



Co-creation and participatory engagement in household DR

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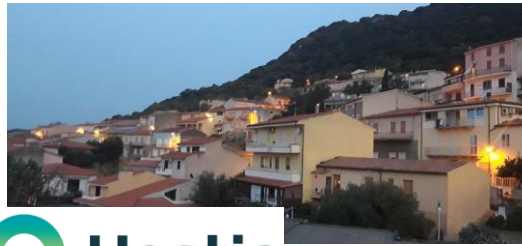
Hestia is a Horizon 2020 project, currently developing a technological, social and business solution **to demonstrate the potential of Demand Response services leveraging on social engagement** and user experience effectiveness (<https://hestia-eu.com/>)

3 PILOT LOCATIONS:

Voorhout, The Netherlands



Berchidda, Sardinia, Italy



Camille Claudel, France



Significance of co-creation

- **One size does not fit all-** especially in smart technology design-‘Resource Man’* profiling
- Participation in **solution identification-not just** in **solution making**
- **Inclusivity & participation** in the building **of the energy community**
- Aiming for **not just consensus-** but **full diversity**



*Strengers, Y., 2013, Smart Energy Technologies In Everyday Life. Smart Utopia?

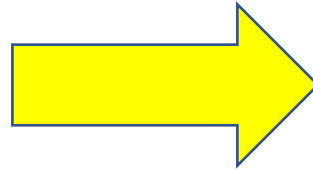


Significance of co-creation for Hestia



Project objectives:

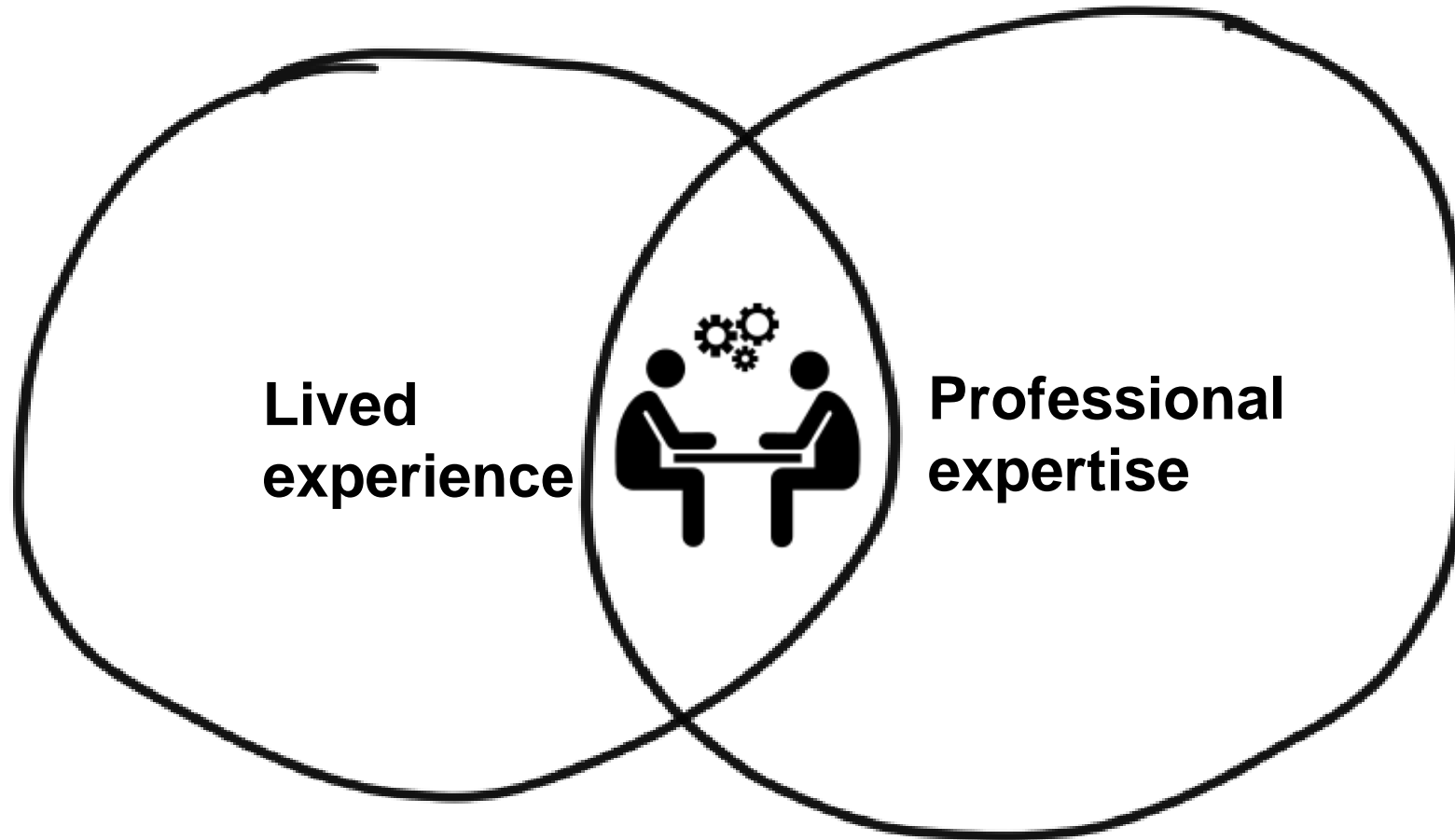
- To exploit the consumer engagement **as part of a cooperative DR strategy at the community level**
- **To involve the residents in the designing of solutions** through participatory co-design process



User engagement strategy

- **Understand everyday** household **practices** at home & collectively in the community
- **Build the energy communities** at the same time as building the DR platform
- **Involve the consortium partners (not only residents) & other relevant stakeholders** in co-creation processes
- **Map & embody the meanings & values of all stakeholders** in the platform

How did we employ co-creation?



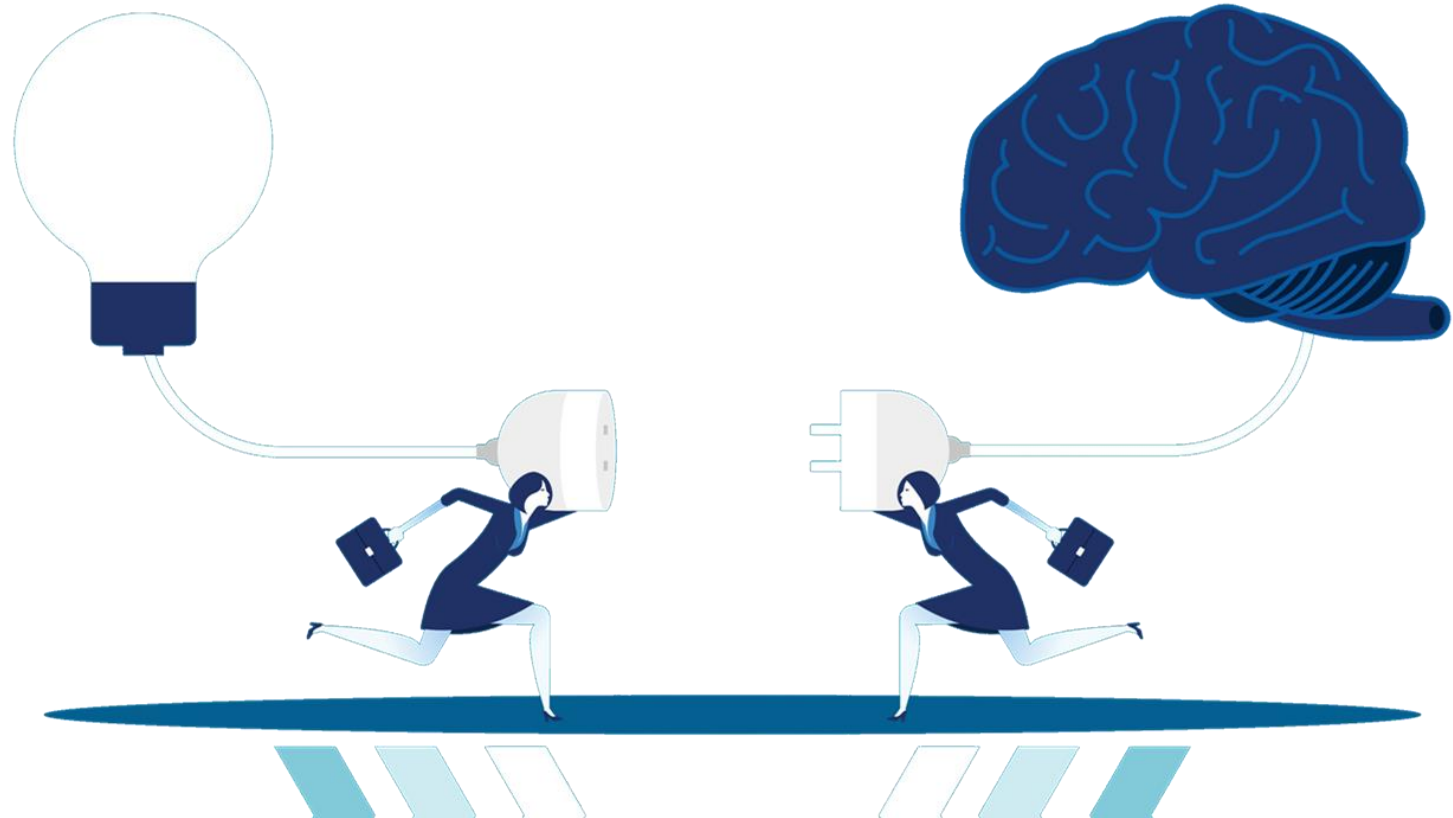
How did employ co-creation?

Interactions with participants in pilots:

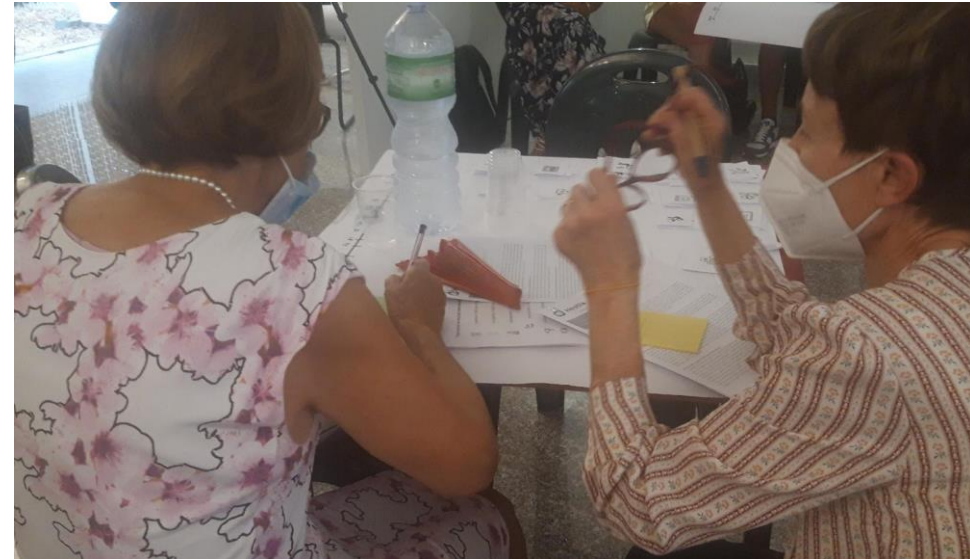
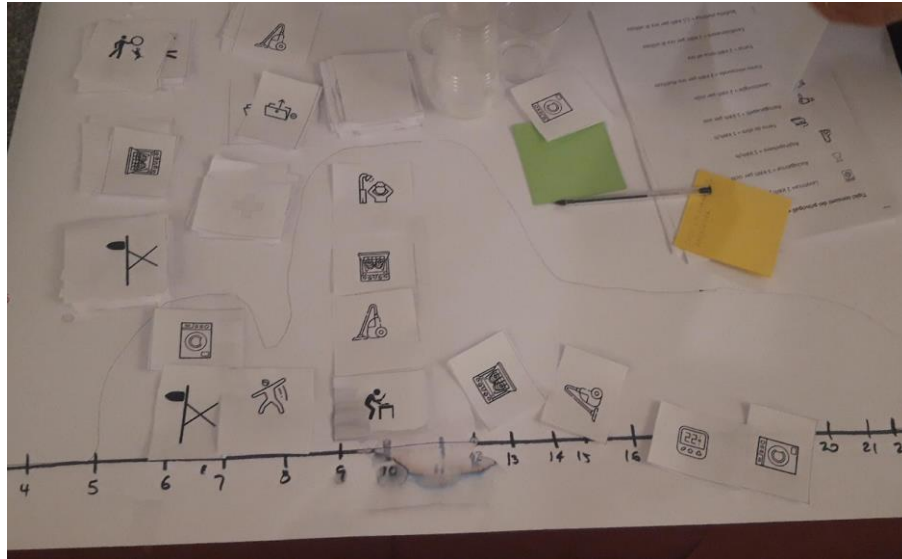
- **Participatory workshops**
- **Virtual** household **interactions** (interviews & home tours)
- **Face-to-face** household **interactions** (interviews & home tours)
- **Visual and interactive methods for user-engagement**

Interactions with consortium partners:

- **Design & facilitation of co-creation workshops** within the Hestia **consortium**



Berchidda-Sardinia-IT



Participants were given a practical group activity which involved the mapping their everyday energy consumption, allocating actions in a 24hr clock and then drawing their energy curve

Berchidda-Sardinia-IT



Photos by Marta Arniani, Futuribile



Women-only focus group to investigate the engagement with Smart technologies & understand the coordination between everyday practices at home with Smart energy systems

Voorhout-NL



The workshop involved two activities. The first reviewed the technological interfaces (current App used and proposed one by Aug-e).

Workshop facilitated by Duneworks, NL



In the second activity participants played a game about generating their preferred energy community

Voorhout-NL

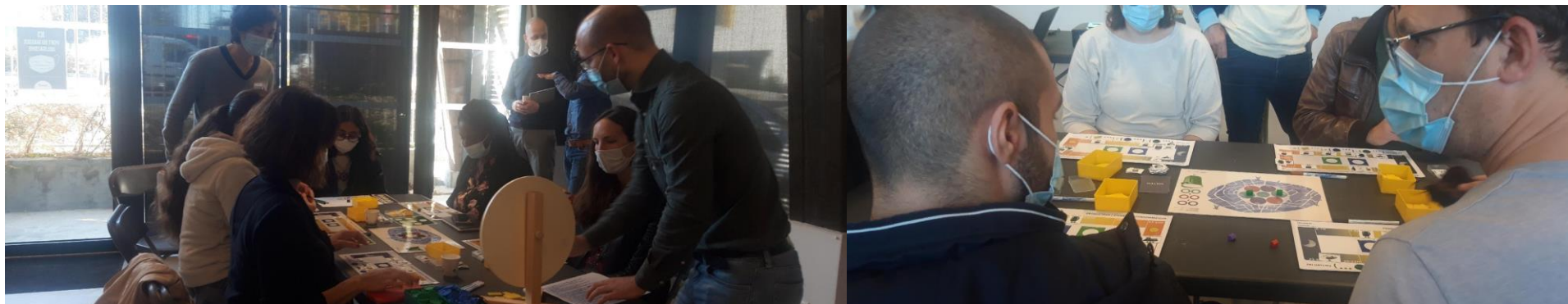


Workshop facilitate by Duneworks, NL. Photos by Sylvia Breukers & Razia Jaggoe

DIGITAAL/ENERGIETECHNISCH	DOEN	PLANNEN
internet		
instellingen smartphone		
overige smart toepassingen (tv?)		
thermostaat		
de huidige app		
ventilatie		
batterij (oude/nieuwe)		
nieuwe sensoren		
Warmtepomp		
Zonnepanelen		
→ wie doet hier iets mee		
ZELF		
partner		
gedeeld		
ander		

Women-only focus group- to get insights into householders' division of digital housekeeping at home, exploring gendered roles and practices relevant to Smart energy technologies

Camille Claudel-FR



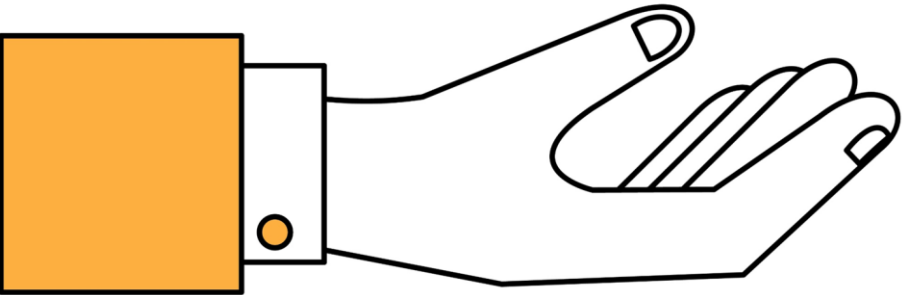
Participants played some 'serious' games to engage with the concepts of smart energy contracts

Workshop facilitated by EDF & User Studio



And they were also given some challenges for changing everyday practices, such as lowering their thermostats or changing their cooking patterns

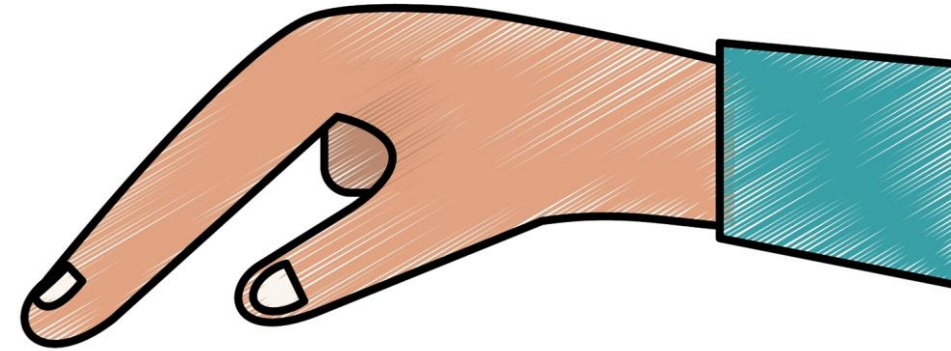
What has worked well



- The activities have been received positively.
Especially the **workshops**.
- People (mostly) want to **collaborate** and work together **rather than compete**
- **Co-creation** activities have helped **build the energy communities**
- Co-creation has **highlighted & helped explore issues of diversity, gender & inclusion**, relevant to people & smart technologies

And what hasn't...

- **Covid** made recruitment & interaction harder, but investment in personalised interactions in the beginning pay off at the end
- **Pilots** do not respond to co-creation in the same way
- **Co-creation within the consortium is a challenge**
- **Sustaining activities & expectations** –to give people the feeling that they are part of something and their input matters. There's a responsibility there.
- **Interpreation of co-creation data** still challenging



Key learnings

- **Project design: co-creation requires** project officers, EU commission and project developers to design co-creation in the proposal and accept **a certain open-endedness** to allow the final design scope/direction of the project to be determined in conversation with users.
- **Sustaining expectations of partners & communities**
- Co-creation is **time & resource consuming** & challenging to run
- Co-creation can help with **the interpretation of the gendered know-how** into technological applications for DR
- **Co-creation can support diversity & inclusivity**, but needs **careful consideration**



Tools & platforms

Physical tools

- Participatory workshops
- Serious games
- Role-playing games
- Cards & probes
- Template for data evaluation amongst partners

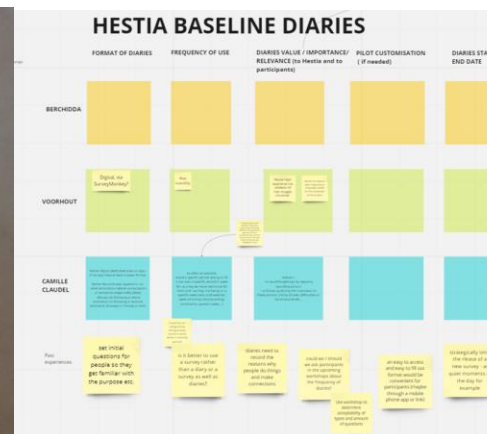
Virtual tools

- Online co-creation through Miro (within consortium)
- Visual methods for mapping households' everyday practices

Serious games & cards by EDF & User Studio



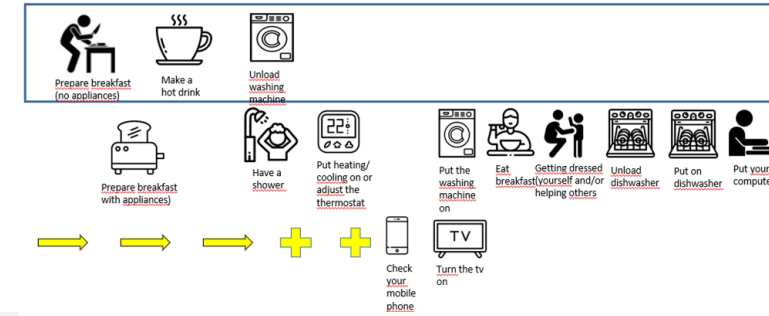
Miro board brainstorming



Visual interactions template-Aggeliki Aggeli

Synchronous interactions

Compose your routine by dragging the relevant elements in the box
Routine1: MORNING



THANK YOU!

Questions



Participants can join
at slido.com with #8172491

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