES projects and does not necessarily reflect the opinion of the European Union.

RE-ENERGISING EUROPE

Welcome & introduction

October 25, 2023

Ioannis Konstas
Q-Plan/W4RES

#REenergisingEurope

BECoop MICAT Multiple Impacts Calculation Tool newTRENDs NRG2PEERS NUDGE UP-STAIRS Uplifting Energy Communities. W4RES

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RE-ENERGISING EUROPE

October 25

Energy communities and renewable energy, accelerating Europe's transition towards a climate neutral, inclusive future

Organised by BECoop, NRG2PEERS, UP-STAIRS and W4RES

Master of ceremony: Ioannis Konstas, Q-PLAN

8.45 - 9.00 - **Registration & welcome coffee**

9.00 - 9.15 - **Keynote** - Tadhg O'Briain, European Commission, DG Energy, Deputy Head of Unit for Consumers, Local Initiatives and Just Transition (tbc)

9.15 - 9.40 - **Skill up! RECs, RES, inclusivity: What are we talking about? Fire pitching of the 4 projects**

- Dimitrios Chapizanis, White Research (representing BECoop)
- Simona D'Oca, Huygen Engineers and Consultants (representing NRG2peers)
- Lorena Sánchez Relaño, IERC (representing UP-STAIRS)
- Giulia Zendron, White Research (representing W4RES)

9.40 - 11.00 - **Policy panel: Driving a clean energy transition through taping the biomass potential, boosting rescoops and empowering women as agents of change: discussing the projects' recommendations**

Moderation: Pádraig Lyons, IERC

Fire pitch by project representatives:

- Diana Süsser, IEECP (for BECoop)
- Anna Klöpper, UIPI (for NRG2Peers)
- Paweł Gilewski, Polish National Energy Conservation Agency (KAPE) (for UP-STAIRS)
- Elsebeth Terkelsen, European Green Cities (for W4RES)

Then joined in a panel by:

- Stavroula Pappa, REScoop.eu
- Tadhg O'Briain, European Commission, DG Energy

11.00 - 11.15 - **Coffee break**

11.15 - 12.15 - **Get inspired - Innovative Approaches, Success stories from the RES and RHC ecosystems**

Moderation: Dara Turnbull, Housing Europe

- BECoop - From your morning coffee to heat: Vasilis Filippou (ESEK)
- NRG2peers - Lessons learnt from the pilot sites: Eelke Kingma (Schoonschip)
- UP-STAIRS - One-Stop-Shops to empower community energy: Ivanka Pandelieva-Dimova (Sofia Energy Centre)
- W4RES - Charlotte Schlicke (Steinbeis Europa Zentrum) and Carina Holzapfel (H2MC)

12.15 - 13.30 - **Lunch + poster session**

13.30 - 14.30 - **The legacy of our projects / Looking forward - Once our projects end: what comes next? How can we replicate our projects' findings/work?**

Moderation: Dimitrios Chapizanis, White Research

- W4RES: Ioannis Konstas, Q-PLAN - The next steps for W4RES in terms of gender awareness in RES - The way to an inclusive energy transition
- UP-STAIRS: Paco Jofra, Ecoserveis Association
- NRG2peers: Stefan Kop, Spectral & Sylvia Breukers, Dune Works - Tool and follow-up projects.
- BECoop: Kostas Dasopoulos, Q-PLAN - Adjusted Business Model Canva for RESCoops

14.30 - 15.30 - **Networking session**

- W4RES co-creation workshop "DIY Gender Equal RES sector: Dive into practice with W4RES towards a gender equal RHC and RES sector". Register here (the number of seats is limited).
- Poster presentations, world café discussions, access to computers to play with our tools, etc.

15.30 - 18.00 - **Visit to an energy community**

RE-ENERGISING EUROPE

Keynote

October 25, 2023 - From 9.00 to 9.15

Tadhg O'Briain

European Commission, DG Energy,
Head of Unit for Consumers, Local Initiatives and Just Transition

#REenergisingEurope

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RE-ENERGISING EUROPE

Skill up! RECs, RES, inclusivity:

"Introduction of our projects"

October 25, 2023 - From 9.15 to 9.40

Dimitrios Chapizanis
White Research/BECoop

Simona D'Oca
Huygen Engineers and Consultants/NRG2Peers

Lorena Sánchez Relaño
IERC/UP-STAIRS

Giulia Zendron
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BECoop Project Overview

Dimitris Chapizanis, Project Coordinator | White Research

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement no. 952930.

BECoop: **Why BECoop?**

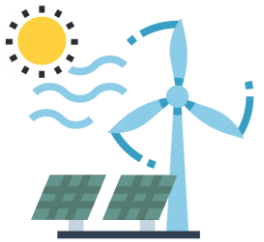
LC-SC3-RES-28-2018-2019-2020 - Market Uptake support

Slow **RES penetration in the EU heating and cooling sector** that accounts for **51%** of EU's total energy consumption

- **Bioenergy** holds the highest potential for replacing fossil-fuelled heat

Dire **need for increasing bioenergy** towards decarbonising the EU energy system

- **Community energy, RESCoops: key factor for future RE market uptake**
- **Dispersion and range of RESCoops** across Europe is still **limited**
  - still relatively undeveloped in southern, central and eastern Europe
- Only a **small share** of RESCoops use **biomass**



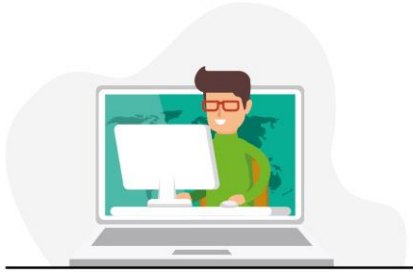
- vs -

The bioenergy industry is missing out on important market opportunities

BECoop: **Project in a nutshell**

LC-SC3-RES-28-2018-2019-2020 - Market Uptake support

- **BECoop** **mobilises people around community bioenergy** and creates a better image for such initiatives
  reduces the development efforts of community bioenergy heating projects

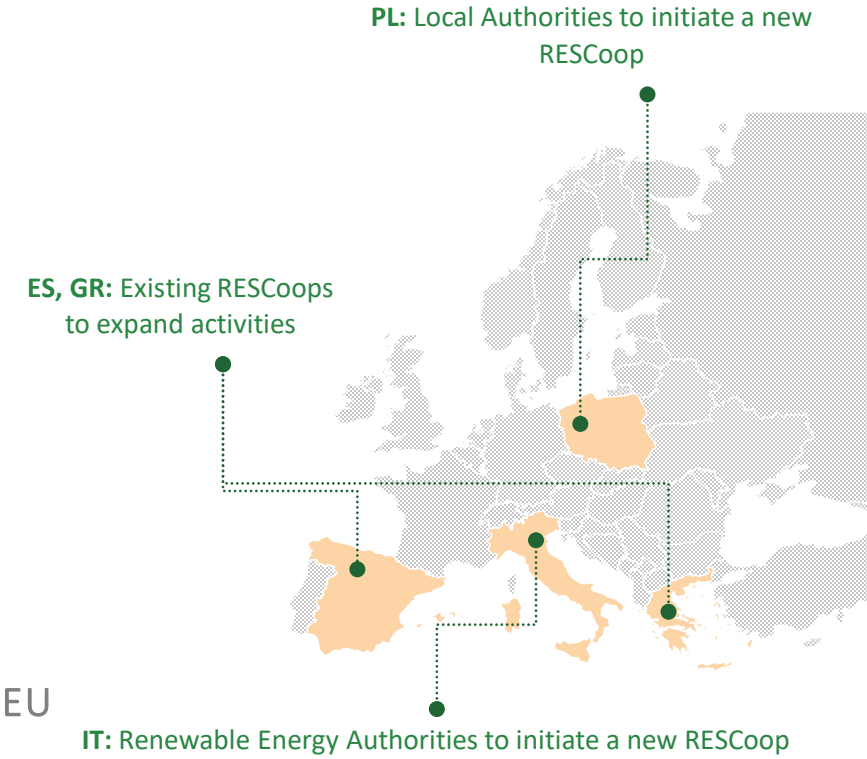


- **market research, social, technical, business, knowledge transfer** and **policy components**

- A suite of **supporting resources and tools** for community bioenergy project development

- exploration and support of **4 new bioenergy heating communities (BECoop RESCoops)**

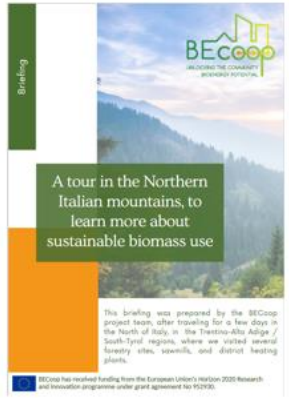
We test the implementation of community bioenergy heating support scheme in diverse, complementary pilot cases in regions with high replication potential across EU



BECoop: **Project numbers**

We mobilise people around community bioenergy

- We validate our results and **open the policy debate** on ***how*** community bioenergy at loc national and EU level can be fostered.



1 **EU** level and 4 **national** level and **policy roadmaps**

50+ **events** (co-creation workshops, consultations, webinars, info days, etc.)

30+ community bioenergy **cases analysed**

10+ (25) sister projects **synergies**

4 **BECoop pilot cases** and 8 additional **replication cases** of our concept

1 Replication Handbook

BECoop: **Project's legacy**

We make bioenergy community heating more appealing

The BECoop Replication handbook

- Builds upon the **entire project experience and pilot implementation results**
- Provides a **step wise approach** for the development or expansion of community bioenergy heating initiatives

The BECoop tools

→ *Check Poster Session 12:15 – 13:30*

Self-assessment tool | BECoop Toolkit | E-market environment

all resources readily available at the

BECoop Knowledge Exchange Platform

https://becoop-kep.eu/

and BECoop project website

www.becoop-project.eu

BECoop: **Joining forces**

We empower the community bioenergy ecosystem to scale

12 partners, 7 EU countries

Project coordinator

WHITE RESEARCH

BECoop pilot cases

goiener · ΕΣΕΚ -ΣΥΝ.ΠΕ- · GMINA OBORNIKI ŚLĄSKIE · fiper FEDERAZIONE ITALIANA PRODUTTORI DI ENERGIA DA FONTI RINNOVABILI · CSEV

Energy Agencies

Technical support partners

circe · CERTH CENTRE FOR RESEARCH & TECHNOLOGY HELLAS · WROCŁAW UNIVERSITY OF ENVIRONMENTAL AND LIFE SCIENCES · IEECP INSTITUTE FOR EUROPEAN ENERGY AND CLIMATE POLICY

fiper FEDERAZIONE ITALIANA PRODUTTORI DI ENERGIA DA FONTI RINNOVABILI

Business support partners

Q-PLAN INTERNATIONAL · CBS COPENHAGEN BUSINESS SCHOOL HANDELSHØJSKOLEN

BECoop: **see you around!**

Let's unlock the community bioenergy potential

Thank you for your time!

Dimitris Chapizanis | White Research | dchapizanis@white-research.eu

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@BecoopH2020

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BECoop video

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NRG2 PEERS

Dr Simona D'Oca
Project Coordinator
Huygen Engineers and Consultants

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NRG2 PEERS

Towards a new generation of EU peer-to-peer Energy Communities facilitated by a gamified platform and empowered by user-centred energy trading mechanisms and business models

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 890345.

Experiences from pilots for developing Readiness Level Framework Indicators

Smart demand-response mechanisms
Optimization of energy consumption and peak demand at community level

Adoption of community-based nudging mechanisms supporting the transition

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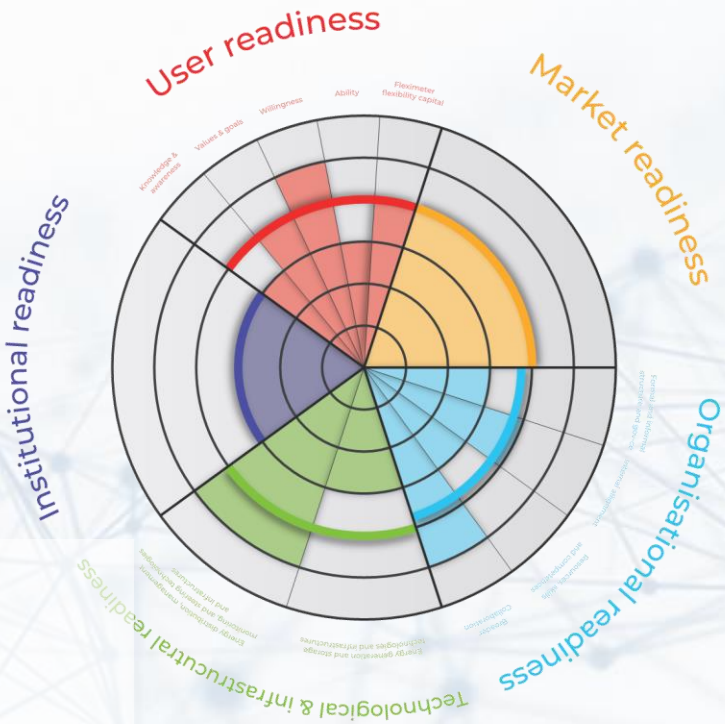
NRG2 PEERS

Experiences from pilots for developing Readiness Level Framework Indicators



Smart demand-response mechanisms
Optimization of energy consumption and peak demand at community level

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NRG2 PEERS

Experiences from pilots for developing Readiness Level Framework Indicators

Smart demand-response mechanisms
Optimization of energy consumption and peak demand at community level

Adoption of community-based nudging mechanisms supporting the transition

Financial savings

Environmental savings

Local self-resilience

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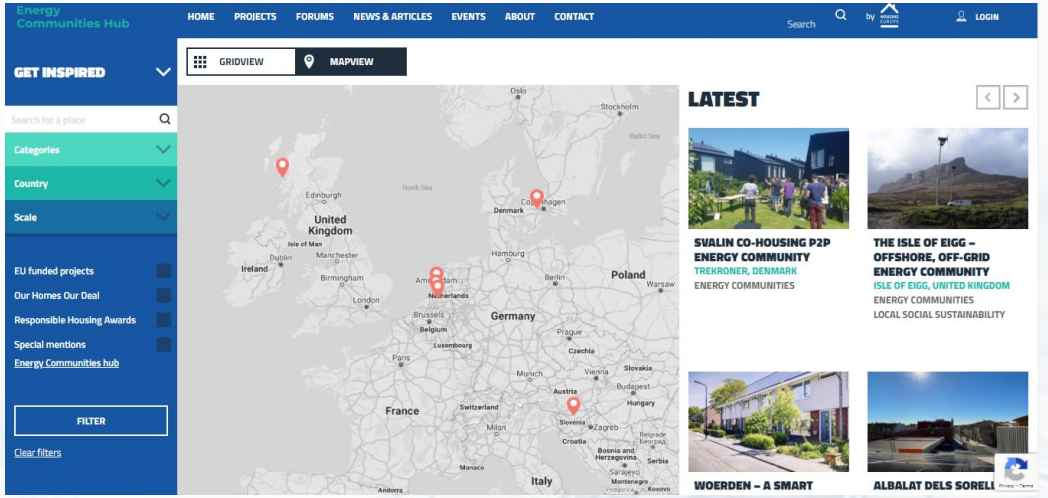
https://www.housingevolutions.eu/energy-communities-hub/



Experiences from pilots for developing Readiness Level Framework Indicators

Smart demand-response mechanisms
Optimization of energy consumption and peak demand at community level

Adoption of community-based nudging mechanisms supporting the transition

ADVISORY APP
educate prosumers and EC members about the practicalities of setting up or participating in peer-to-peer / energy trading mechanisms
& RLIT

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Key recommendations for P2P Energy Communities in EU

Growing Smart

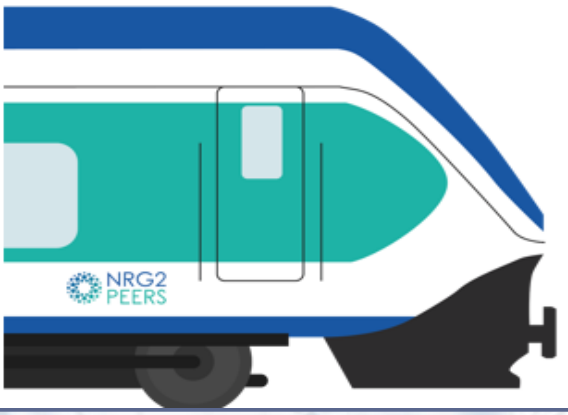
NRG2peers ROADSHOW

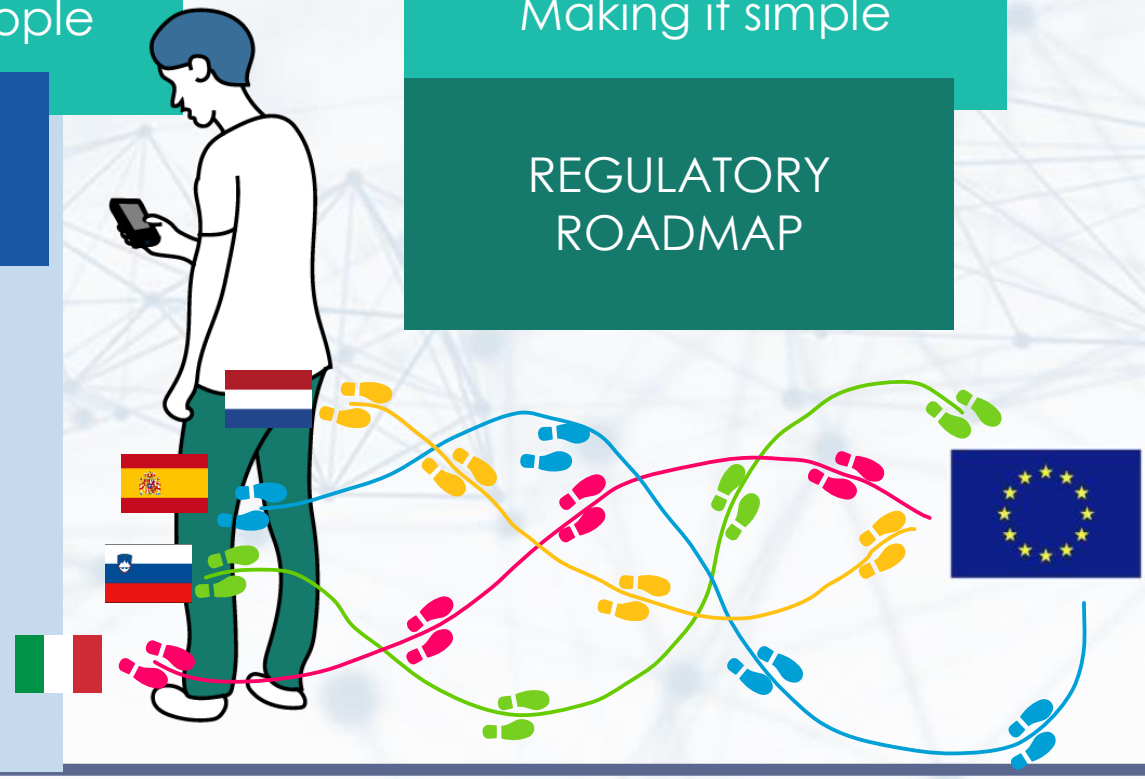
Enhancing People

ADVISORY APP

Making it simple

REGULATORY ROADMAP





Re-Energising Europe

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NRG2PEERS

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UP-STAIRS Uplifting Energy Communities.

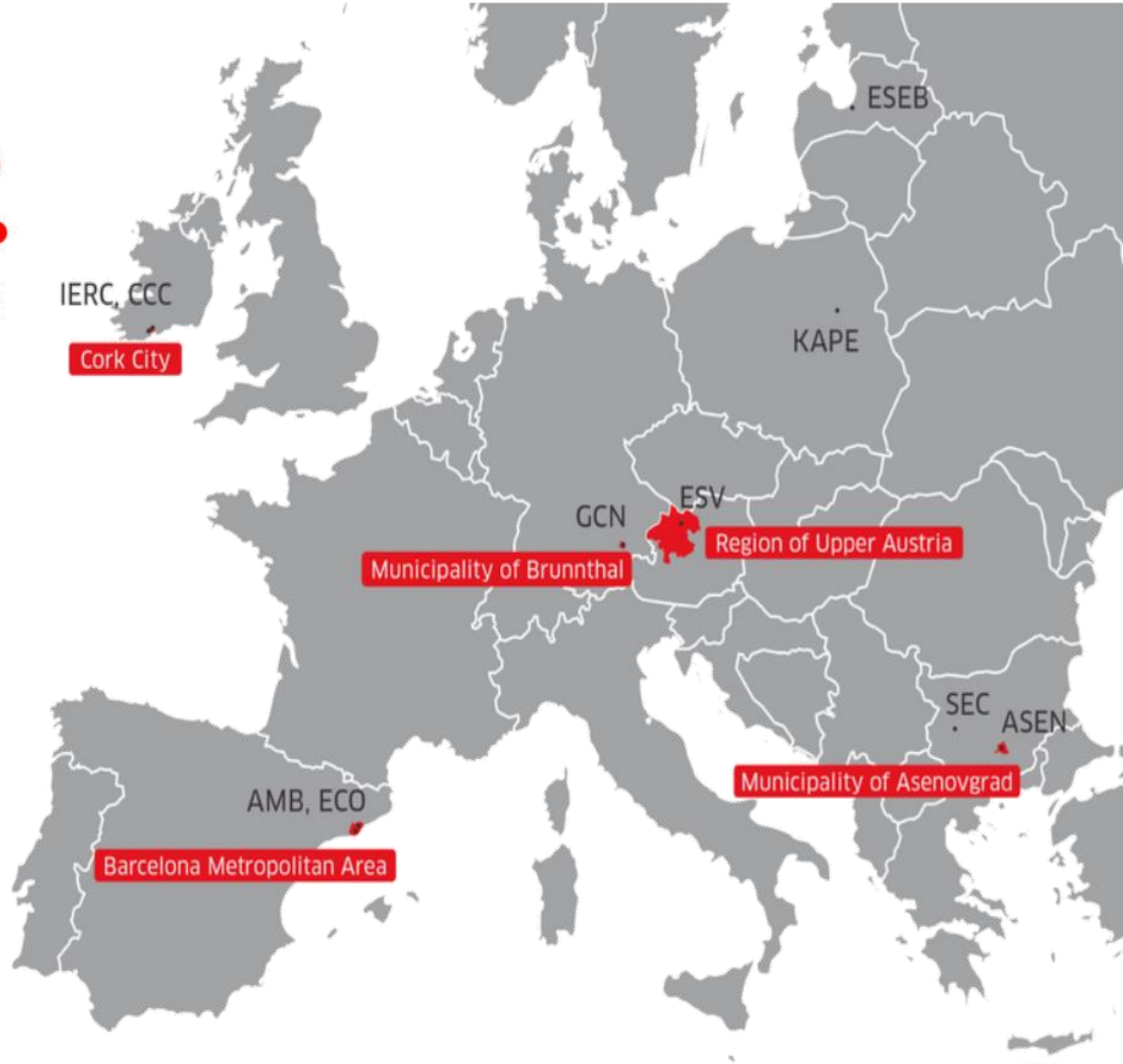
11 partners from 7 EU countries

Project Coordinator

IERC International Energy Research

September 2020 - November 2023

€ 2,018,307



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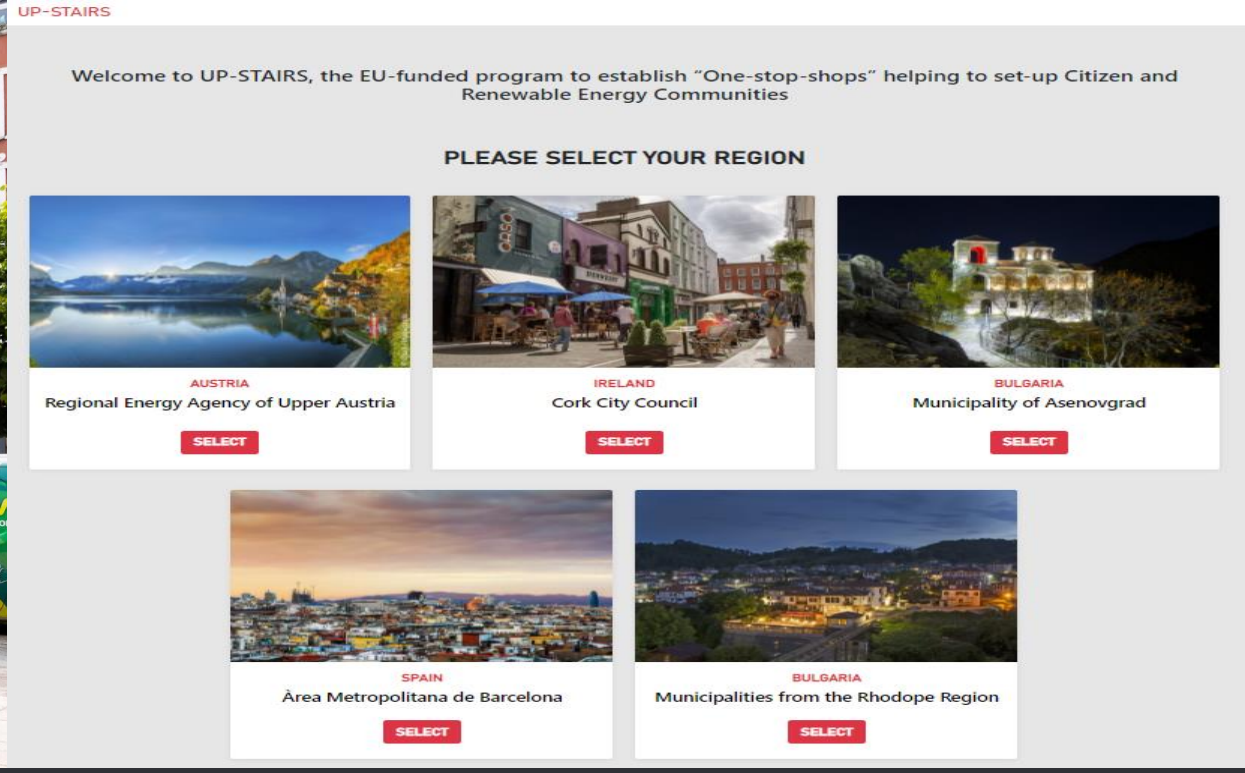
UP-STAIRS Uplifting Energy Communities.



UP-STAIRS Uplifting Energy Communities

www.h2020-upstairs.eu

FOLLOW US

UP-STAIRS Uplifting Energy Communities

UpStairs_h2020

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IERC International Energy Research

ecoserveis

SEC

GREENCOM NETWORKS

KAPE Krajowa Agencja Poszanowania Energii S.A.

OÖENERGIESPARVERBAND

AMB Àrea Metropolitana de Barcelona

Comhairle Cathrach Chorcaí Cork City Council

Ekubirojs

W4RES

WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

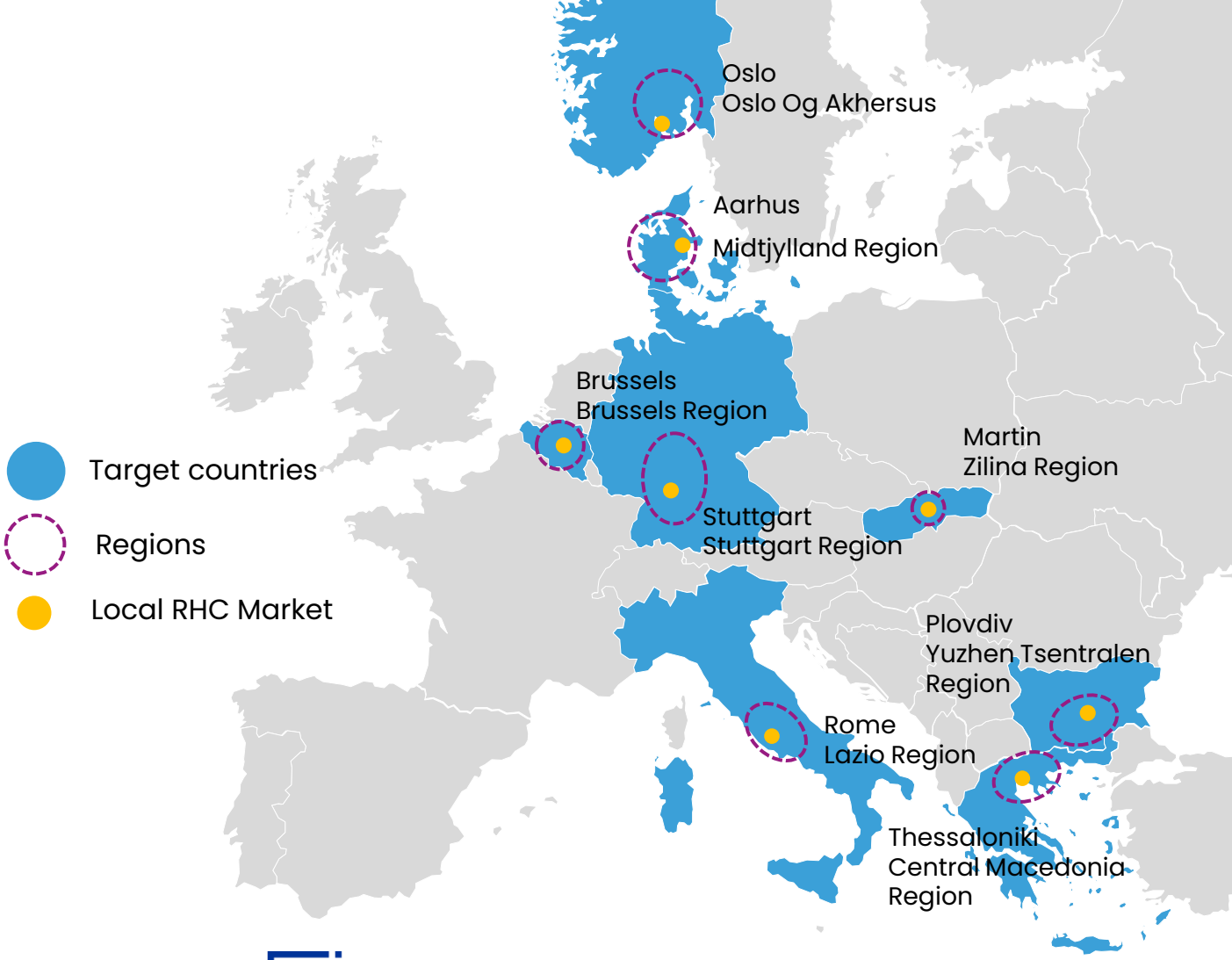
Giulia Zendron

White Research

W4RES

Tapping into the potential of women for supporting renewable energy in the heating and cooling market

- **EU funded**
- **12** partners
- **8** European countries
- **Timeframe:** 2020 - 2023



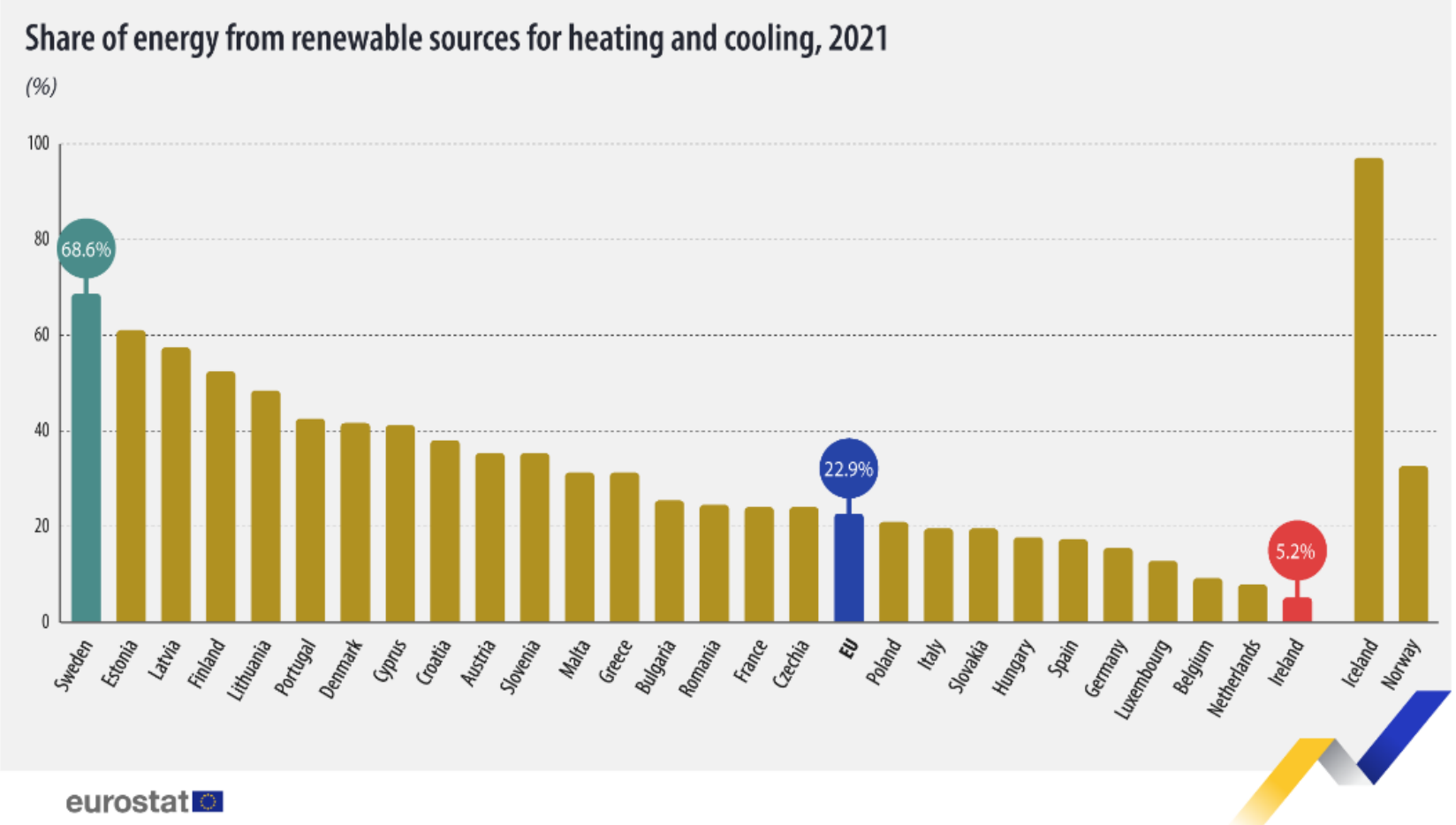
Heating and Cooling and the transition to a greener industry

50% of Europe's final energy demand

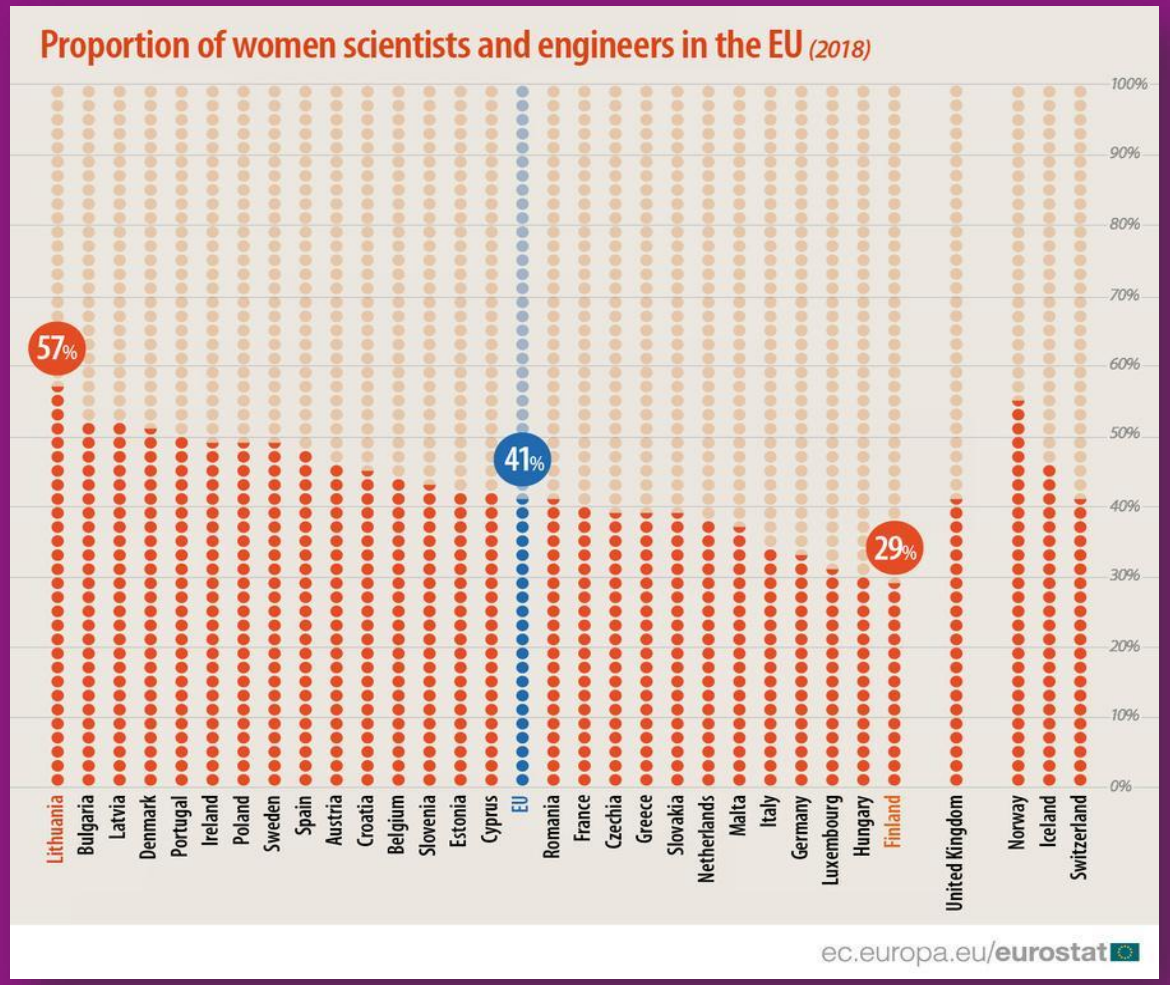
23% renewable energy in heating/cooling in 2018

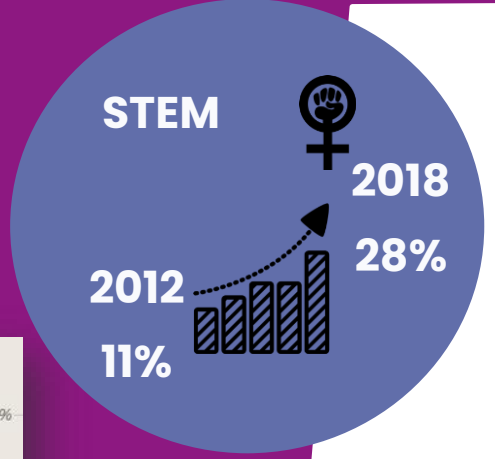
80% of EU's demand from natural gas (=90% of EU gas imports)

38% of EU emissions from heating



Women representation in the sector





2019

32%

Share of women in the renewable energy workforce

22%

Share of women in the oil and gas industry

STEM jobs

28%

Non-STEM Technical Jobs

35%

Administrative jobs

45%

Shares of women in STEM, non-STEM and administrative jobs in renewable energy

W4RES main scope

EU renewable energy targets for 2030

Addressing the **Transition** from Fossil Fuels **to Renewable Energy**

Scaling up the **involvement of women** in the market deployment and uptake of **RHC solutions**

W4RES in a nutshell

Quadruple helix RHC ecosystems

Market actors

Research & Academia

Authorities & policy makers

Civil society organisations & communities

Insights

Framework conditions

Needs and challenges

Case studies

Market uptake support measures

- Business & innovation support for enhanced market uptake
- Technical support & consultancy for deployment
- Capacity building for improved gender mainstreaming
- Awareness raising campaigns on local barriers and opportunites

Connect & sustain

W4RES Observatory

W4RES Regional hubs

Advisory Board

Interlinked networks & initiatives

Synergies with international networks

Results & lessons learnt

Policy learning & exchange

- Hackathons
- Mutual learning workshops & missions
- Replication Guide and Toolkit
- Policy Reccomendations

Our results…

- Women-led RHC projects
- Mentors – Role Models
- RHC Community Insider
- Resources & Tools
- RHC Market Uptake Reports
- RHC Forum

Regional Hubs

- Country Hub main statistics
- Financial Framework
- Regional Hub service portfolio
- Supported initiatives

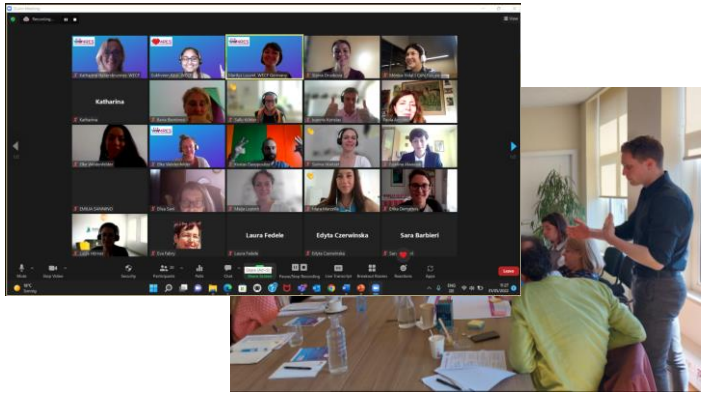
Support Schemes for Women-led RHC Projects

56 projects supported

- Business Support & Co-evaluation
- Technical Support & Co-evaluation
- Awareness Raising & Co-evaluation
- Capacity Building & Co-evaluation

National Campaigns

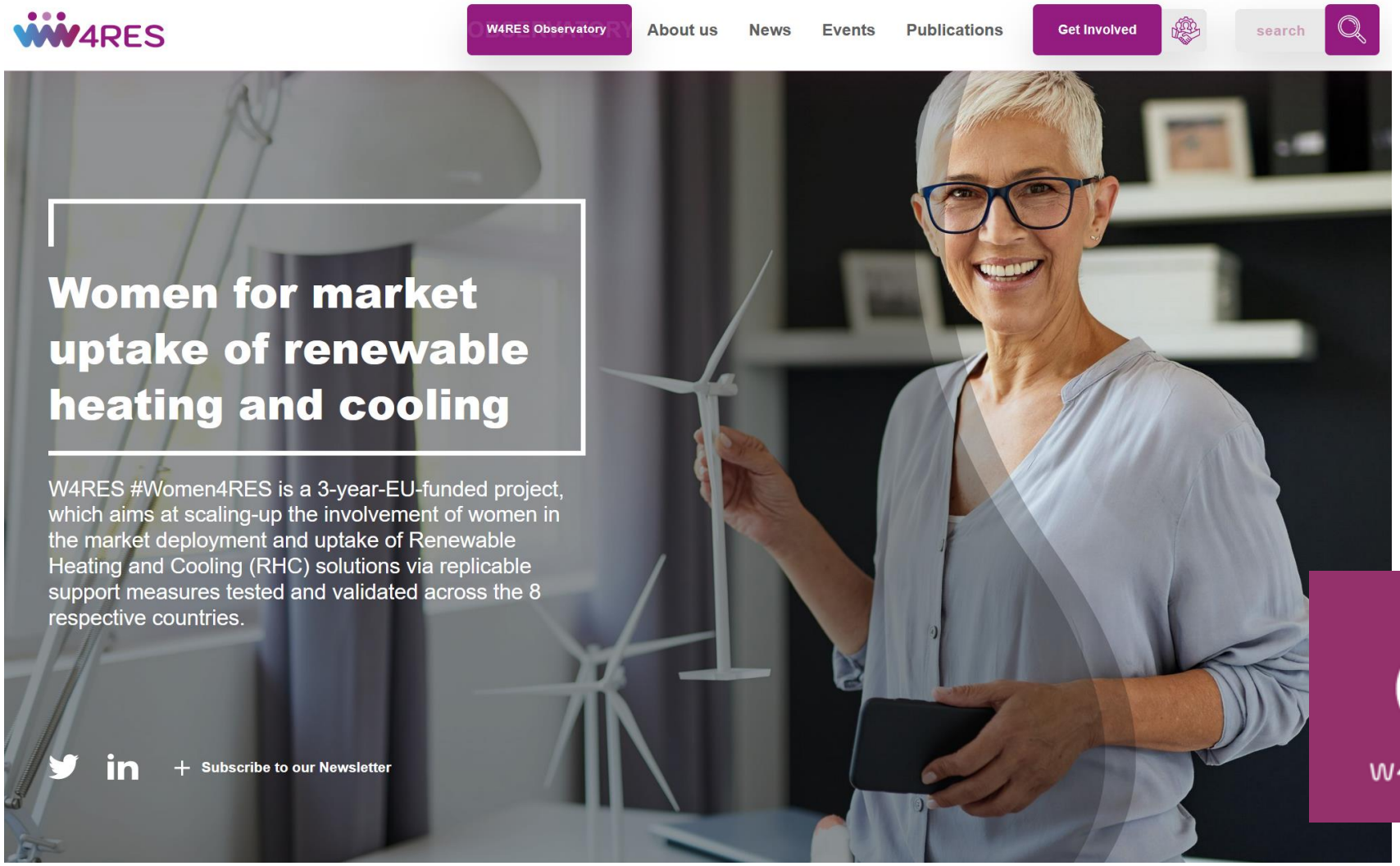
- Local awareness raising campaigns
- Capacity building seminars and trainings
- Regional Hackathons
- Mutual learning workshops



Policy Recommendations

Replication Guide & Toolkit

… to support the development of a more competitive, inclusive and gender-responsive EU RHC landscape.



W4RES WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

Thank you!

w4res.eu @W4resW W4RES

RE-ENERGISING EUROPE

Policy Panel

"Driving a clean energy transition through taping the biomass potential, boosting rescoops and empowering women as agents of change: discussing the projects' recommendations"

October 25, 2023 - From 9.40 to 11.00

Diana Süsser
IEECP / BECoop

Elsebeth Terkelsen
EGC / W4RES

Paweł Gilewski
KAPE / UP-STAIRS

Anna Klöpper
UIPI / NRG2Peers

Tadhg O'Briain
European Commission

Stavroula Pappa
REScoop.eu

Pádraig Lyons
IERC

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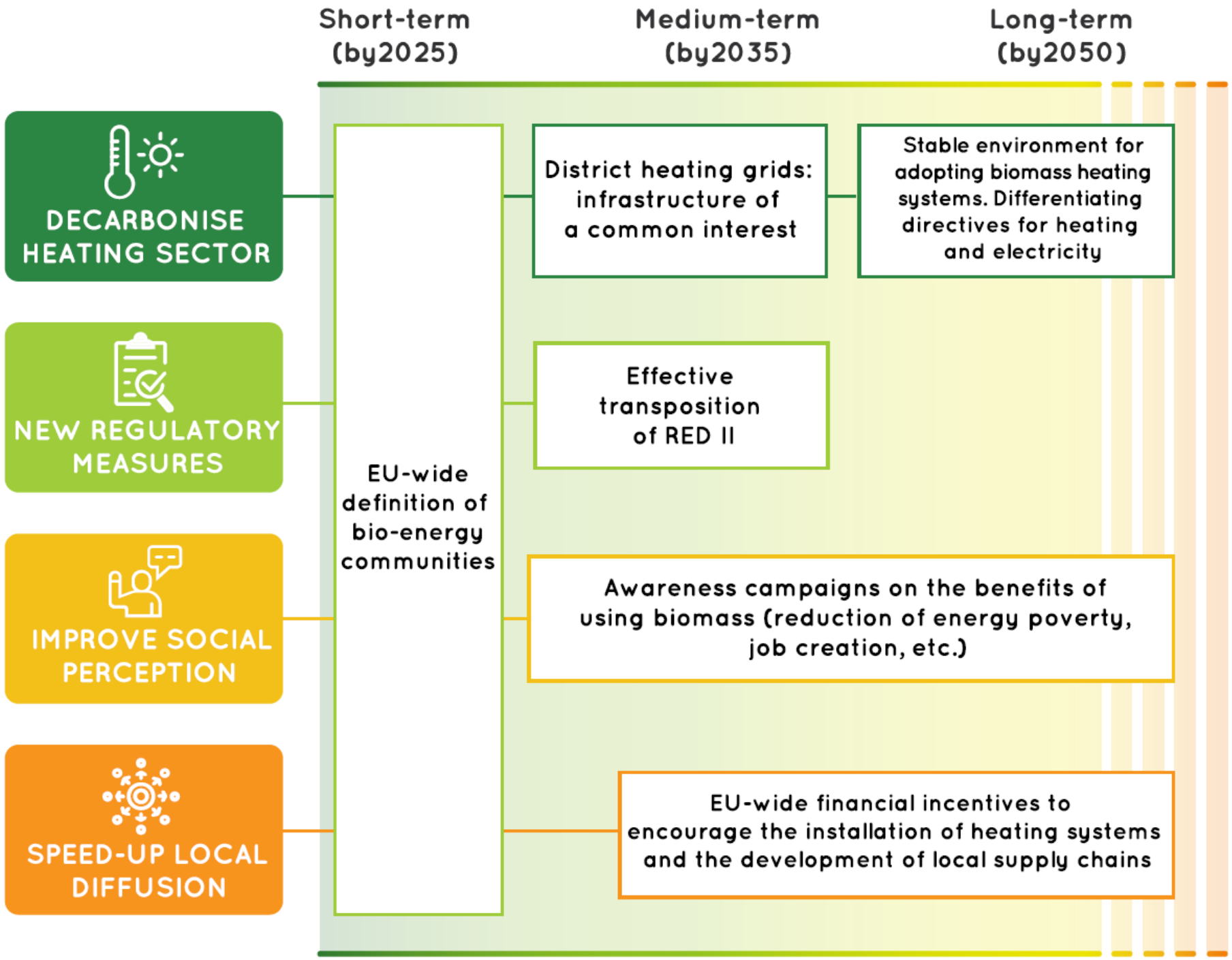
Policy roadmaps promoting bioenergy communities in the European Union

Dr Diana Süsser

BECOOP
UNLOCKING THE COMMUNITY BIOENERGY POTENTIAL

BECOOP
UNLOCKING THE COMMUNITY BIOENERGY POTENTIAL

Proposed policy roadmap for the acceleration of bioenergy communities in Europe



BECoop: **see you around!**

Let's unlock the community bioenergy potential

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BECoop video

Peer2Peer Energy Communities - Policy recommendations on EU and national level

NRG2 PEERS

Anna Klöpper – Communication and Project Officer
International Union of Property Owners (UIPI)

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Barriers and recommendations based on experiences in 4 Pilot Countries: the Netherlands, Slovenia, Spain and Italy

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NRG2Peers Policy Recommendations – EU level

- ***Recommendation 1:*** *Development of Clear Business Models*

- ***Recommendation 2:*** *Funding and Financial Support*

- ***Recommendation 3:*** *Empower Citizens and Increase Knowledge*

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NRG2Peers Policy Recommendations – National level

- ***Recommendation 1:*** *Comprehensive Regulatory Framework*

- ***Recommendation 2:*** *Financial, Administrative, and Logistical Support*

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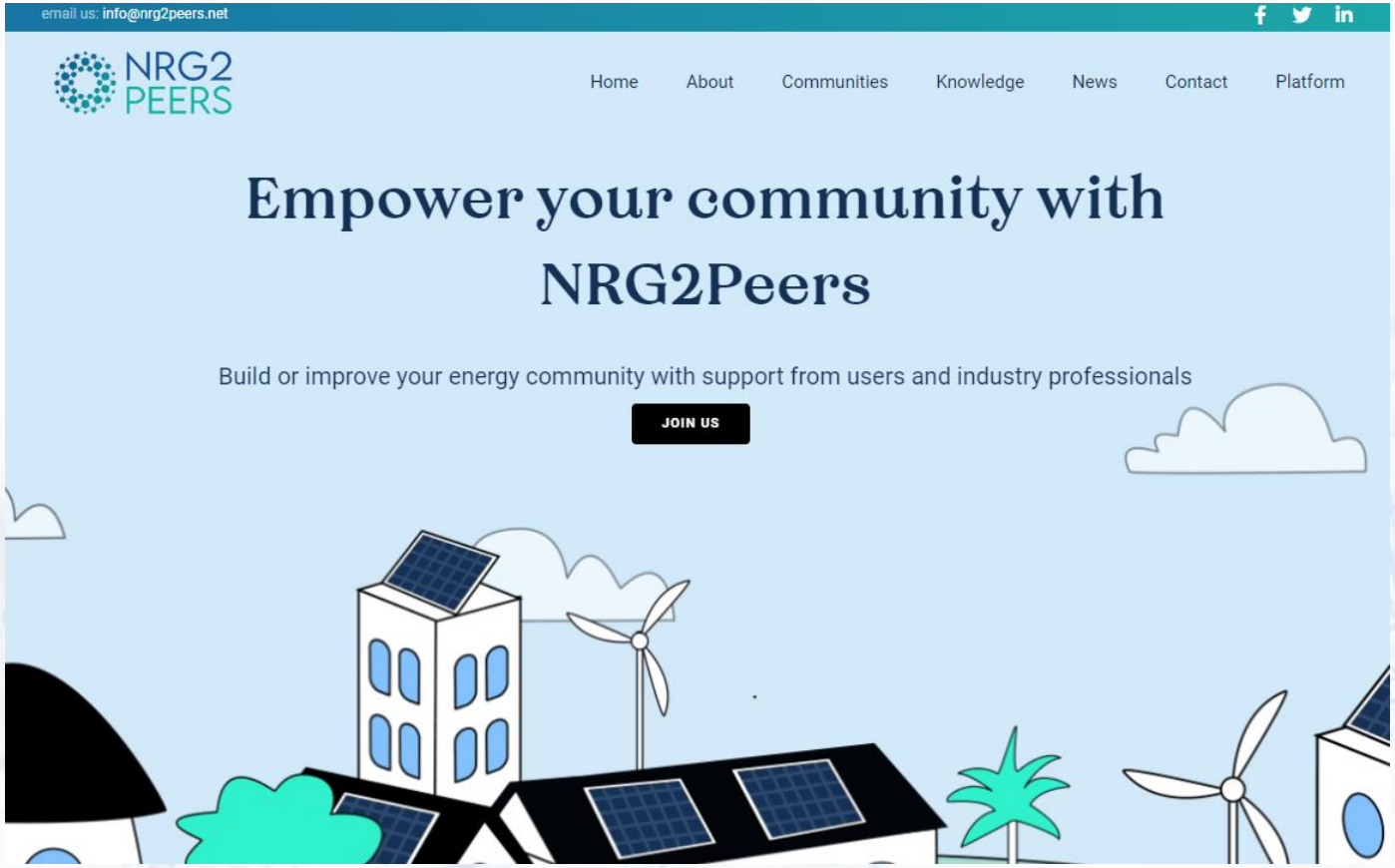
The full report will be published soon! Check out nrg2peers.net



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NRG2 PEERS

KAPE
Krajowa Agencja Poszanowania Energii S.A.

Challenges and opportunities for collective and cooperative actions

Paweł Gilewski, PhD
The Polish National Energy Conservation Agency
Warsaw University of Technology, Poland

UP-STAIRS Uplifting Energy Communities.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 891775

Challenges

- The participation of residents in energy communities depends to a large extent on the availability of programs co-financing individual activities.
- The existence of a thorough legislative framework for energy communities.
- The need to inform citizens about energy community activities and energy efficiency and renewable energy measures.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 891775

Opportunities

- Close cooperation between representatives of local authorities and representatives of One Stop Shops can have a positive impact on the operation of energy communities.

- It is very important to have a specific legislative and regulatory framework for energy communities at national/regional level, as this increases the willingness of residents to participate in collective actions and the creation of energy communities.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 891775

Recommendations

- Reducing excessively high pre-requirements that can discourage residents.
- The initiative of the energy community should be promoted and facilitated through an appropriate legislative framework.
- Promotion of the concept of energy communities by national authorities, which can increase trust in the concept.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 891775

UP-STAIRS Uplifting Energy Communities.

KAPE
Krajowa Agencja Poszanowania Energii S.A.

Challenges and opportunities for collective and cooperative actions

Paweł Gilewski, PhD
The Polish National Energy Conservation Agency
Warsaw University of Technology, Poland

POLITECHNIKA WARSZAWSKA
WARSAW UNIVERSITY OF TECHNOLOGY

UP-STAIRS Uplifting Energy Communities.

THANK YOU FOR YOUR ATTENTION

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 891775

WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

EUROPEAN GREEN CITIES

Policy Recommendations

Elsebeth Terkelsen, European Green Cities

25/10/2023

www.w4res.eu welcome@w4res.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

EUROPEAN GREEN CITIES

- Aarhus and Copenhagen, Denmark
- Network, non-profit – supporting the development of green cities (sustainable energy supply, energy efficiency, mobility and biodiversity) – by promoting and participating in innovation projects
- 57 cities in 19 countries

Policy Recommendations

Support **women** in driving market **uptake** of renewable heating and cooling (**RHC**)

Policy Recommendations

1. Support a Gender Balanced RHC Sector for Future Generations
2. Promoting an Inclusive Workplace in the RHC Sector
3. Advancing Gender Equity in the RHC Sector
4. Institutionalize Awareness on Gender Mainstreaming
5. Raise and Provide Funds for Women-Led Projects in the RHC Sector

Policy Recommendations 1

1. Support for a gender balanced RHC sector in future generation

- Awareness Campaigns in Schools
- Connect Climate Protection and STEM
- Facilitate School-Company Cooperation
- Emphasize Intercultural and Social Skills
- Skills Training and Technical Support

Policy Recommendations 2

2. Promoting an Inclusive Workplace in the RHC Sector

- Gender Quotas
- Networking Opportunities
- Mentoring Programs
- Gender and Family-Friendly Policies
- Gender-Responsive Budgeting
- Safe Reporting Procedures

European Green Cities as Work Place

- Gender Policy for Employing
- 30-hour Work Week
- Remote Work
- Travel Policy

Policy Recommendations 3

3. Advancing Gender Equity in the RHC Sector

- Inclusivity Training
- Gender-Disaggregated Data
- Gender-Quota Decision Making
- Gender-Inclusive Communication
- Gender-Smart Policies
- Gender-Ready Energy Cooperatives

4. Institutionalize Awareness on Gender Mainstreaming

- Awareness Campaigns in Industry
- Gender-Smart Training
- Promotional Campaigns
- Visibility of Women-Led Initiatives

Visibility of Women-Led Initiatives

5. Raise and Provide Funds for Women-Led Projects in the RHC Sector

- Raise Awareness of Financial Barriers
- Quotas for Gender-Just Projects
- Support Women-Led Initiatives
- Encourage Research Participation

Avedøre Green City

Energy Community

PV & chargers

Low temperatur DH

Biodiversity

Thank you!

Elsebeth Terkelsen

et@greencities.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

RE-ENERGISING EUROPE

Coffee Break

#REenergisingEurope

BECoop MICAT Multiple Impacts Calculation Tool newTRENDs NRG2 PEERS NUDGE UP-STAIRS Uplifting Energy Communities. W4RES

These projects have received funding from the European Union's Horizon 2020 research programme. The sole responsibility for the content of this event lies with the BECoop, MICAT, newTRENDs, NrG2peers, NUDGE, UP-STAIRS and W4RES projects and does not necessarily reflect the opinion of the European Union.

RE-ENERGISING EUROPE

Get inspired

"Innovative approaches, success stories from the RES and RHC ecosystems"

October 25, 2023 - From 11.15 to 12.15

Vasilis Filippou
ESEK, Karditsa
Greece/BECoop

Eelke Kingma
Schoonschip/NRG2Peers

Ivanka Pandelieva-Dimova
Sofia Energy Centre/
UP-STAIRS

Charlotte Schlicke
Steinbeis Europa
Zentrum/W4RES

Carina Holzapfel
H2MC/W4RES

Dara Turnbull
Housing Europe

#REenergisingEurope

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ΕΣΕΚ Energy Community of Karditsa

From your morning coffee to heat

Vasileios Filippou

Member of the Management Board of the Energy Community /

Forest engineer, Aristotle University of Thessaloniki (PhD)

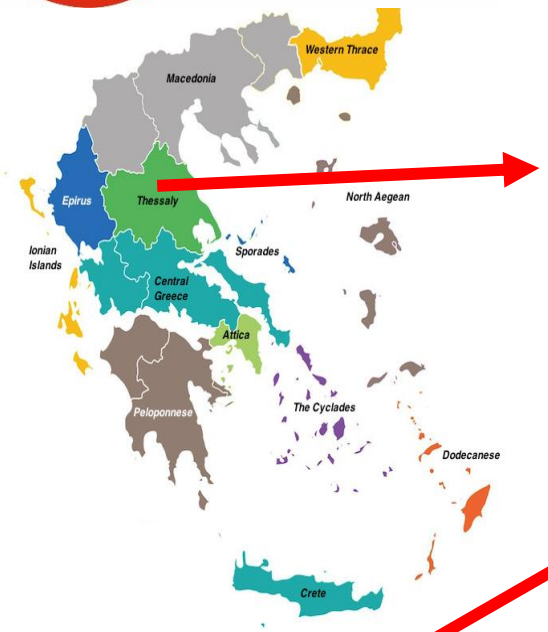
Follow us: @esekarditsas

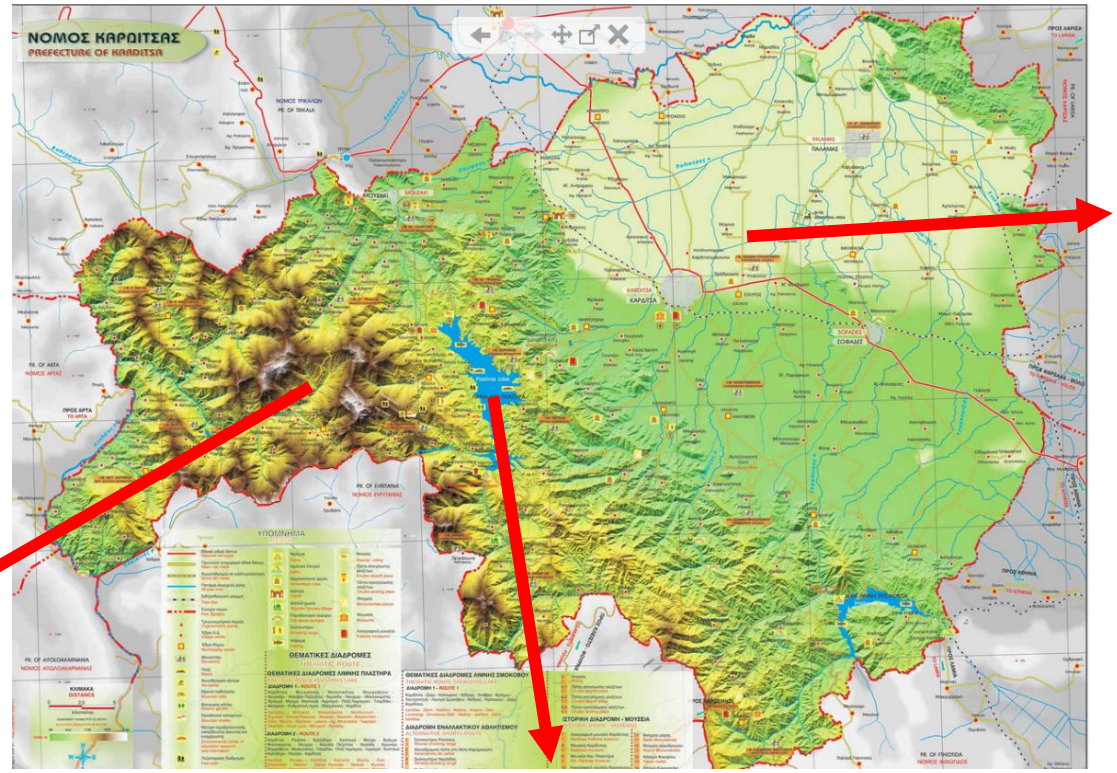
info@esek.gr

www.esek.gr

-ΣΥΝ.ΠΕ-
ΕΣΕΚ

The Regional Unit of Karditsa





The Karditsa plain

- Population: 113,544 inh. (2011 census)
  - 1 % of the Greek population
  - 34 % of the local population lives in the city of Karditsa
- Area: 2.636 Km^2
  - Flat land: 47.7 %
  - Mountainous areas: 44 %
  - Semi-mountainous areas: 8.3 %
- Eastern part: part of the Thessaly plain
- Western part: Agrafa mountains

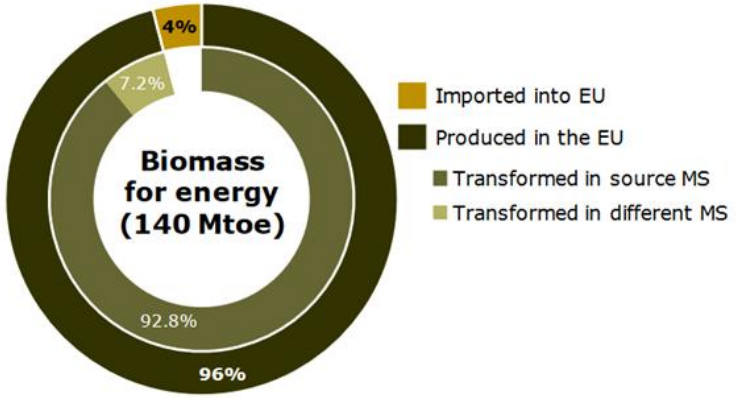
Agrafa Mountains

Plastira Lake

The Energy Community of Karditsa – a short history

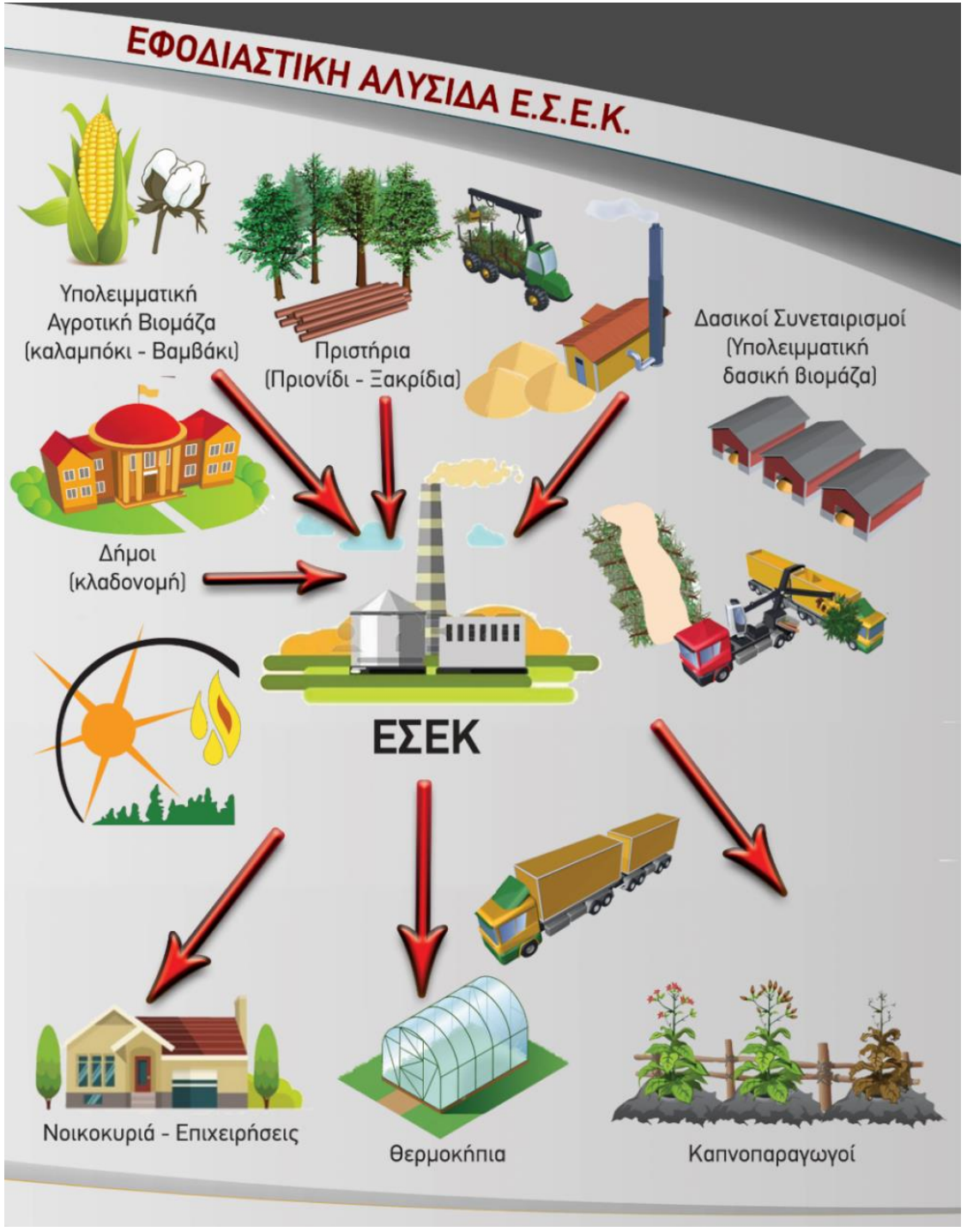
- It is based in the participation of citizens and SMEs of Karditsa's prefecture (or originating from it) who are sharing a common vision of an energy independent prefecture. 400 members.
- It is supported by local authorities:
  - Chamber of Commerce,
  - Regional Authority,
  - Municipalities,
  - Cooperative bank
- It was hosted in the "incubator" of the Development Agency.

Why Biomass?



Origin of biomass supplied for energy in 2016 in the EU-28. Source: NREAP Progress Reports.

https://ec.europa.eu/eurostat/web/energy/data/shares
https://ec.europa.eu/energy/topics/renewable-energy/progress-reports_en?redir=1
https://www.zambiainvest.com/economy/zda-boosts-job-creation/
https://blogs.canterbury.ac.uk/psychology/building-community-resilience-to-climate-change-insights-from-the-social-psychology-of-groups/
https://www.yesmagazine.org/issue/ecological-civilization/2021/02/16/what-does-ecological-civilization-look-like
https://rsr.akvo.org/en/project/5659/update/29849/


ΕΦΟΔΙΑΣΤΙΚΗ ΑΛΥΣΙΔΑ Ε.Σ.Ε.Κ.
Υπολειμματική Αγροτική Βιομάζα (καλαμπόκι - Βαμβάκι)
Πριστήρια (Πριονίδι - Ξακρίδια)
Δασικοί Συνεταιρισμοί (Υπολειμματική δασική βιομάζα)
Δήμοι (κλαδονομή)
ΕΣΕΚ
Νοικοκυριά - Επιχειρήσεις
Θερμοκήπια
Καπνοπαραγωγοί

ΚΑΦΟΤΟΠΙΟ
ΕΣΥ ΞΕΡΕΙΣ ΤΗΝ ΑΞΙΑ ΤΟΥ ΚΑΦΕ ΠΟΥ ΠΙΝΕΙΣ;

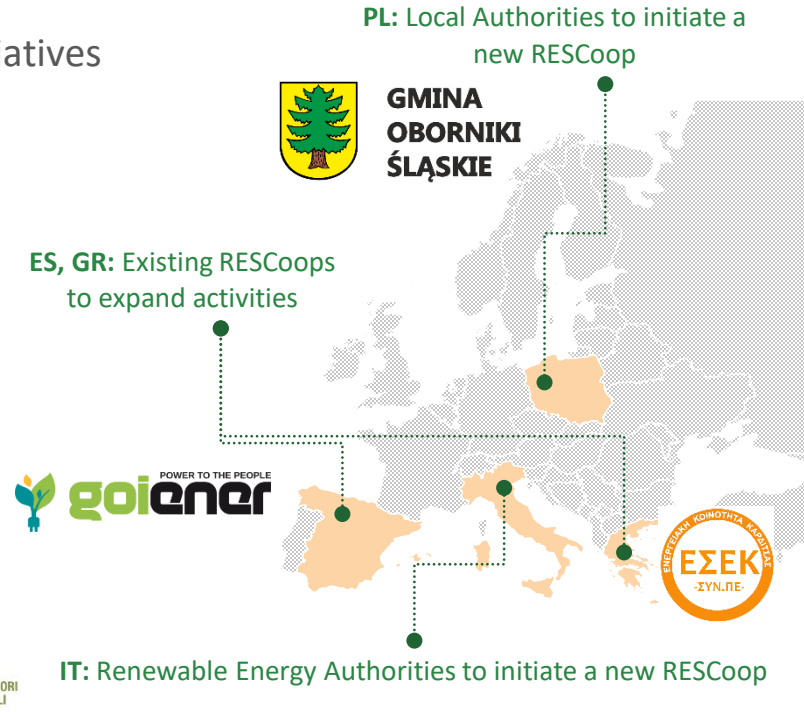
Solid biofuel plant

BECoop: **Project in a nutshell**

H2020 / GA 952930 Topic: LC-SC3-RES-28-2018-2019-2020 - Market Uptake support

- **BECoop mobilises people around community bioenergy** and creates a better image for such initiatives
  reduces the development efforts of community bioenergy heating projects
- **market research, social, technical, business, knowledge transfer** and **policy components**
- A suite of **supporting resources and tools** for community bioenergy project development
- exploration and support of 4 **new bioenergy heating communities (BECoop RESCoops)**

  We test the implementation of community bioenergy heating support scheme in diverse, complementary pilot cases in regions with high replication potential across EU



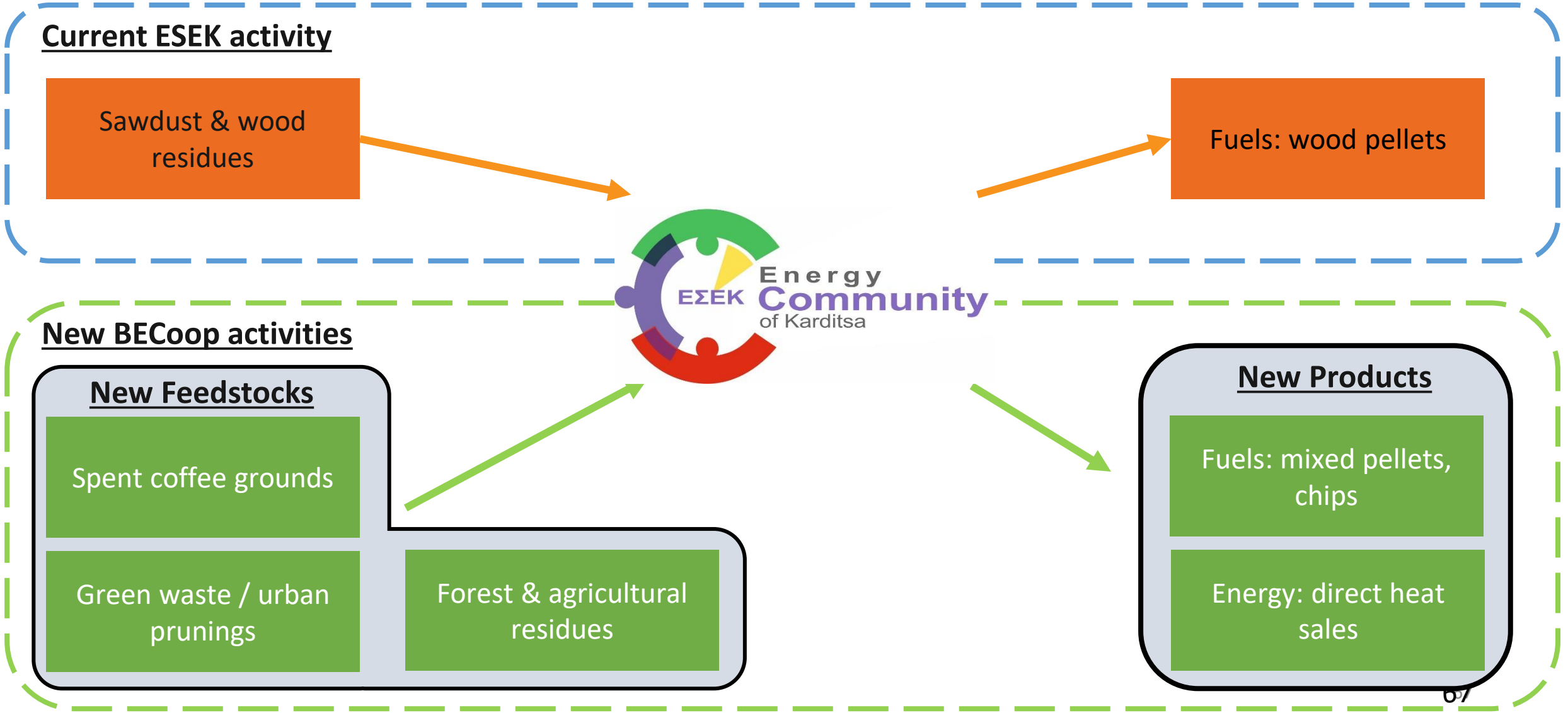
fiper
FEDERAZIONE ITALIANA PRODUTTORI DI ENERGIA DA FONTI RINNOVABILI

- We validate our results and **open the policy debate** on ***how*** community bioenergy at local, national and EU level can be fostered.

20+ community bioenergy cases analysed 50+ events (co-creation workshops, consultations, webinars, info days, etc.) 10+ sister projects synergies

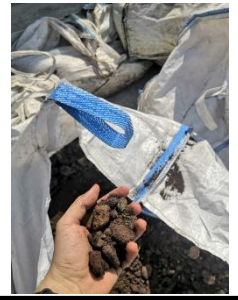
- We empower the community bioenergy **ecosystem to scale** - 8 additional **replication cases** of our concept

Expanding the ESEK business model through BECoop



New ESEK activities: biomass sourcing

Municipality of Karditsa	City tree pruning	Chipping	Loading of the woodchips and transportation



Local cafeterias	Collection of the residual coffee	Transportation of the residual coffee

Municipality of Lake Plastira in collaboration with local forest cooperative	Removal of forest residues from local forests	Chipping	Loading of the woodchips and transportation

ΕΣΕΚ Energy Community of Karditsa

New ESEK activities: fuels & heat sales

(Mixed) Pellet production

Commercialization

End Users

Chips

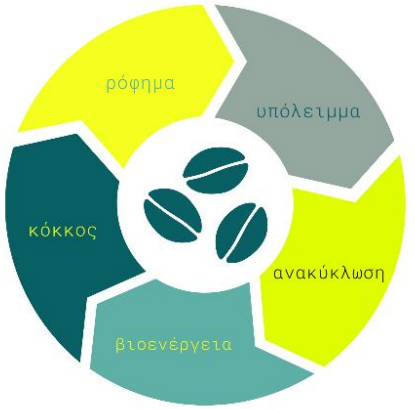
Installation and operation of biomass boilers

Heat sales

BEcoop

InCommOn
Innovative Communities Onwards

ΕΣΕΚ Ενεργειακή Κοινότητα Καρδίτσας



InCommOn
Innovative Communities Onwards

Coffee pellet project

ΕΣΕΚ Ενεργειακή Κοινότητα Καρδίτσας

© Karditsa Energy Community

RESCOOP.EU

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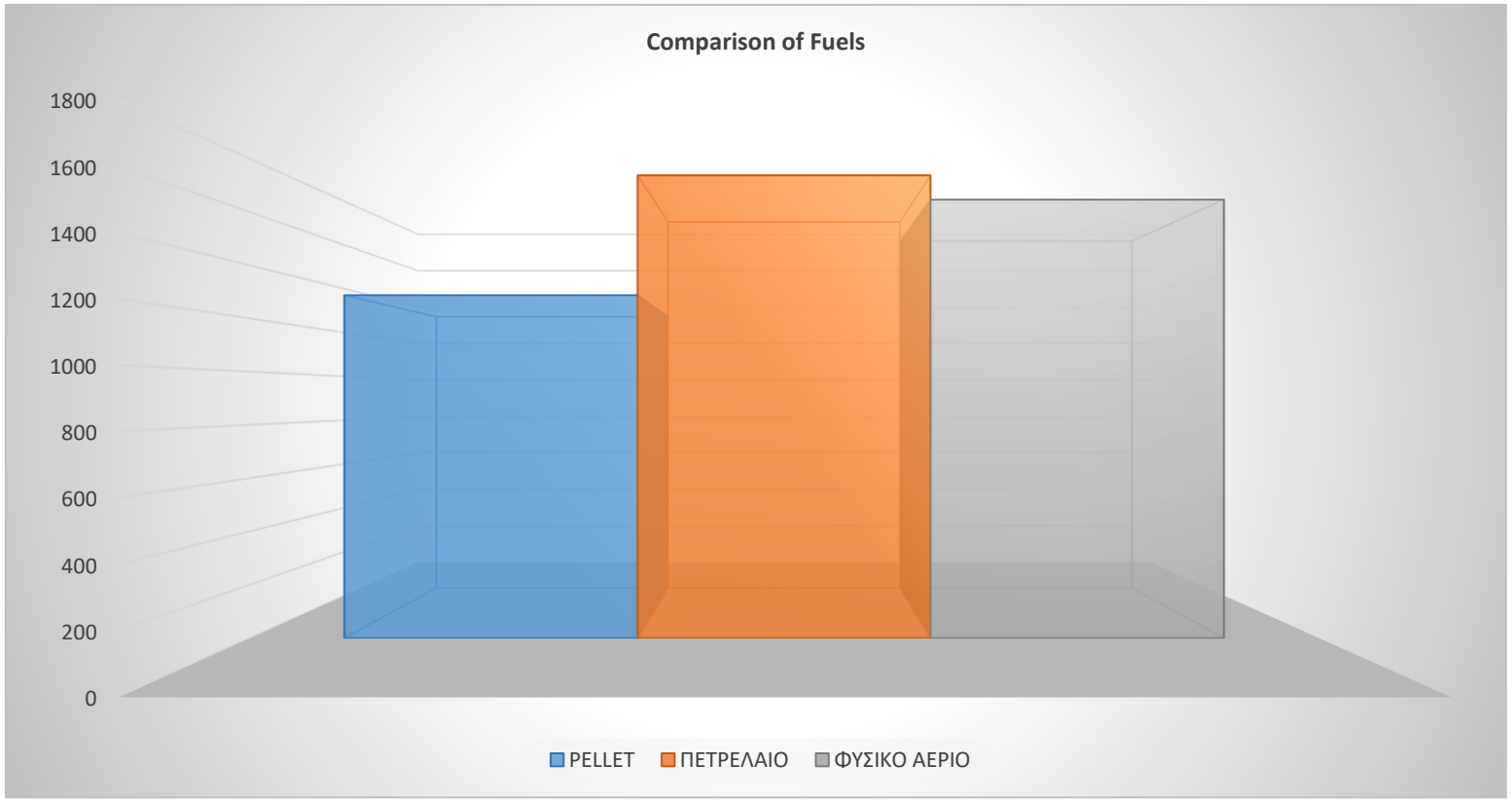
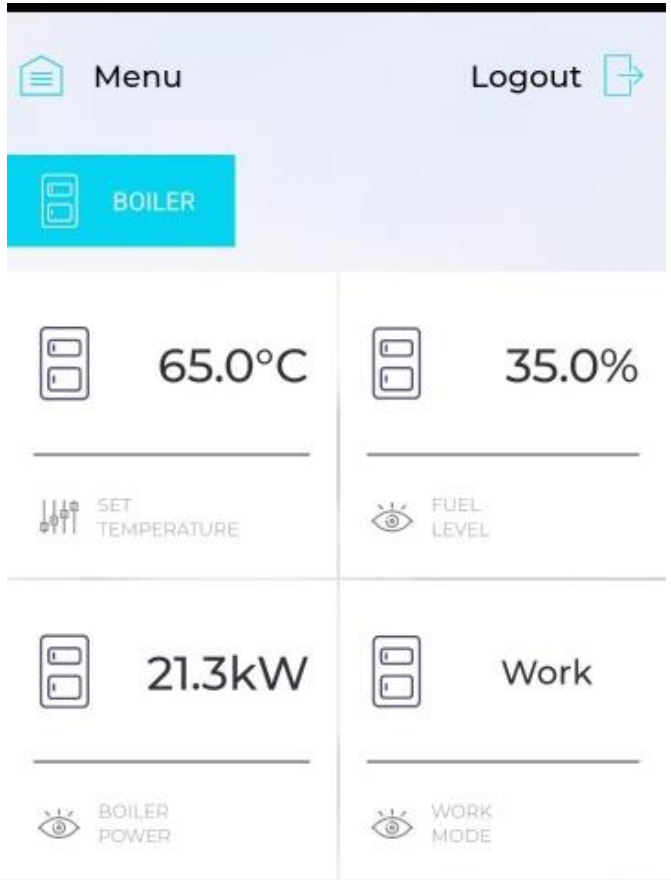
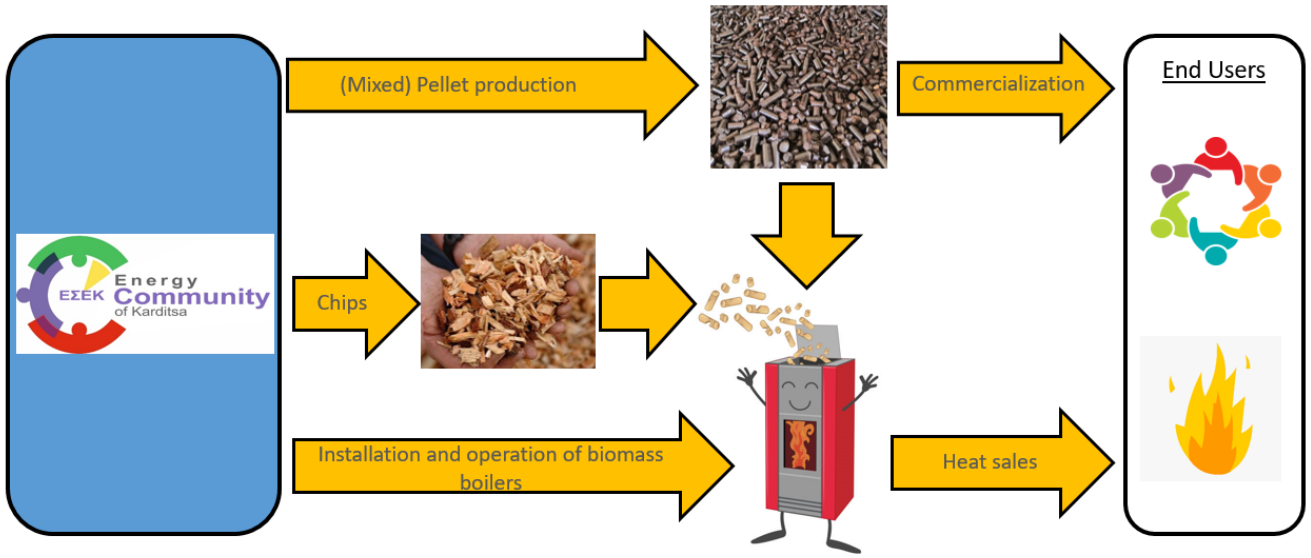
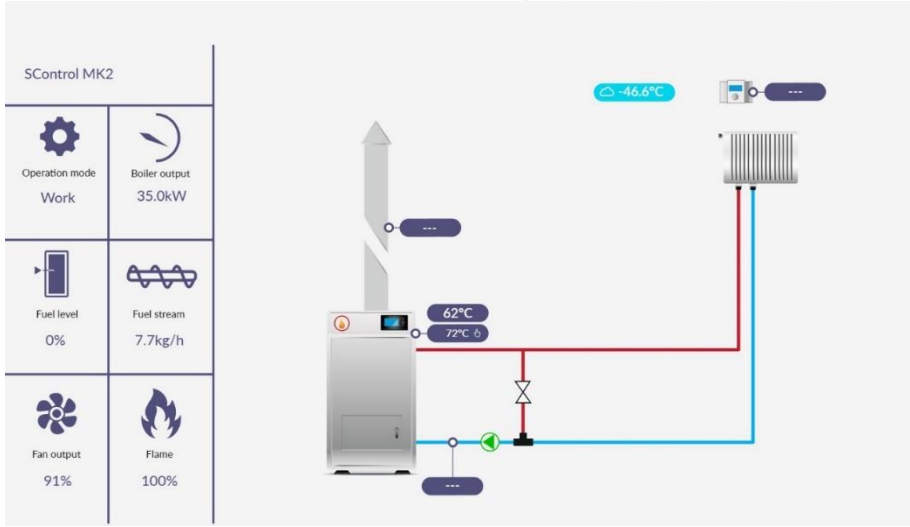

Comparison of Fuels
1800
1600
1400
1200
1000
800
600
400
200
0
PELLET
ΠΕΤΡΕΛΑΙΟ
ΦΥΣΙΚΟ ΑΕΡΙΟ


Menu
Logout
BOILER
65.0°C
SET TEMPERATURE
35.0%
FUEL LEVEL
21.3kW
BOILER POWER
Work
WORK MODE


Energy Community of Karditsa
ΕΣΕΚ
(Mixed) Pellet production
Chips
Installation and operation of biomass boilers
Commercialization
Heat sales
End Users


SControl MK2
Operation mode
Work
Boiler output
35.0kW
Fuel level
0%
Fuel stream
7.7kg/h
Fan output
91%
Flame
100%
62°C
72°C

ON GOING PROJECT

GREENPEACE

FREE SOLAR

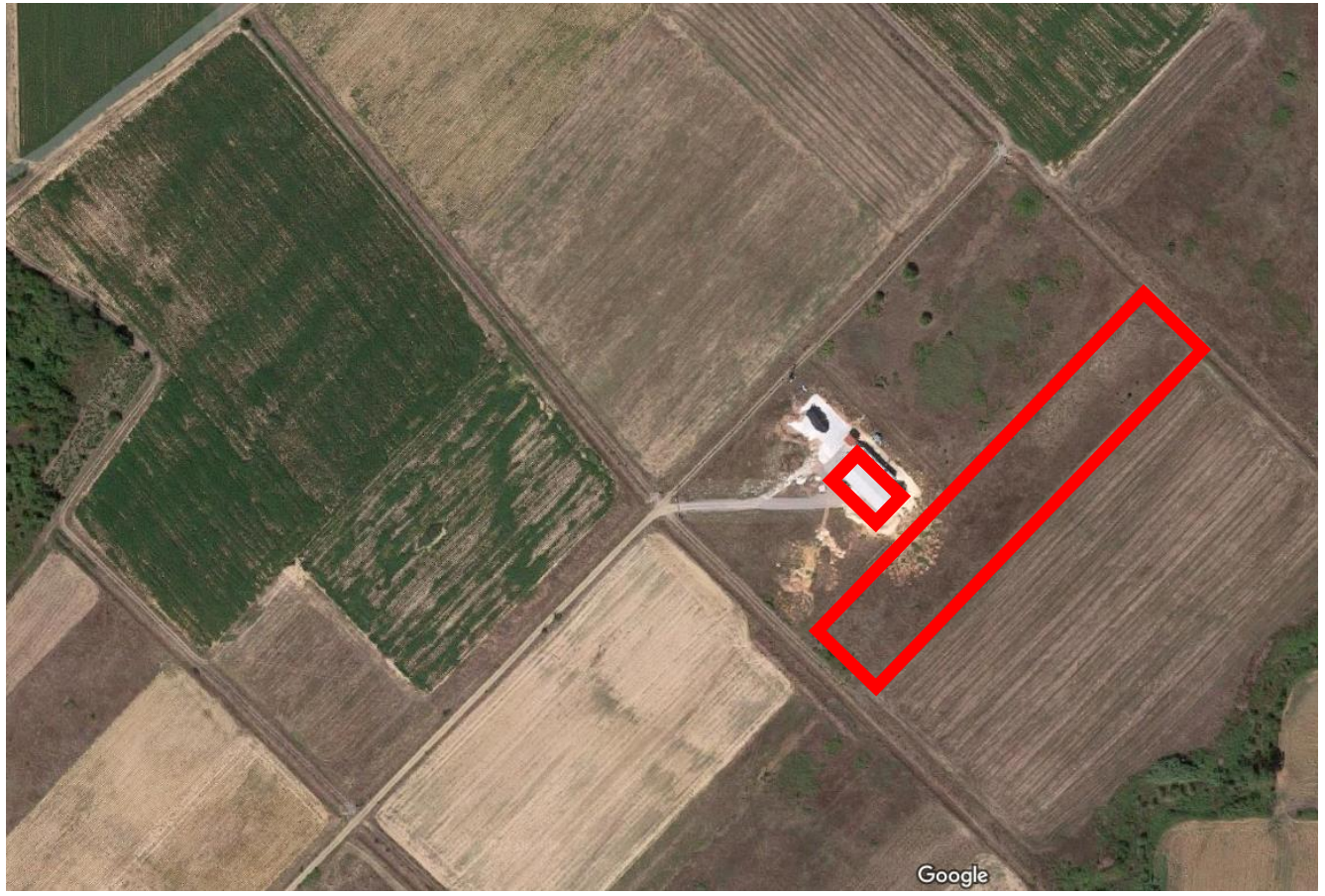
✓ Photovoltaic construction for net metering (rooftops)

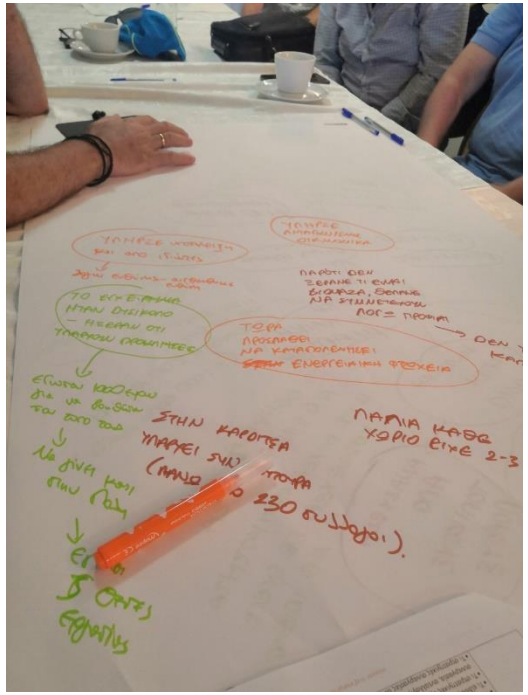
UP COMING PROJECT

✓ Photovoltaic construction for virtual net metering

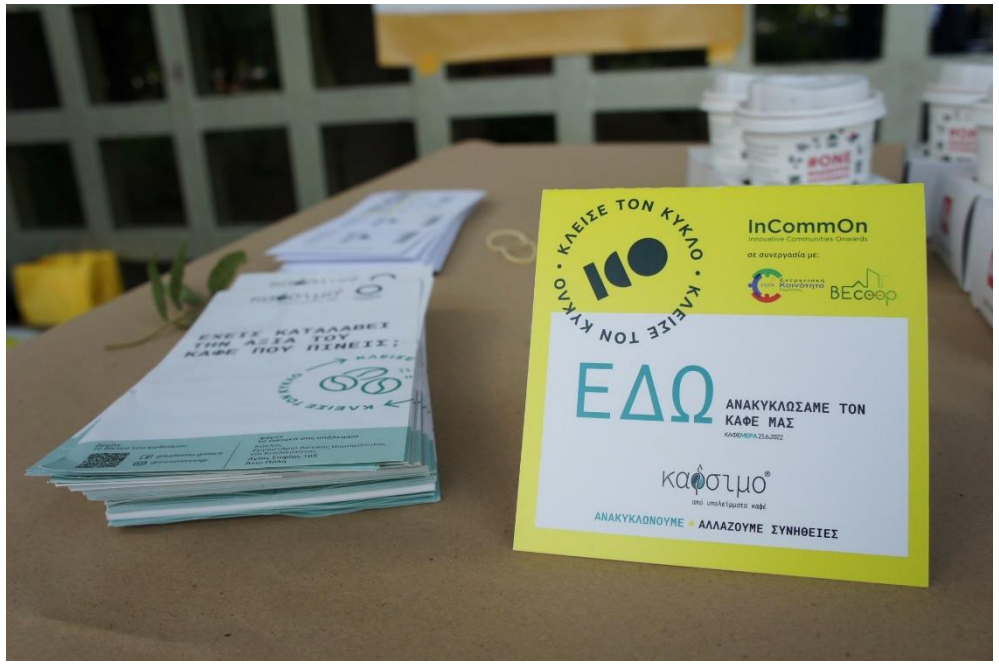
✓ **1 MW** (Land)

✓ **100 KW** (Roof)





ecoperativa


ΚΛΕΙΣΕ ΤΟΝ ΚΥΚΛΟ
InCommOn
Innovative Communities Onwards
ΕΔΩ
ΑΝΑΚΥΚΛΩΣΑΜΕ ΤΟΝ ΚΑΦΕ ΜΑΣ
καφσιμο
ΑΝΑΚΥΚΛΩΝΟΥΜΕ ΑΛΛΑΖΟΥΜΕ ΣΥΝΗΘΕΙΕΣ

BEcoop
ΕΔΩ

ΕΣΕΚ
Ενεργειακή Κοινότητα Καρδίτσας
BEcoop
UNLOCKING THE COMMUNITY BIOENERGY POTENTIAL
η δική μας ενέργεια
25.06.2022
ώρα 16:00-22:00 Παυσίλυπο
AgroBioHeat
HEINRICH BÖLL STIFTUNG ΘΕΣΣΑΛΟΝΙΚΗ
GREENPEACE
InCommOn
2ISECAP
Οικό Σφαιρα
FREE SOLOR
EKETA
ELECTRA
avka
ecoperativa

From your morning coffee to heat

Thank you!

Vasileios Filippou

Member of the Management Board of the Energy Community /

Forest engineer, Aristotle University of Thessaloniki (PhD)

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schoon schip AMSTERDAM

NRG2 PEERS

NRG2Peers – Re-Energising Europe

25 - 10 - 2023

UP-STAIRS
One-Stop-Shops to Empower Community Energy

Ivanka Pandelieva-Dimova

SEC

ivankap@sec.bg

UP-STAIRS Uplifting Energy Communities.

RE-energising Europe – Sharing ideas and knowledge

24-25 October 2023
Brussels, Belgium

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Concept

- Creation of OSSs in five pilot regions: Asenovgrad Municipality (Bulgaria), Barcelona Metropolitan Area (Catalonia, Spain), Cork City (Ireland), Upper Austria Region (Austria), Rhodoshop (Rhodope Region, Bulgaria) ;
- OSSs help the creation of energy communities and assist citizens in the energy transition through provision of holistic advice according to the local or regional needs;
- OSSs establishment and operation is based on Business Model Framework (BMF) developed within the project and adapted to each pilot context.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Focus of OSSs services

- OSS Barcelona и OSS Upper Austria focus mainly but not exclusively on support for **creation of Renewable Energy Communities and implementation of RES (PV) in buildings**;
- OSS Asenovgrad, OSS Cork и OSS Rhodoshop focus mainly but not exclusively on support for **creation of Citizen Energy Communities for energy refurbishment of residential buildings.**

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Key successes in figures

- People outreached: 62 511
- People involved/engaged: 11 857
- Energy savings (expected): 17.2 GWh/y
- PV energy (to be) produced: 58.1 GWh/y
- Building area (to be) refurbished: 316 751 sq.m.
- PV energy (to be) installed: 40 MW
- Associated expected investment: 71.7 MEuro
- Energy communities supported: 340

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Key findings from OSS operation

Background

Lack of key information for homeowners:

- ✓ where to start on establishing an energy community in their area.
- ✓ the route to getting financial help;
- ✓ policy framework and where to find it;
- ✓ the increased community benefits.

Challenges and Lessons

- ✓ Numerous regulatory barriers to establishing a renewable energy community (Ireland and Bulgaria);
- ✓ Capacity in the construction area not sufficient in a reasonable timeframe across all grant routes (Ireland).
- ✓ Service should be free for citizens, especially those at risk of energy poverty;
- ✓ Technical and legal background of ICs important;
- ✓ Proactive behaviour of ICs needed;
- ✓ Coordination between many home owners in one building a challenge (Bulgaria);
- ✓ Low awareness and lack of interest towards ESCO contracts as funding option (Bulgaria).

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

OSS Cork Home Energy UpGrade Office

6500 citizens informed about benefits of Energy Community formation in Ireland

RE-energising Europe – Sharing ideas and knowledge

24-25 October 2023, Brussels, Belgium

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

OSS Asenovgrad buildings

Before

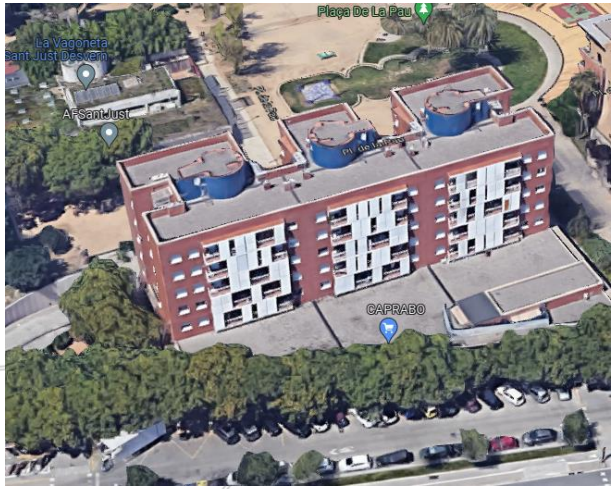
After

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

OSS Barcelona Metropolitan Area

Engaging activities to promote self consumption and energy communities

- Citizens assistance: 1770 citizens
  - 1 special session (shared self consumption in a multi-family building)
- SME's assistance: 590 SME's



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

OSS Upper Austria

- 1000+ individual advice sessions
- 50+ events with 2500+ participants
- **100+ Energy Communities in operation in Upper Austria**

More information:

Covenant of Mayors Investment Forum • Energy Efficiency Finance Marketplace 2023

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

For more information:

https://www.h2020-upstairs.eu/

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Thank you for your attention!

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

W4RES

WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

Supporting women-led projects for renewable energy heating and cooling

Charlotte Schlicke

Steinbeis Europa Zentrum
Enabling Innovators to Grow

www.w4res.eu welcome@w4res.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

Tapping into the potential of women for supporting renewable energy in the heating and cooling market

W4RES WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

EUREC · APRE Agenzia per la Promozione della Ricerca Europea · Steinbeis Europa Zentrum Enabling Innovators to Grow · EUROPEAN GREEN CITIES

HFT Stuttgart University of Applied Sciences · CiviESCo · WHITE · PEDAL CONSULTING

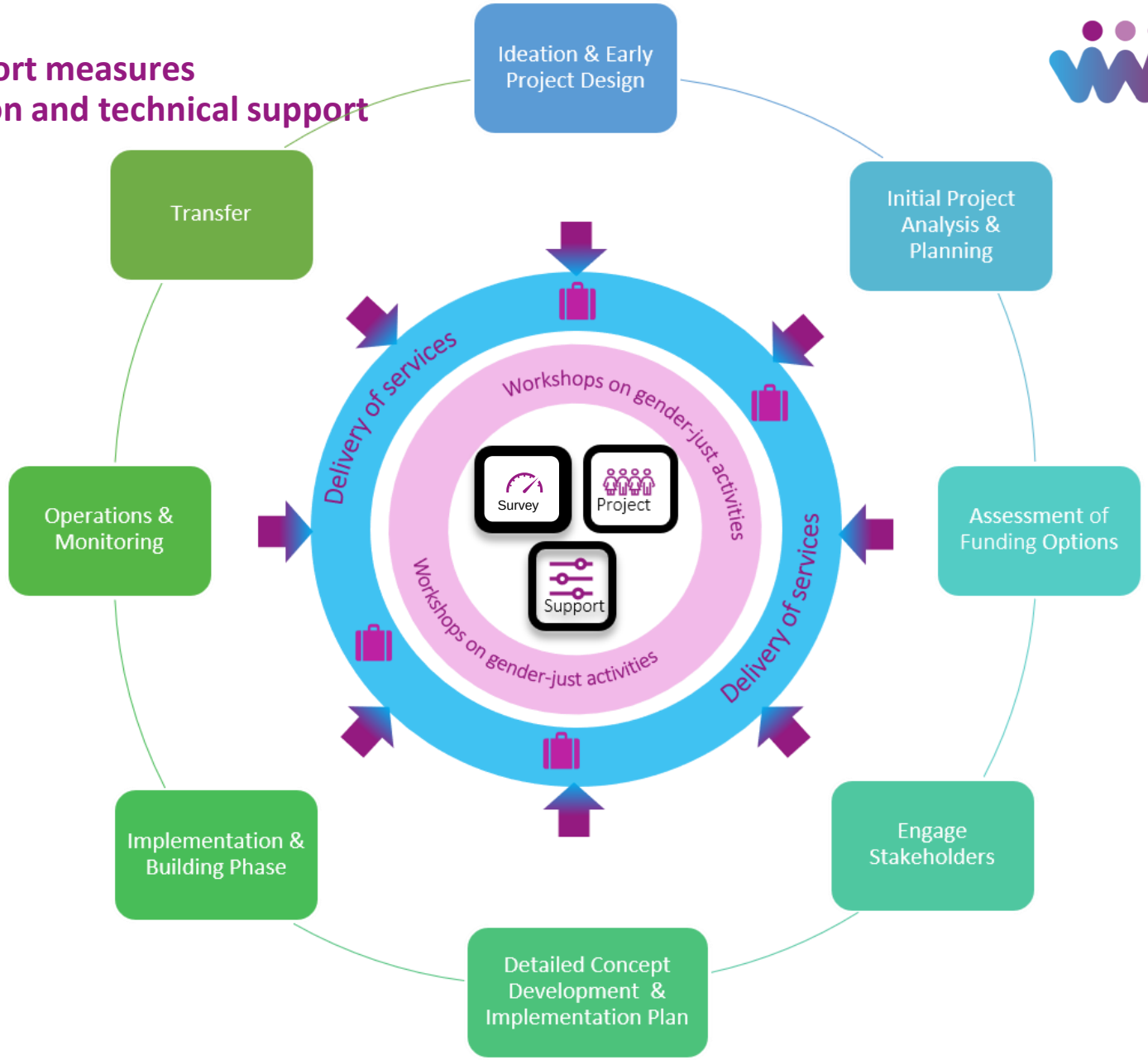
ЕНЕРГИЙНА АГЕНЦИЯ ПЛОВДИВ / ENERGY AGENCY OF PLOVDIV · save agency · ECWT · Q-PLAN INTERNATIONAL · wecf

8 European countries – Regional Hubs **12 partners**

Market uptake support measures

56 women-led projects were supported

Market uptake support measures – Business, innovation and technical support



Market uptake support measures – Business, innovation and technical support

Project phase	Business support services	Technical support services
Ideation & Early Project design	▪ Design Thinking & Brainstorming ▪ Idea scanning & development	
Initial Project Analysis & Planning	▪ Market research & trends analysis ▪ Financial planning ▪ Business modelling ▪ Environmental modelling ▪ IPR Management	▪ Analysing local conditions & data ▪ Assessing technical feasibility ▪ Screening legal frame ▪ Supporting rough design & sizing
Assessment of Funding Options	▪ Assessment of funding options ▪ Training on R&I funding programmes ▪ Investment readiness trainings	
Engage Stakeholders	▪ Matchmaking & pitching events ▪ Partnering with local clusters ▪ Stakeholder analysis & user engagement	
Detailed Concept Development & Implementation Plan	▪ Business model review ▪ Implementation roadmap	▪ Scenarios and 3D building simulations ▪ Boundary conditions ▪ Fine sizing, e.g. grid planning
Implementation & Building Phase	▪ Project management ▪ Adaptations to changing circumstances ▪ Life Cycle Assessment	
Operations & Monitoring	▪ Feedback integration & ▪ Adaptations to business model	▪ Project Documentation ▪ Monitoring via UN 17 SDGs ▪ Certification
Transfer	▪ Transfer to other projects ▪ Knowledge sharing (Green Cities)	▪ Technical project analysis ▪ User feedback

Service Catalogue:

71 services

49 services

22 services

Method used to:
Supporting hands-on promising women-led projects for renewable energy heating and cooling

W4RES WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

1. Scout

2. Engage

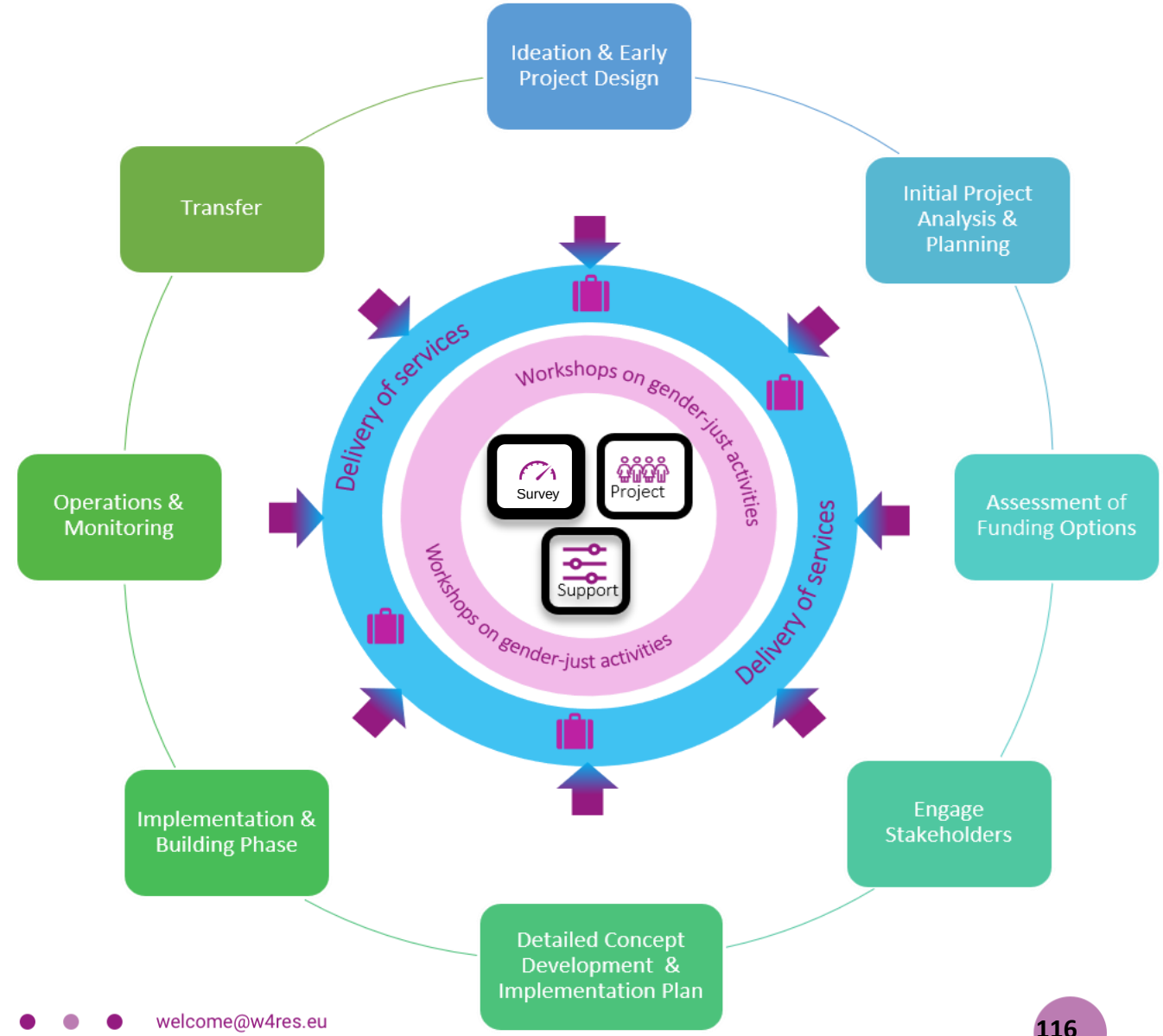
3. Evaluate & Select

Survey + Hubs

4. Assess **needs** and **match** them

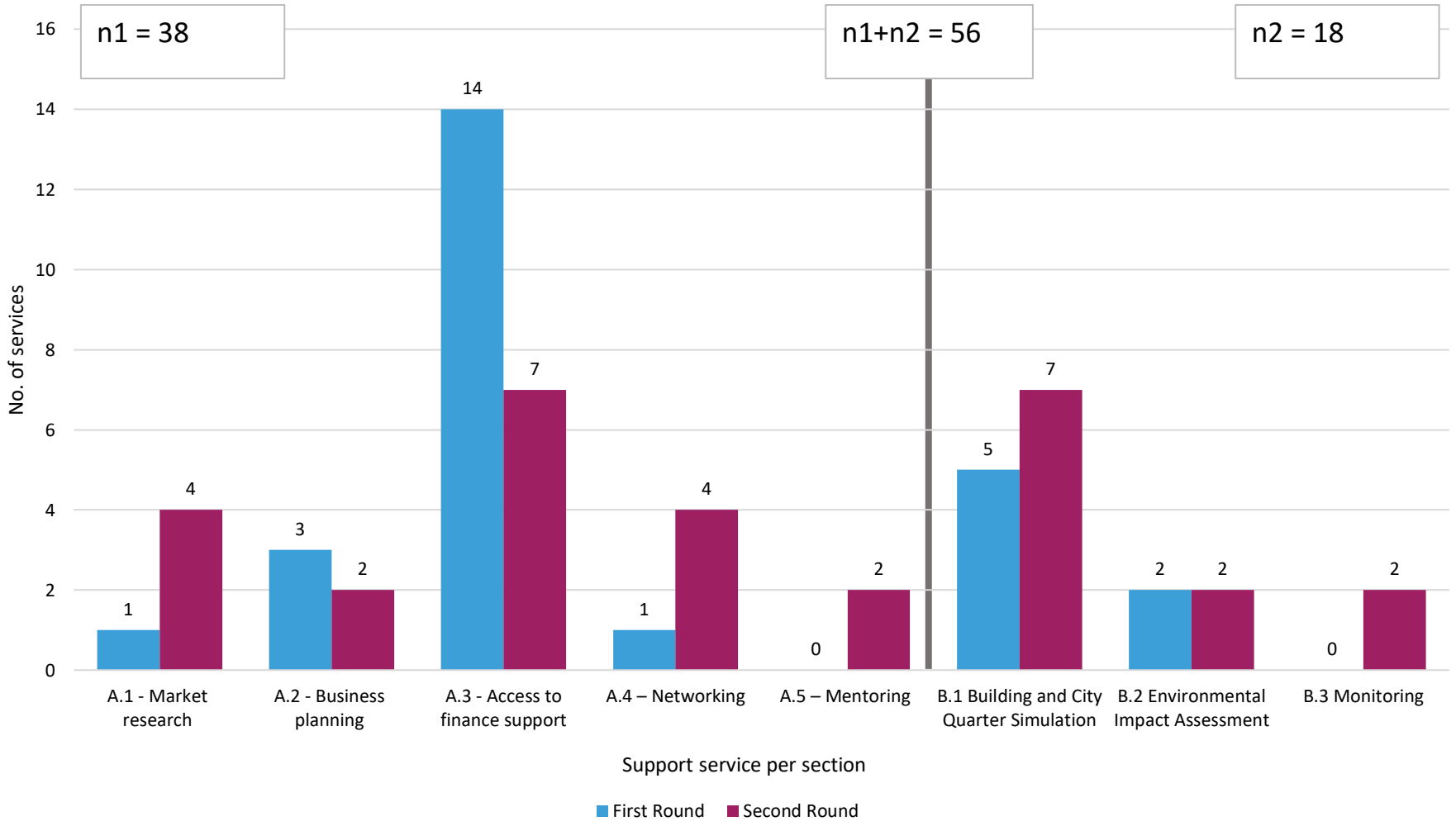
5. Delivery of **services**

6. Validation



Selected women-led projects for renewable energy heating and cooling

56 women-led projects were supported



Thank you!

Charlotte Schlicke & Elke Weidenfelder

elke.weidenfelder@steinbeis-europa.de

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

4RES

supported

H_2mc

HEATING

This is us....

H_2mc

HEATING

HEAT TRANSITION OLD BUILDINGS:

- High costs
- Complex regulations
- Technical & planning requirements

PELLET HEATING

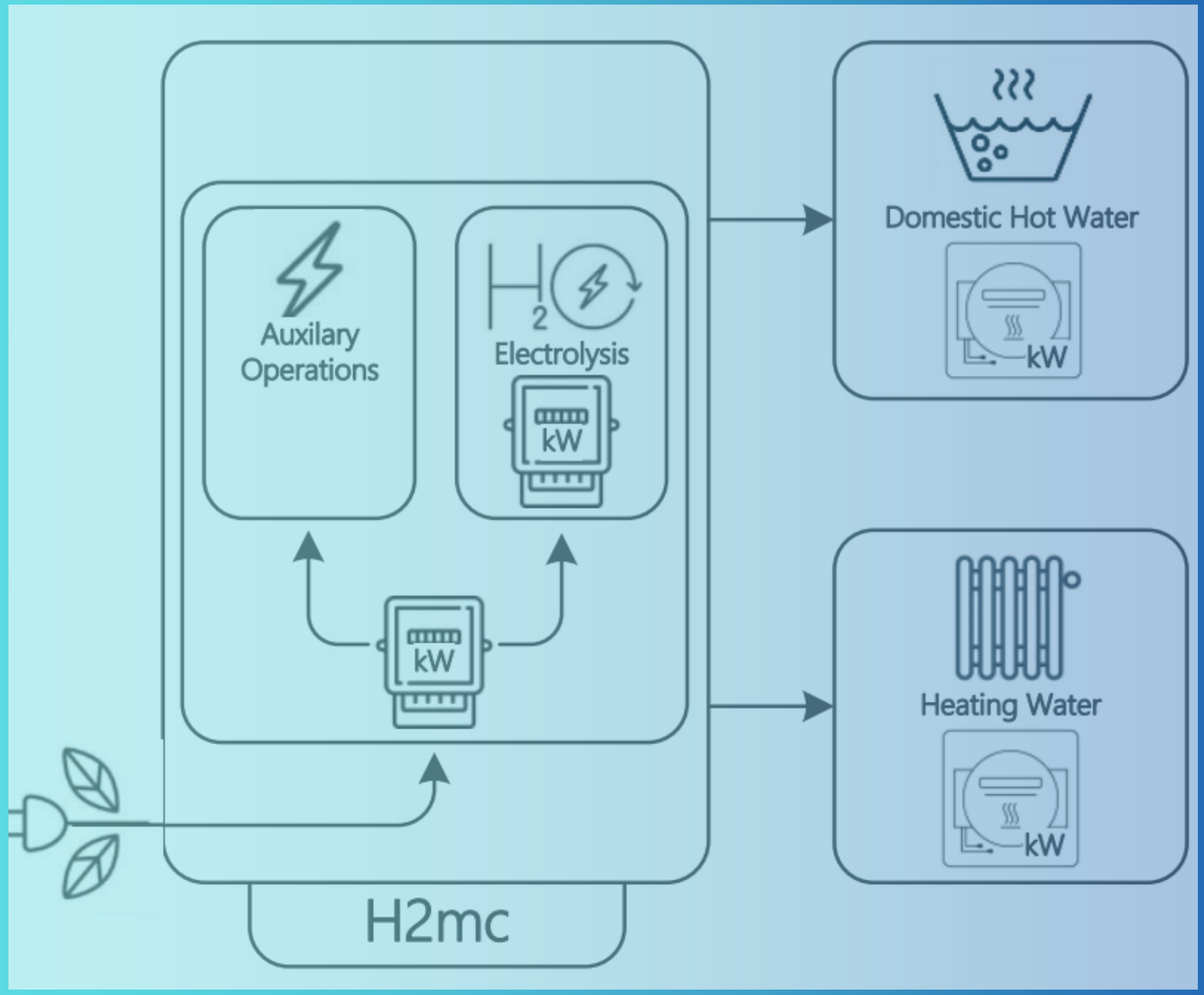
- CO_2 and fine dust emissions,
- Costly renovation and readjustment,
- Storage of the pellets

HEAT PUMP

- High acquisition and
- High operating costs

OTHER ELECTRICAL HEATING SOLUTIONS

- High acquisition and
- High operating costs


Auxilary
Operations
2
Electrolysis
kW
kW
Domestic Hot Water
kW
Heating Water
kW
H2mc

FUTURE

Co-Creation Partner

Go-to-market Strategy

PRESENT

Efficiency Certificate

Automation

Funding

PAST

Prototype long-term test

Patent

FOLLOW US ON LINKEDIN:

AND BECOME PART OF THE H2MC HEATING JOURNEY

RE-ENERGISING EUROPE

Networking lunch
&
Poster sessions

#REenergisingEurope

BECoop MICAT Multiple Impacts Calculation Tool newTRENDs NRG2 PEERS NUDGE UP-STAIRS Uplifting Energy Communities. W4RES

These projects have received funding from the European Union's Horizon 2020 research programme. The sole responsibility for the content of this event lies with the BECoop, MICAT, newTRENDs, NrG2peers, NUDGE, UP-STAIRS and W4RES projects and does not necessarily reflect the opinion of the European Union.

RE-ENERGISING EUROPE

The legacy of our projects

"What comes next? How can we replicate our projects' findings and work?"

October 25, 2023 - From 13.30 to 14.30

Kostas Dasopoulos
Q-PLAN/BECoop

Stefan Kop
Spectral/NRG2Peers

Sylvia Breukers
Dune Works/NRG2Peers

Paco Jofra Carrasco
Ecoserveis Association/
UP-STAIRS

Ioannis Konstas
Q-PLAN/W4RES

Dimitrios Chapizanis
White Research

#REenergisingEurope

BECoop MICAT Multiple Impacts Calculation Tool newTRENDs NRG2PEERS NUDGE UP-STAIRS Uplifting Energy Communities. W4RES

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W4RES

WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

Q-PLAN INTERNATIONAL

Yiannis Konstas

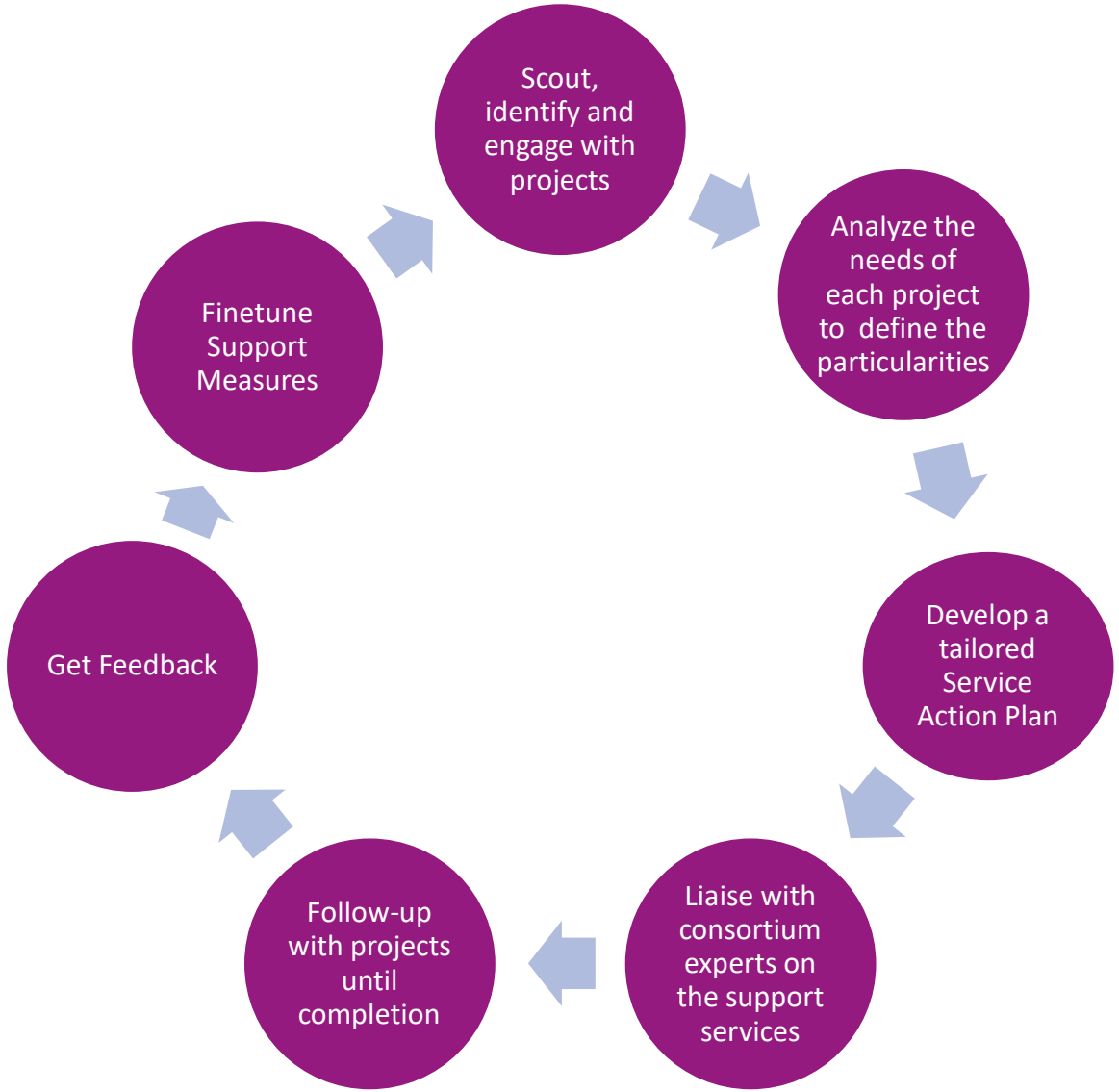
Tapping into the potential of women for supporting renewable energy in the heating and cooling market

W4RES WOMEN FOR MARKET UPTAKE OF RENEWABLE HEATING AND COOLING

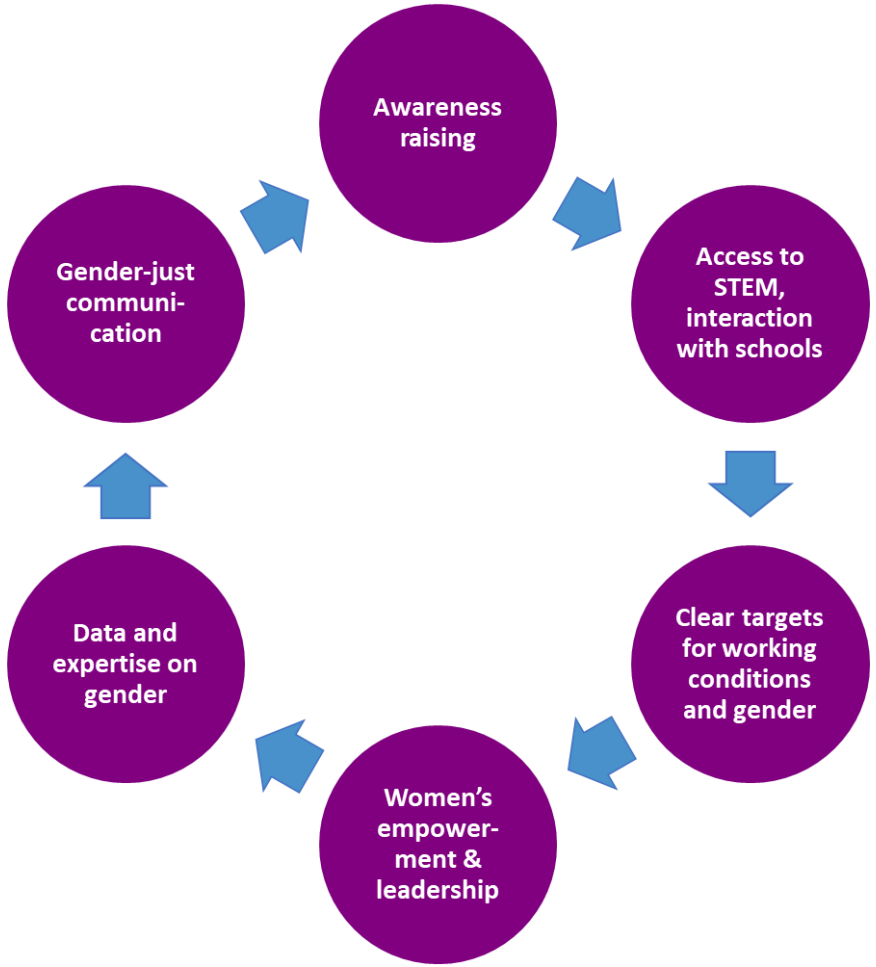
- ❑ Support for young women willing to pursue a STEM related education
- ❑ Support for women/mothers to not penalize their (early) career development
- ❑ Visibility for successful women in RHC
- ❑ Support for participation in networking events

- ❑ Coaching and mentoring programs for female entrepreneurs
- ❑ Business support, skills training, and technical support
- ❑ Communications campaigns targeted to female users
- ❑ Collection and assessment of gender disaggregated data

The W4RES Approach



Energy Transition



"..To be truly transformative, energy access and the energy sector must be linked with an agenda that challenges the stereotypes of women and that also advances their rights, dignity and visibility in their various roles as consumers, producers, investors, experts, and agents of change.."

Thank you!

Q-PLAN INTERNATIONAL

Yiannis Konstas

www.w4res.eu welcome@w4res.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 952874

Exploring the role of PAs in ECs promotion

Paco Jofra

Ecoserveis Association

paco.jofra@ecoserveis.net

UP-STAIRS Uplifting Energy Communities.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

Project Description – in a nutshell

Objectives

- Accelerating the creation of new energy communities in 5 pilot regions
- Supporting citizens and municipalities in becoming prosumers
- **Testing new Energy Service model frameworks of One-Stop-Shops for local collective actions which support local stakeholders in working together**
- Stimulating replication in other regions throughout the EU.

Impacts

- Setting-up and testing 5 One-Stop-Shops for energy communities and collective local action
- Triggering 66 million Euro in sustainable energy investments / energy-related investments
- Engaging 10,000 consumers in sustainable energy activities

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

UP-STAIRS Uplifting Energy Communities.

One Stop Shops deployment

PHASES

Pre-service
- Market analysis
- Resources
- Building staff capacities
- Promotion of the OSS services

Service
- Specific services to be provided:
  - Information
  - Advice
  - Support and accompaniment

Post-service
- Support provided after the service period
- Evaluation
- End-user relationship management

FIELDS

Financial advice	Organizational support
Legal support	Communication
Technical support	Facilitation & Mediation

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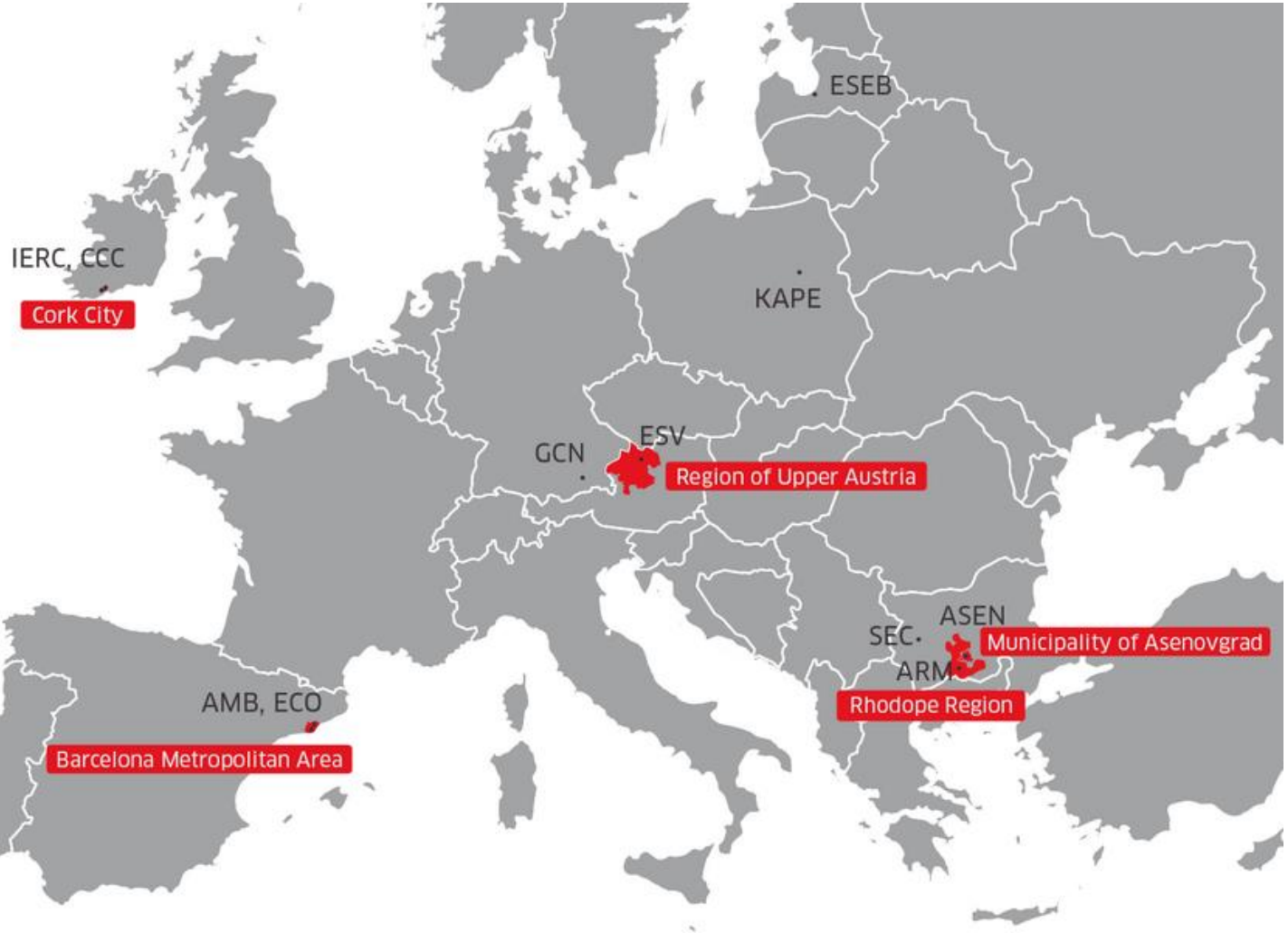
UP-STAIRS Uplifting Energy Communities.

Our One Stop Shop Pilots



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UP-STAIRS Uplifting Energy Communities.

Cork

Cork City Council's new Home Energy Upgrade Office (HEUGO)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 892037

UP-STAIRS Uplifting Energy Communities.

Barcelona Metropolitan Area

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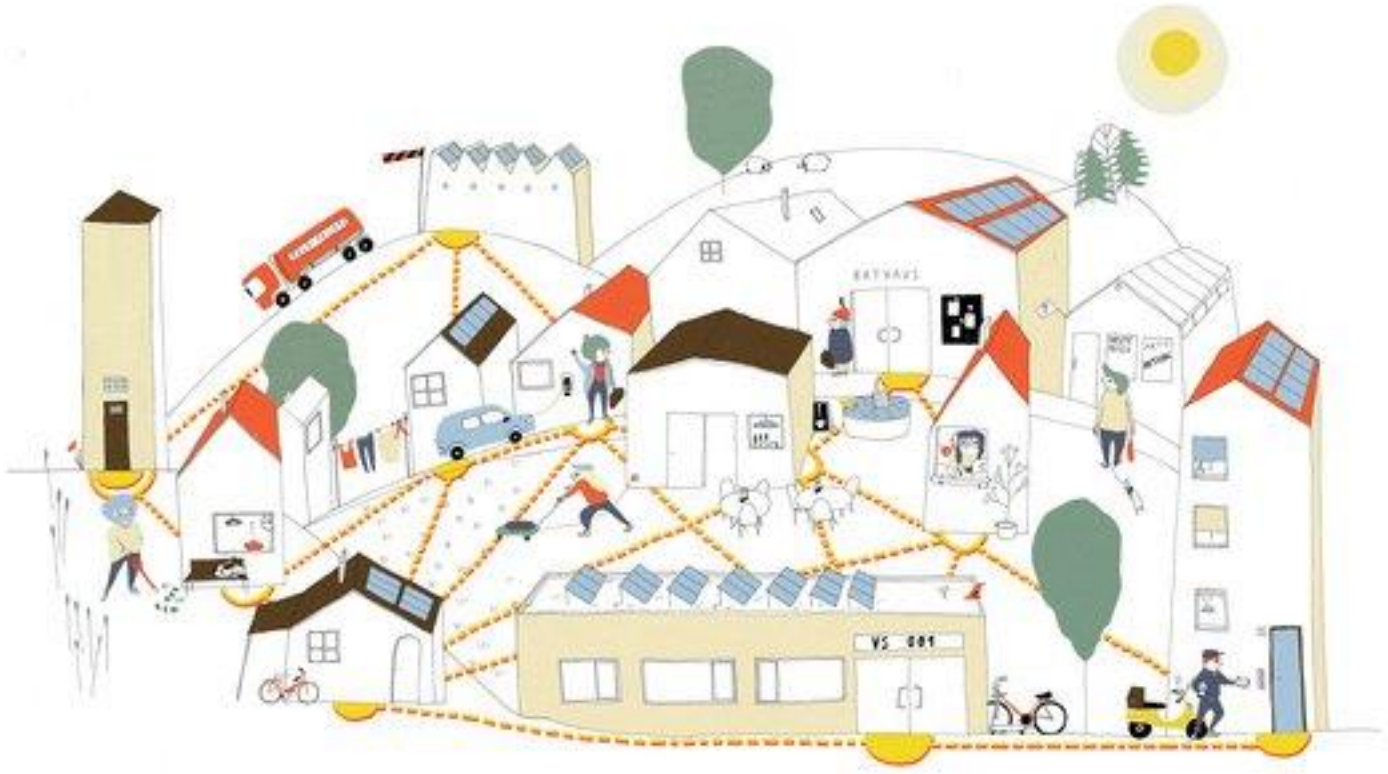
UP-STAIRS Uplifting Energy Communities.

Upper Austria



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UP-STAIRS Uplifting Energy Communities.

Asenovgrad & Rhodope Region

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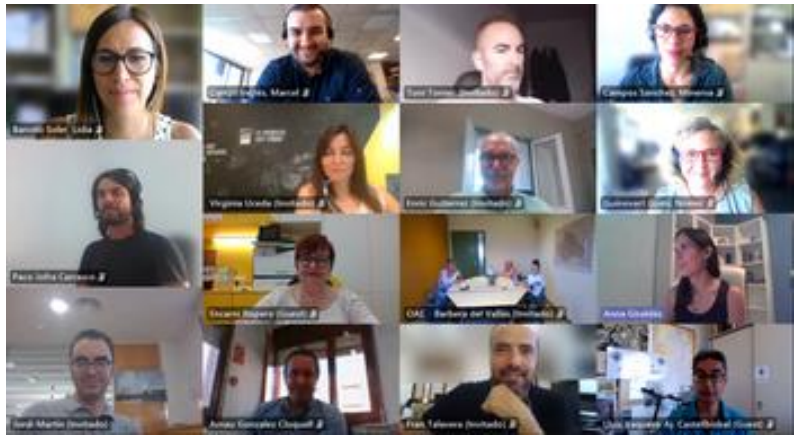
UP-STAIRS Uplifting Energy Communities.

Key findings from our training programmes



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UP-STAIRS Uplifting Energy Communities.

For more information:

www.h2020-upstairs.eu/

twitter.com/UpStairs_h2020

This project has received funding from
the European Union's Horizon 2020 research and
innovation programme under grant agreement No 892037

UP-STAIRS Uplifting Energy Communities.

THANK YOU!

Paco Jofra

Ecoserveis

paco.jofra@ecoserveis.net

This project has received funding from
the European Union's Horizon 2020 research and
innovation programme under grant agreement No 892037

UP-STAIRS Uplifting Energy Communities.

NRG2 PEERS

Development of Digital Tools to enable the uptake of Energy Communities

Sylvia Breukers & Stefan Kop
Project Members / Work Package Lead
Duneworks & Spectral

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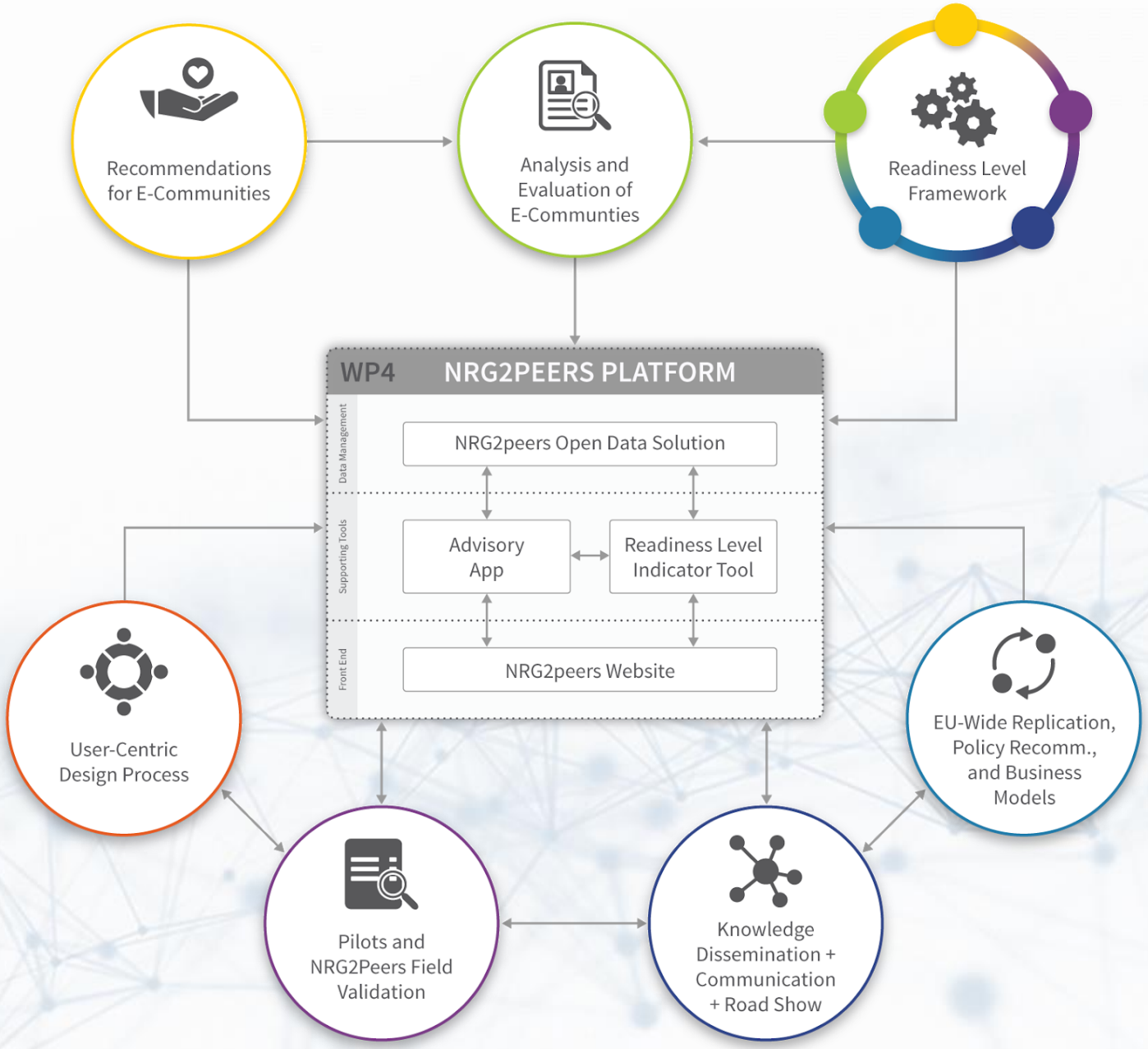

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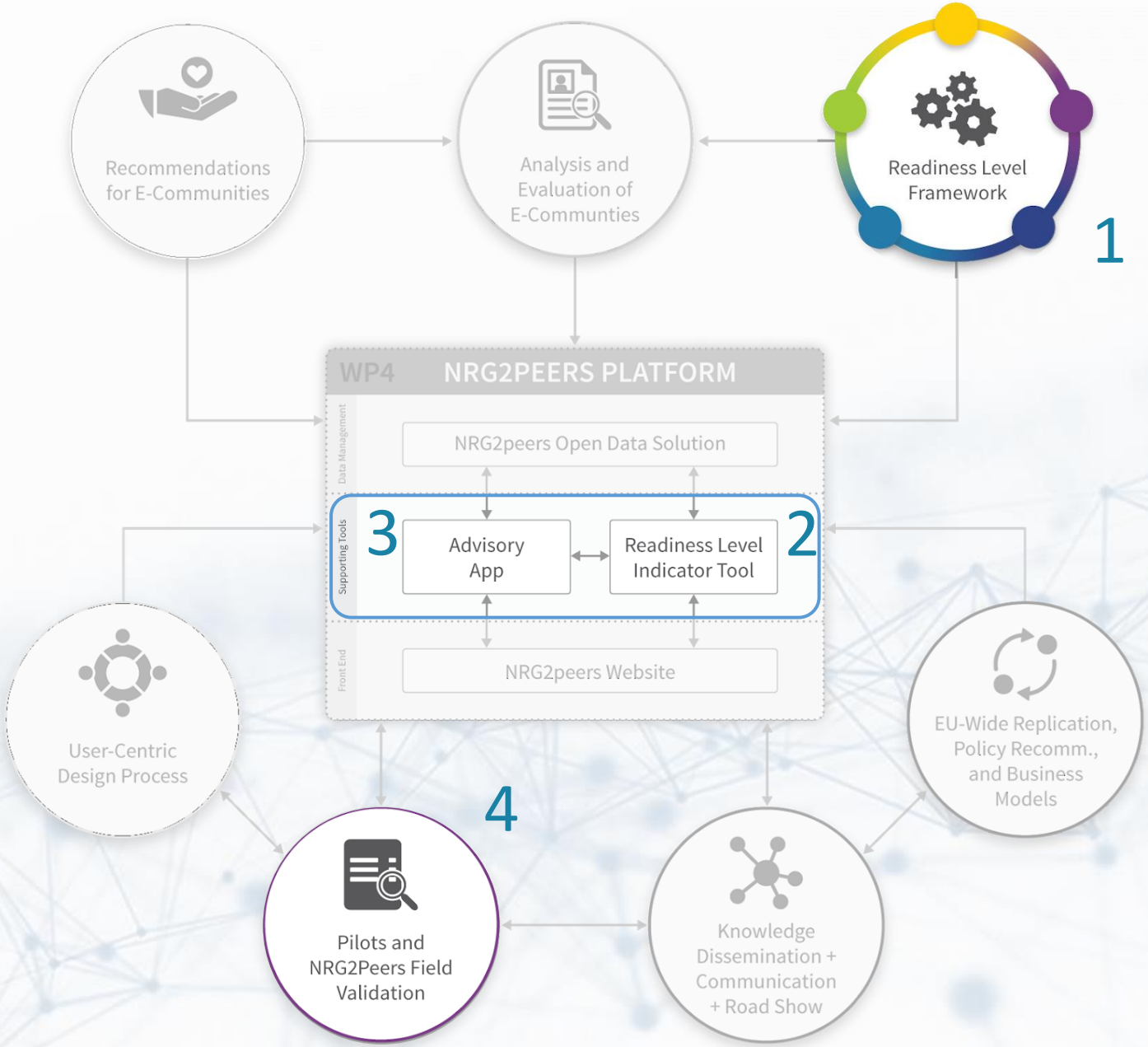

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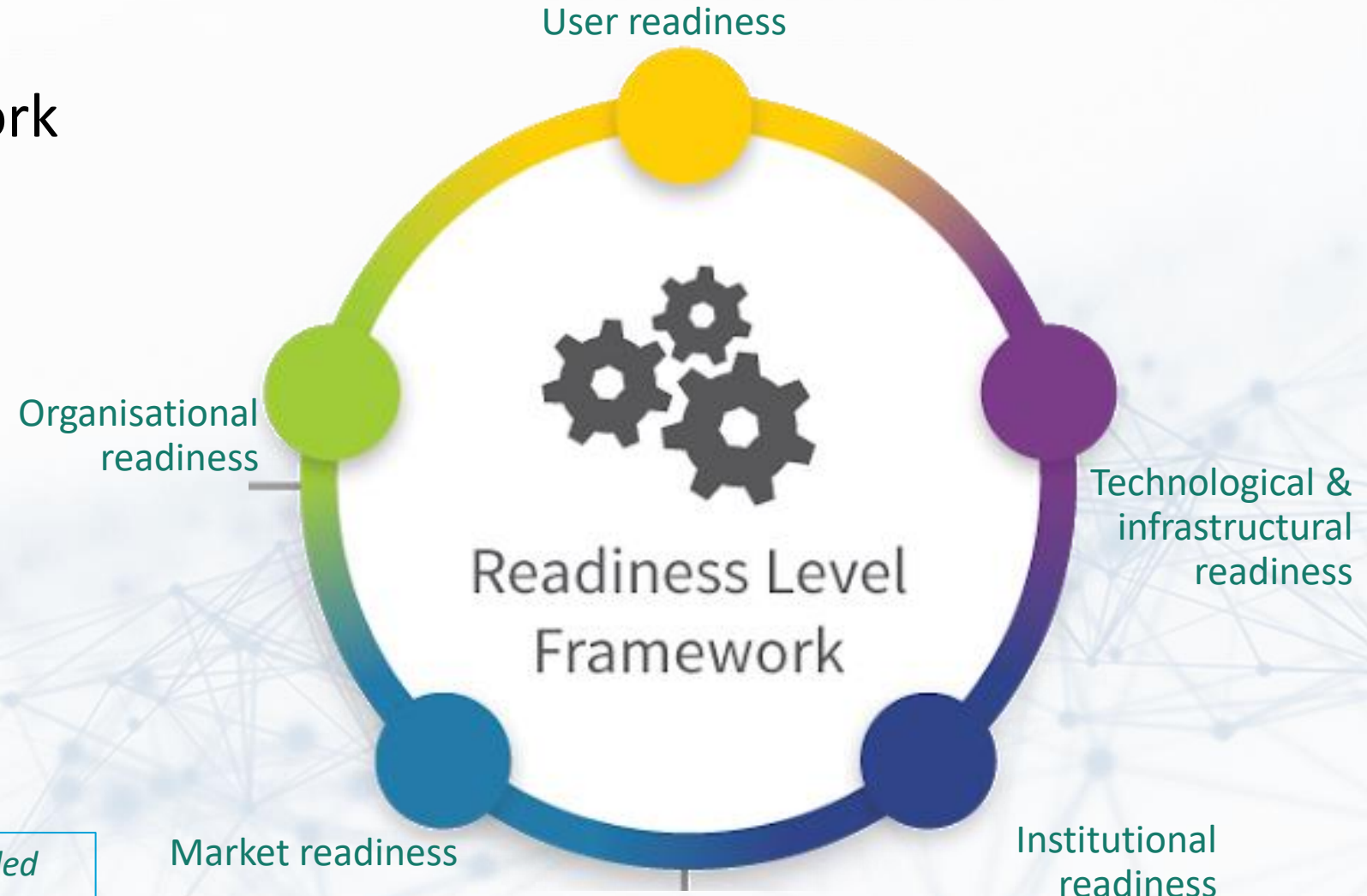
Readiness Level Framework

- Co-creation; iterative rounds: comprehensive, multi-disciplinary (2020-2021)
- Envisaged users of the tool: ECs and policy actors
- Assessment tool; support tool for dialogue and decision making



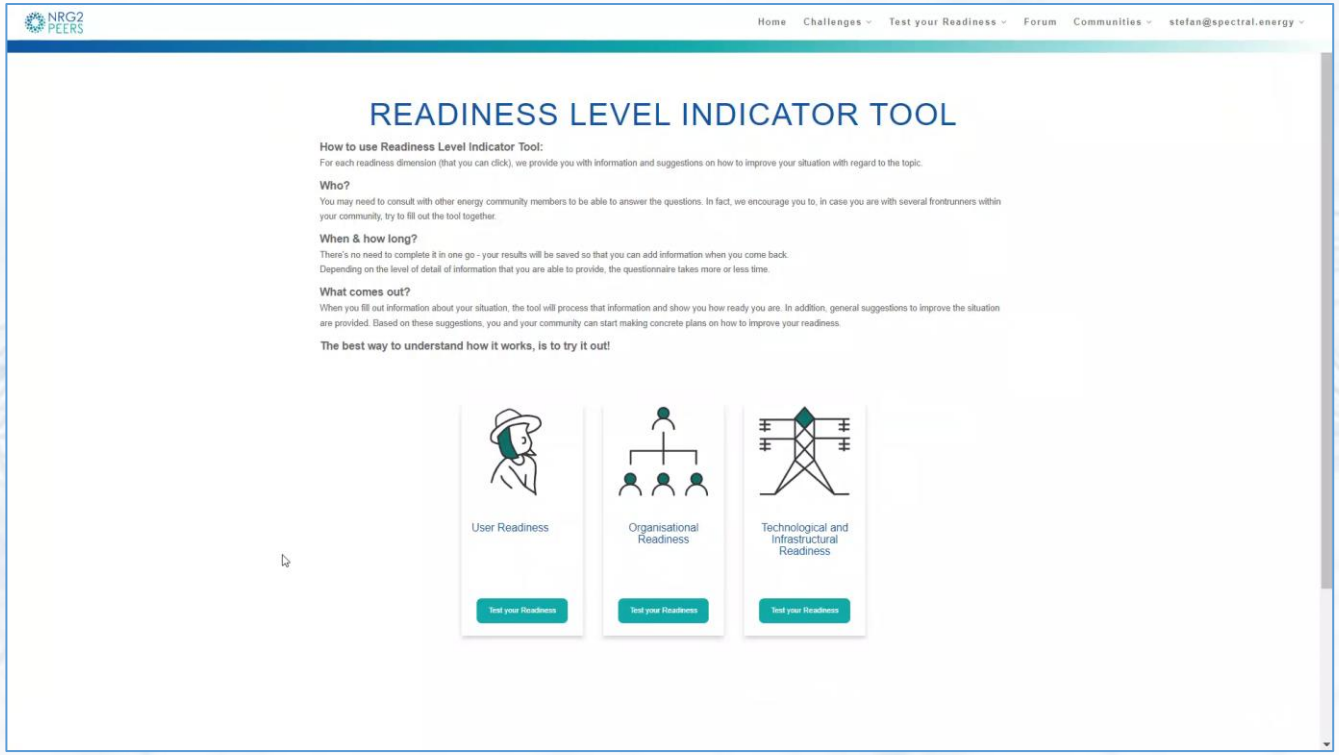
The conceptual elaboration of the RLF offers detailed insight in the type of user-related, organisational, institutional, market and technological elements that need to be in place for communities to become engaged in P2P in a manner that will generate value for the community.

This project has received funding from the European Union's H2020 framework programme for research and innovation under grant agreement no 890345.

Readiness Level Indicator Tool (RLIT)

Key features:

- Translation of the framework into a digital tool
- Target users: energy communities
- Guided “survey” with direct recommendations / suggestions
  - User, organizational, technological and infrastructural readiness



www.nrg2peers.net

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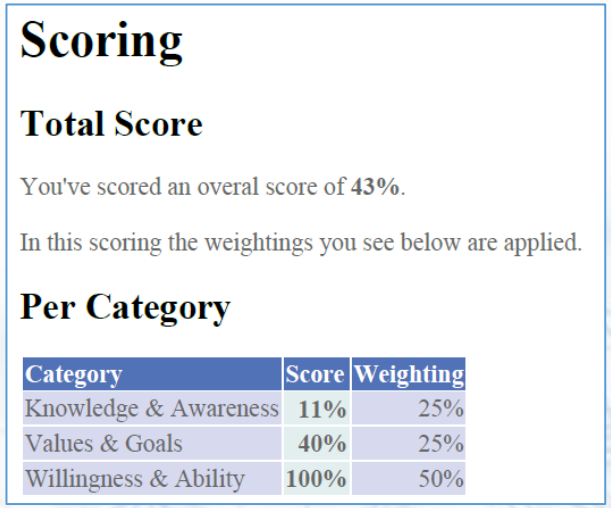
  - User, organizational, technological and infrastructural readiness
- Readiness level report after completion



Scoring

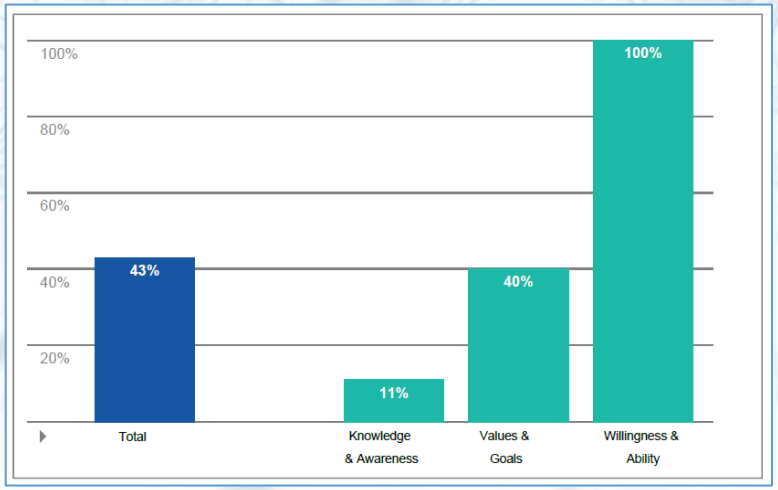
Total Score

You've scored an overal score of **43%**.

In this scoring the weightings you see below are applied.

Per Category

Category	Score	Weighting
Knowledge & Awareness	11%	25%
Values & Goals	40%	25%
Willingness & Ability	100%	50%



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NRG2 PEERS

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Readiness Level Indicator Tool (RLIT)

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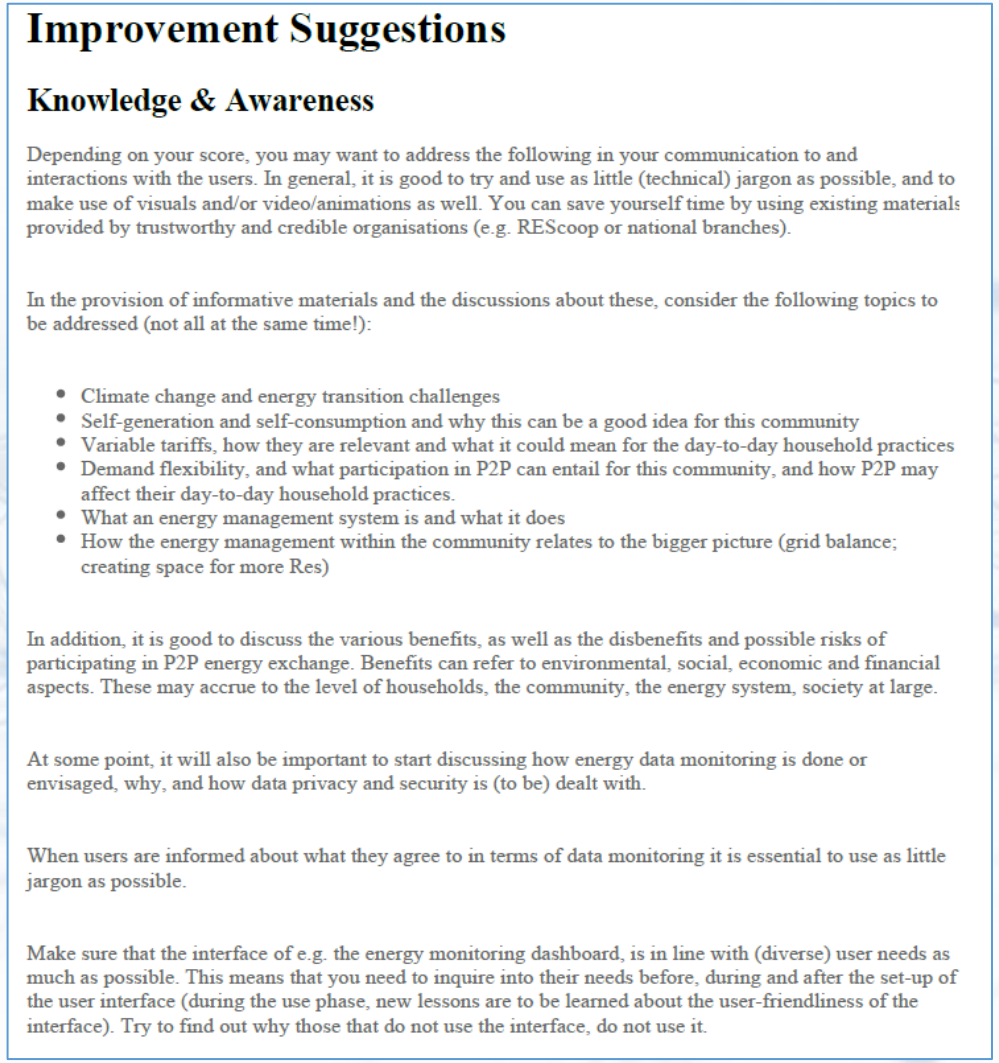
www.nrg2peers.net



Improvement Suggestions

Knowledge & Awareness

Depending on your score, you may want to address the following in your communication to and interactions with the users. In general, it is good to try and use as little (technical) jargon as possible, and to make use of visuals and/or video/animations as well. You can save yourself time by using existing materials provided by trustworthy and credible organisations (e.g. REScoop or national branches).

In the provision of informative materials and the discussions about these, consider the following topics to be addressed (not all at the same time!):

- Climate change and energy transition challenges
- Self-generation and self-consumption and why this can be a good idea for this community
- Variable tariffs, how they are relevant and what it could mean for the day-to-day household practices
- Demand flexibility, and what participation in P2P can entail for this community, and how P2P may affect their day-to-day household practices.
- What an energy management system is and what it does
- How the energy management within the community relates to the bigger picture (grid balance; creating space for more Res)

In addition, it is good to discuss the various benefits, as well as the disbenefits and possible risks of participating in P2P energy exchange. Benefits can refer to environmental, social, economic and financial aspects. These may accrue to the level of households, the community, the energy system, society at large.

At some point, it will also be important to start discussing how energy data monitoring is done or envisaged, why, and how data privacy and security is (to be) dealt with.

When users are informed about what they agree to in terms of data monitoring it is essential to use as little jargon as possible.

Make sure that the interface of e.g. the energy monitoring dashboard, is in line with (diverse) user needs as much as possible. This means that you need to inquire into their needs before, during and after the set-up of the user interface (during the use phase, new lessons are to be learned about the user-friendliness of the interface). Try to find out why those that do not use the interface, do not use it.

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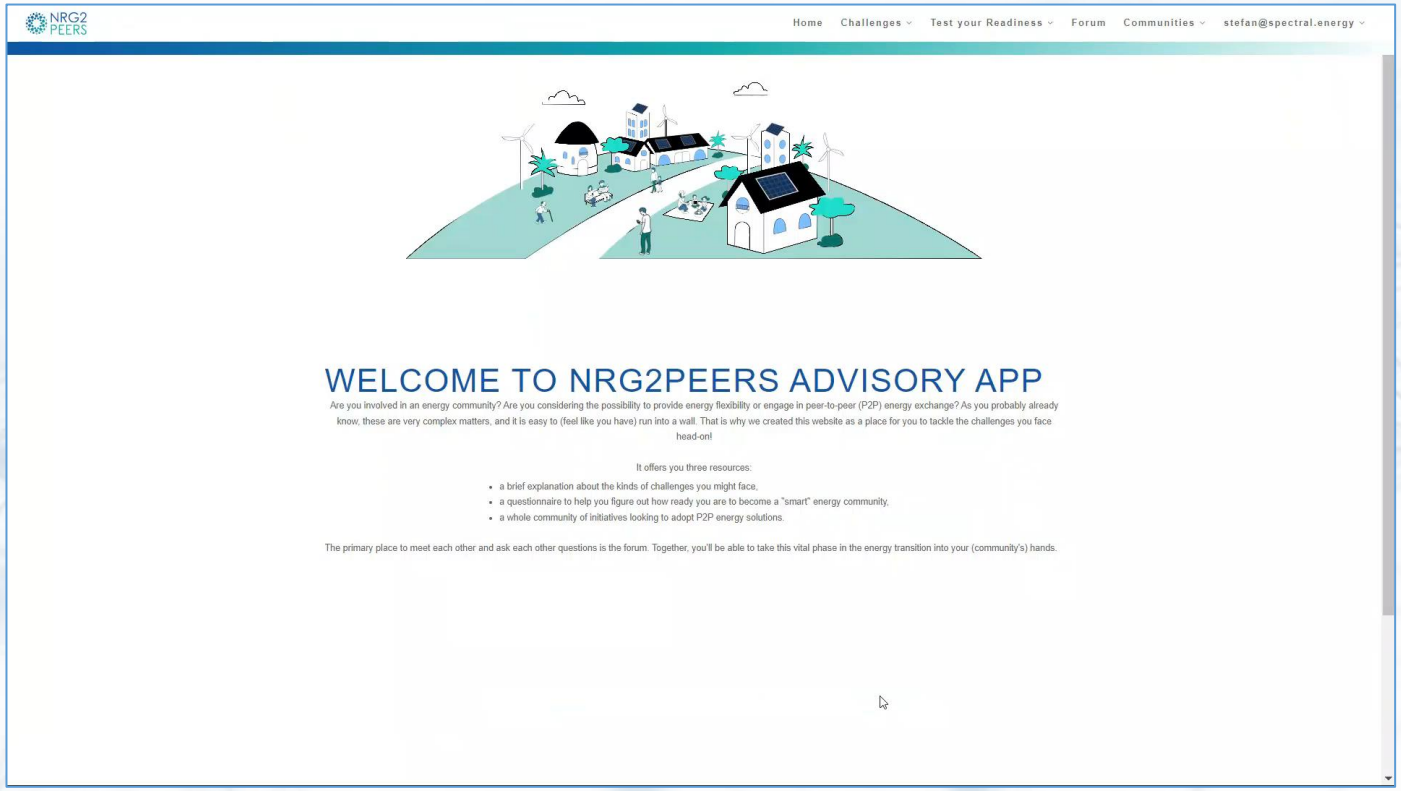
Advisory App

Key features:

- Community of communities
- Sharing of knowledge from and for (upcoming) communities and experts
- Structured around the same categories of the RLIT



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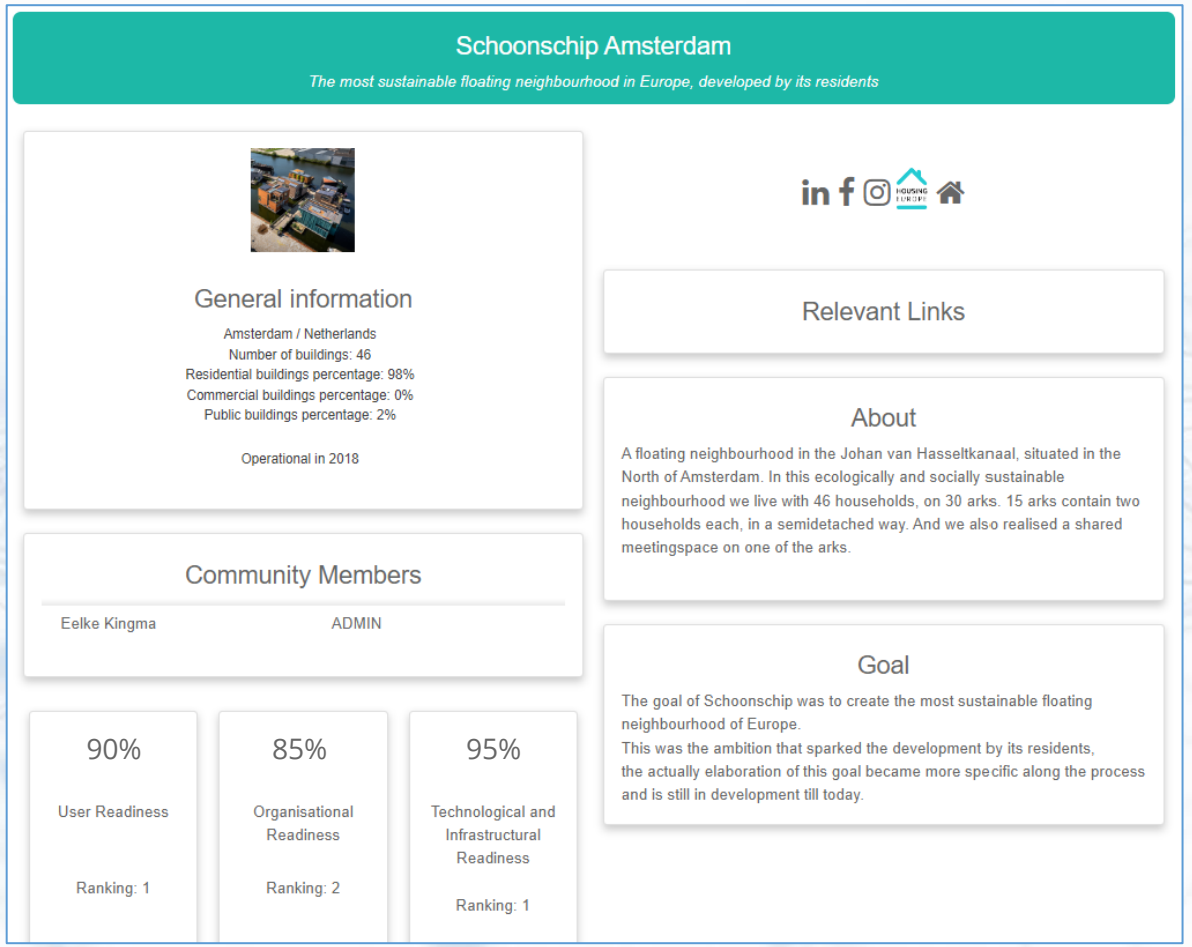
Advisory App

Key features:

- Community of communities
- Sharing of knowledge from and for (upcoming) communities and experts
- Structured around the same categories of the RLIT
- Community page with specific information of the community
  - Option to link to RLIT scores



www.nrg2peers.net

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Participatory Assessment

Understandability
Usability
User-friendliness
Attractiveness
Reliability
Credibility and Trustworthiness
Cost-effectiveness
Decision-driving potential

Qualitative approach: survey; workshop; interviews

- September 2022 and Summer 2024
- First iteration: used to improve the tools
- Round 2: summer 2024 – recommendations for further improvements

Lessons learned:

- Striking the right balance generic – specific
- Goal of the tools: assessment or awareness and conversation
- Forum: appreciated for its practical experiences
- P2P as a mobilizing concept
- Lost in translation (digitalisation)
- Engage the future hosts of the tool

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NRG2 PEERS

Thank you for your attention

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BECoop

UNLOCKING THE COMMUNITY BIOENERGY POTENTIAL

Adjusted Business Model Canva for RESCoops

BECoop Final Event - RE-Energising Europe

Q-PLAN INTERNATIONAL

Kostas Dasopoulos

Brussels, 25th October 2023

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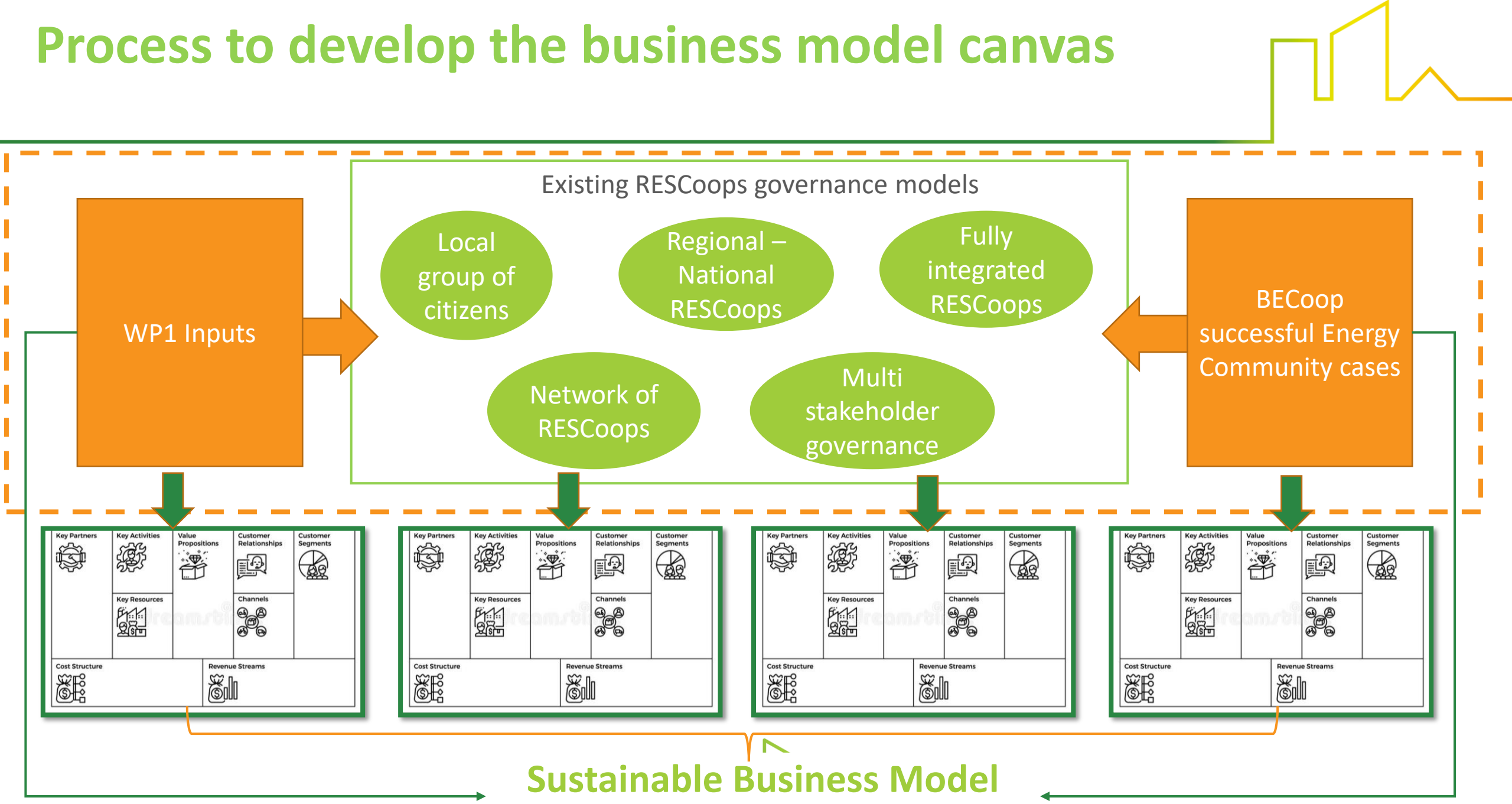
Process to develop the business model canvas



PROBLEMS & BARRIERS

- Non sustainable urban pruning waste
- Unused coffee residues
- Unexploited forest residues
- Significant local energy poverty
- Fossil fuel dominance of heating
- Lack of awareness of biomass benefits
- Regulatory & Institutional barriers

SOLUTIONS

- Affordable RH to the local community
- Decarbonization of heat energy for public buildings, local industries and households
- Production of solid biofuels from local waste
- Biomass boilers installation in municipal buildings

KEY PARTNERS

Local governance
- Urban pruning
- Forest residues
- Potential end-users (public buildings, schools, pools, ...)

Academia (UTH & CERTH)
- Scientific support
- Biofuels optimization

Biomass boilers firms
- Installation, O&M

Local community
- Citizens
- Coffee houses
- Biomass owners
- Local industries (i.e hotels, ..)

KEY ACTIVITIES

- ✓ Biofuel production (pellets)
- ✓ Provision of bioheat
- ✓ Urban waste management (pruning, coffee)
- ✓ Local awareness raising campaigns
- ✓ Municipal buildings energy upgrade
- ✓ Solar PV construction & NEM
- ✓ Future district heating network

KEY RESOURCES

Physical
- Residues
- Transport
- Equipment
- Experts

Financial
- Member's equity
- Bank Loan

Intellectual
- Partnership
- Knowhow

VALUE PROPOSITIONS

- NECP → local bioenergy
- Competitive biomass price
- Tackle energy poverty
- Unexploited residues for RE
- Local waste management
- Decarbonization of the local heating system
- Reliable access to RH
- Business opp. for biomass
- Direct RE to public buildings
- Biofuel to citizens

CUSTOMER RELATIONS

- Local Households → pellets/NEM
- Municipal buildings → pellets
- Local industries → bioheat

SUSTAINABLE CHANNELS

Pruning/Coffee → pellets → citizens

Forest residues → pellets → citizens

Pellets → school → boiler → heat

Solar → PV → NEM → members

CUSTOMER SEGMENTS

- Energy Community members (**ESEK**)
- Local community
- Municipalities of Karditsa/Plastira
- Local coffee houses
- Local industries (i.e hotels, ...)

END OF LIFE

The local exploitation of biomass offers a reliable waste management system aligned with the circularity principles and the bioeconomy.

COST STRUCTURE & ADDITIONAL COSTS

Production costs
- Equipment ~1MW biomass boilers (x20)

Installation Costs & Grid Implementation
- Transportation, connection, configuration

Other Costs
- R&D, Permits, Taxes, etc.

CAPEX est.
100,000€

Lifetime
25 years

OPEX est.
= 30,000 € / year
- Plant operation
- Maintenance
- Biomass logistics
- Labor costs
- Annual fees/other

SUBSIDISATION

Financing sources

Self-financing (new member fees)
Bank Loan (ΣΥΝΕΤΑΙΡ. ΚΑΡΔΙΤΣΑΣ)
Accumulation of investment capital
Crowdfunding

EU&National Funding programs

ΕΞΟΙΚΟΝΟΜΩ ΓΙΑ ΝΕΟΥΣ
ΕΞΟΙΚΟΝΟΜΩ ΕΠΙΧΕΙΡΩ
ΗΛΕΚΤΡΑ
ΕΞΟΙΚΟΝΟΜΩ

EU Regional Dev. Fund
Cohesion Fund
Just transition fund
Recover & Resilience.
LIFE Program
Horizon Europe

REVENUE STREAMS

Renewable Energy Savings
- 730 MWh,th annual production
- Public buildings demands covered
- Reduced Energy bills
- Pellets trade market

Other potential revenues
- Boilers maintenance
- Hot water from biomass
- Local/state/ EU incentives
- Installation in other buildings

Revenues*: 64,000 €/year
ROI: 25% **Pay Back**: 4 years

ENVIRONMENTAL RISKS

- Air Pollution from materials manufacturing
- Exhaust emissions in transportation processes
- Unproper combustion may emit pollutants

SOCIAL RISKS

- Short term loss of fossil fuel-based jobs
- Competition of local beneficiaries on the produced energy

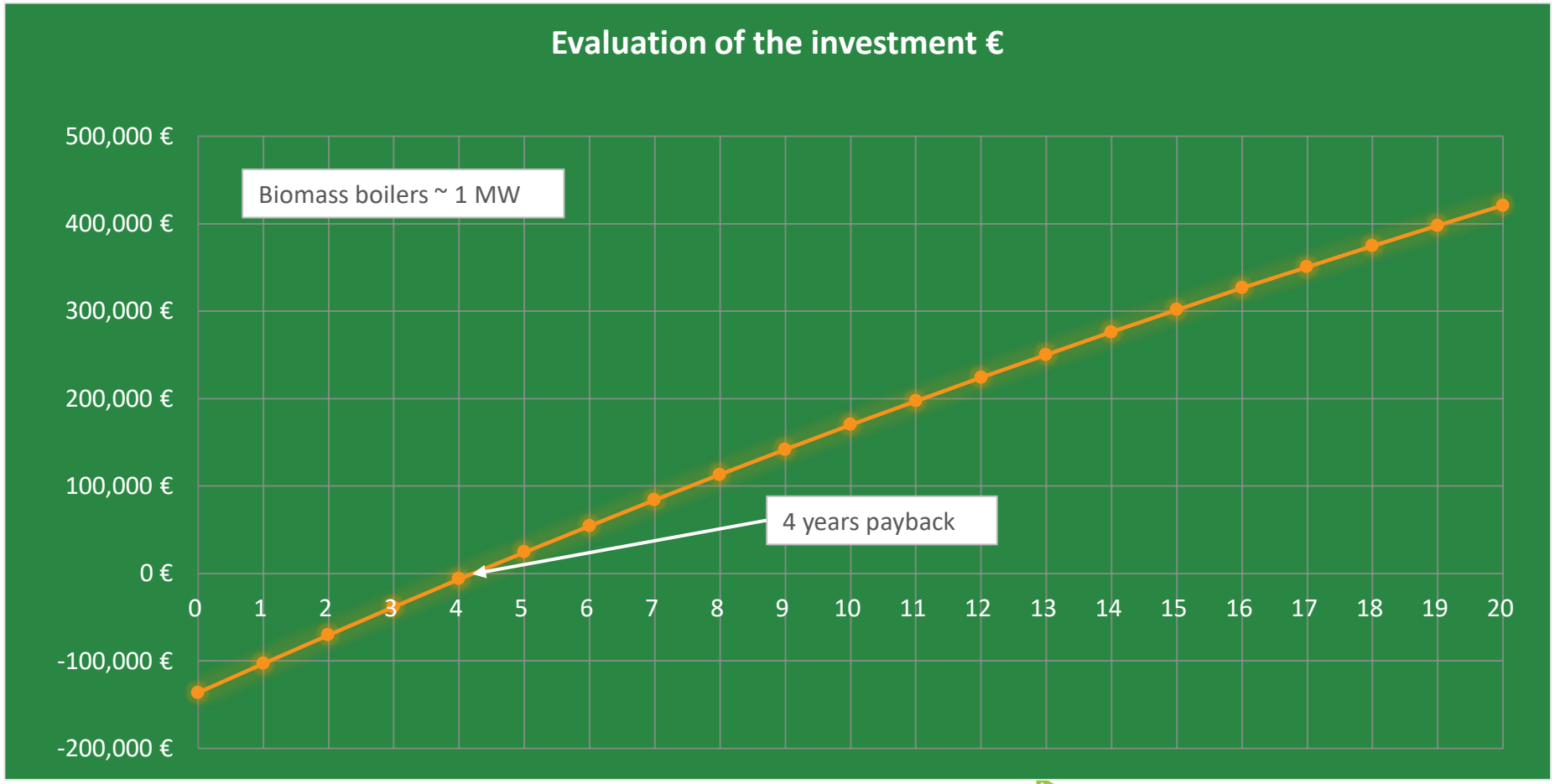
ENVIRONMENTAL BENEFITS

- ~ 3,000 tn CO2 saved → 600 cars
- Decarbonization of the thermal grid
- Clean energy to public buildings
- Circularity within local waste management

SOCIAL BENEFITS

- Creation of new jobs (biomass)
- Support of the local economy
- Improved conditions/clean air
- RE to the wider region of Karditsa
- RH comfort to public buildings
- Raised Environmental awareness

Investment evaluation



NPV	420.834 €
ROI	24,98%
Pay-back	4,00 years
IRR	22,23%

BECoop: **see you around!**

Let's unlock the community bioenergy potential

Thank you for your time!

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BECoop video

RE-ENERGISING EUROPE

Networking session

W4RES co-creation workshop

Site visit

#REenergisingEurope

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RE-ENERGISING EUROPE

THANK YOU!

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