



Workshop
**Innovative solution and co-creation for
effective implementation of demand response**

14th of June, 2023 - Madrid, Spain

sustainableplaces.eu

Project Overview

Delivering an integrated tool-chain for the transition of energy communities to full players of the energy & flexibility markets

Developing a Consumer Digital Twin model to streamline the information exchange between building-level tools and market actors

Creating a secure and interoperable digital toolbox compatible with the majority of residential building systems used across the EU



Technical & Technological

OBJECTIVES



Citizen Engagement & Co-creation



Designing compound (energy & non-energy) service offerings and business models to enable the participation of the residential sector in demand response markets/services

Identifying incentives and drivers of citizens and energy communities and delivering a citizen engagement methodology to stimulate citizen participation in the energy transition and community flourishing

Validation of the expected impact of the ACCEPT solution in real-life conditions (citizens, communities) in four European countries and maximize replication potential



Jan 2021 to
June 2024



Project cost: 7.57M€

EU contribution: 5.86M€

Grant Number	957781
Call	H2020-LC-SC3-2020-EC-ES-SCC Topic: LC-SC3-EC-3-2020 - Consumer engagement and demand response
16 Partners	HYPERTECH , CIRCE, SIN, QUE, CERTH, Witside, UCC, RINA-C, Mytilineos, ESB, EDBR, MIWenergia, LaSolar, AEM, Viesgo, EEE
Pilots	Demonstration Sites: Greece, Spain, Netherlands and Switzerland Pre-Validation testbeds: 2 testbeds in Greece, DSO historical data from Spain

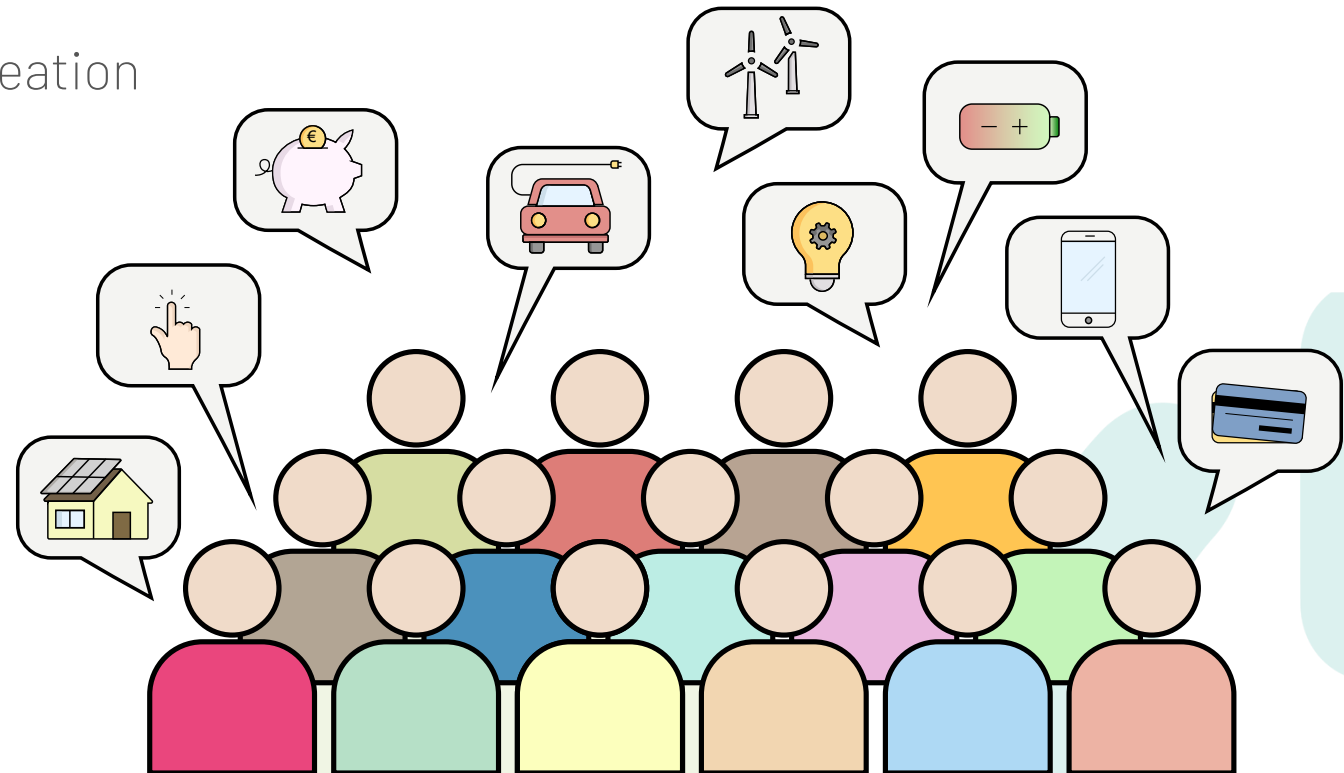


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Importance of User Engagement and Co-creation

3-step engagement approach:

- Raising citizen awareness (info campaigns)
 - What is the energy transition
 - Why do citizens need to be involved
 - How can they benefit
- Making citizens part of the solution (co-creation campaigns)
 - Citizen empowerment
 - Solution meets main user requirements
- Keeping momentum up (feedback and continuous engagement campaigns)
 - Motivation is key
 - Feedback leads to improvements and identification of obstacles



User Involvement in Pilot Sites



38 households



40 households



42 households

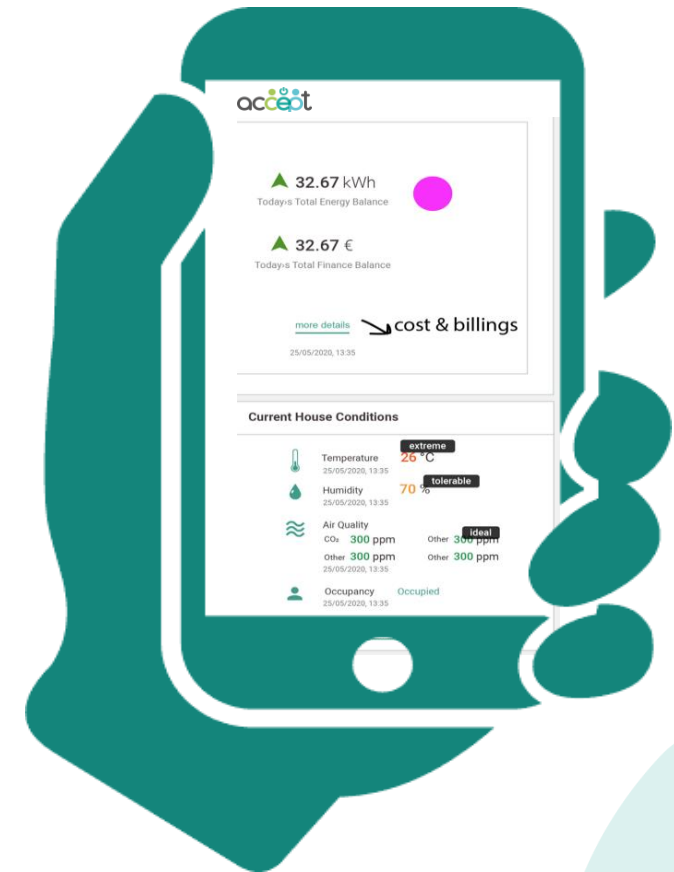


32 residential apartments

Involvement of Users in Co-creation activities

Co-creation focused on Citizen Application:

- Consent form for participants to consent to use of their data
- Briefing document to participants explaining project and user testing
- Notes for pilot partners with guiding note on the user testing process
- Discussion guide: A detailed description of the agenda and instructions for the user testing session for pilot partners to follow
- System Usability Scale (SUS): A standard survey for participants to fill out which provides a quantitative assessment of the C-APP's usability
- Living labs: pilot partners met with the end-users on a 1-to-1 basis for user testing session (feedback on design and functionality of C-App)



Results of User Engagement (Co-creation)

Useful outcomes of co-creation workshops:

- Feedback from end-users of each pilot site used for C-App improvements
- Alignment of real end-user needs and ACCEPT toolset
- Data produced from SUS during user testing show users' current opinions on C-APP and help track progress of C-APP development

Country	Number of participants	Average Score
Spain	4	86.25 ●
Switzerland	3	37.50 ●
Netherlands	11	32.73 ●
Greece	20	66.25 ●
Combined average		56.38 ●

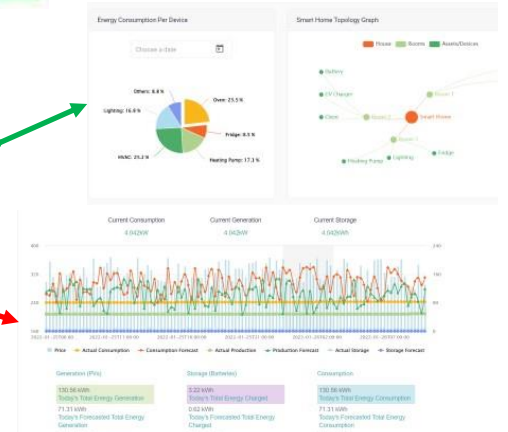


What they liked

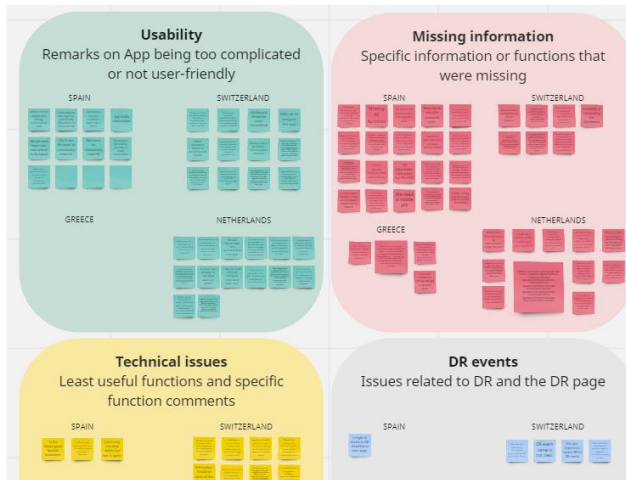
- Summaries on the DR page
- Majority happy with content of homepage
- Topology and device consumption section & graph

What they disliked

- Community functions not useful or clear
- Analytics section and graph too complex
- Lack of customization (language, measurement units)



Miro Board



Printed material



Tools and Platforms for User Engagement

Questionnaires and Surveys

Persona Questionnaire

As part of the ACCEPT project, we invite you to fill in best develop the ACCEPT application with the users' motivations and frustrations when it comes to day-to-day so-called user personas, which will help the software development and preferences.

Please feel free to be answer honestly, as the question from participation at any time.

Completing the questionnaire should take around 10 minutes.

Open ended questions

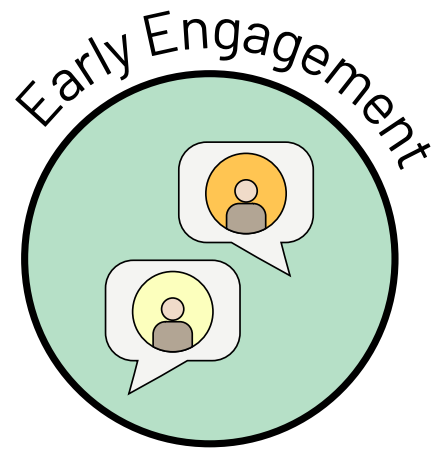
In this section, we would like to know about your experience about energy consumption. Please express yourself with the question!

- When thinking about your average daily routine, can't you compromise on (e.g. cooking, washing, showering)?
- Do you think it is important to be mindful about energy consumption?

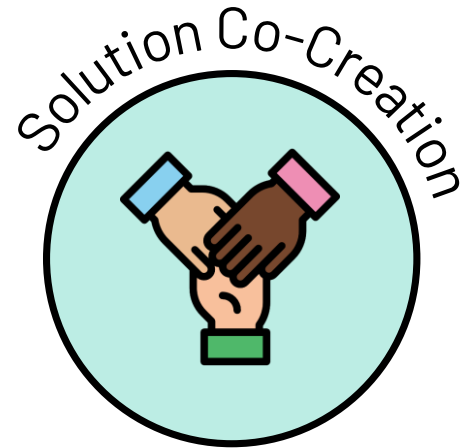
Most valuable tool - Human interaction



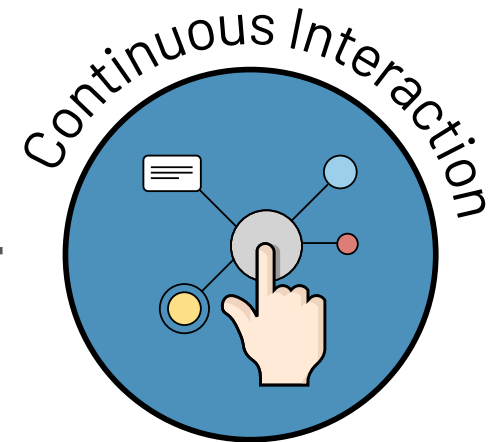
Key Learning from Implemented Strategies



- Inform
- Raise awareness
- Promote
- Recruit



- Empower
- Own
- Tailor

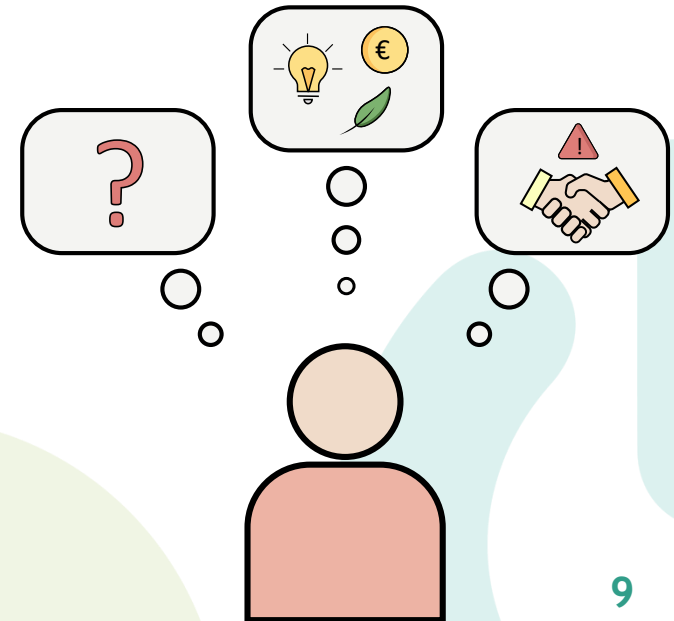


- Keep motivated
- Improve solution and process
- Shape future

Learning Point 1

Citizen hesitation to engage

- Lack of awareness about the issue (*Why* should I help?)
- Lack of awareness about /limited understanding of possible solutions (*How* can I help?)
- Lack of incentives to engage (What's in it *for me*?)
- Lack of trust from citizens (Is it *safe*? Does it *work*?)



Learning Point 2

Key Learnings from Implemented Strategies

What has worked well with co-creation activities:

- Leveraging local social dynamics & networks of trust
 - Co-creation activities led by pilot leaders
- Effective communication targeting average citizen
 - All guidance documents in layman terms and local language
- Engagement boosting events
 - Pilot partners introduced pilot sites and participants to SSH partners (leading on the Living Labs)
- Web-based citizen application available for user testing
- Simple tools used for gathering user feedback



Key Learnings from Implemented Strategies

Learning Point 3

- Co-creation is very hard
 - Engagement persistence
 - Communication gap
- Co-creation is necessary
 - Achieve fitness-for-purpose
 - Increase acceptance and replication potential
- Tangible short-term incentives seem critical to engage citizens and achieve early buy-in
 - Until the sustainable, long-term benefits to citizens become evident



Thank you!

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Questions



Participants can join
at [slido.com](https://www.slido.com) with #8172491



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