

Citizen Empowerment – The experience of a user centred energy system

Redream project

Carlos Becker – Stemy Energy

Now is the time to get involved in the energy transition



The EU is very rich in renewable energy sources.

Do you want to help boost and make the most of this type of generation?

Europe's electricity system may be in trouble due to gas shortages.

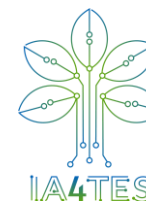
Do you want to help mitigate this?

Electricity prices are getting higher and higher.

Do you want to reduce your electricity bill?

For a less gas-dependent Europe

Do you want to help make Europe less dependent on gas?



How can consumers get involved?



By being **flexible** in their consumption

Consumption flexibility is the ability of consumers to **change the way they consume** for their own and the electric system's benefit.

Flexibility \neq Interruptibility



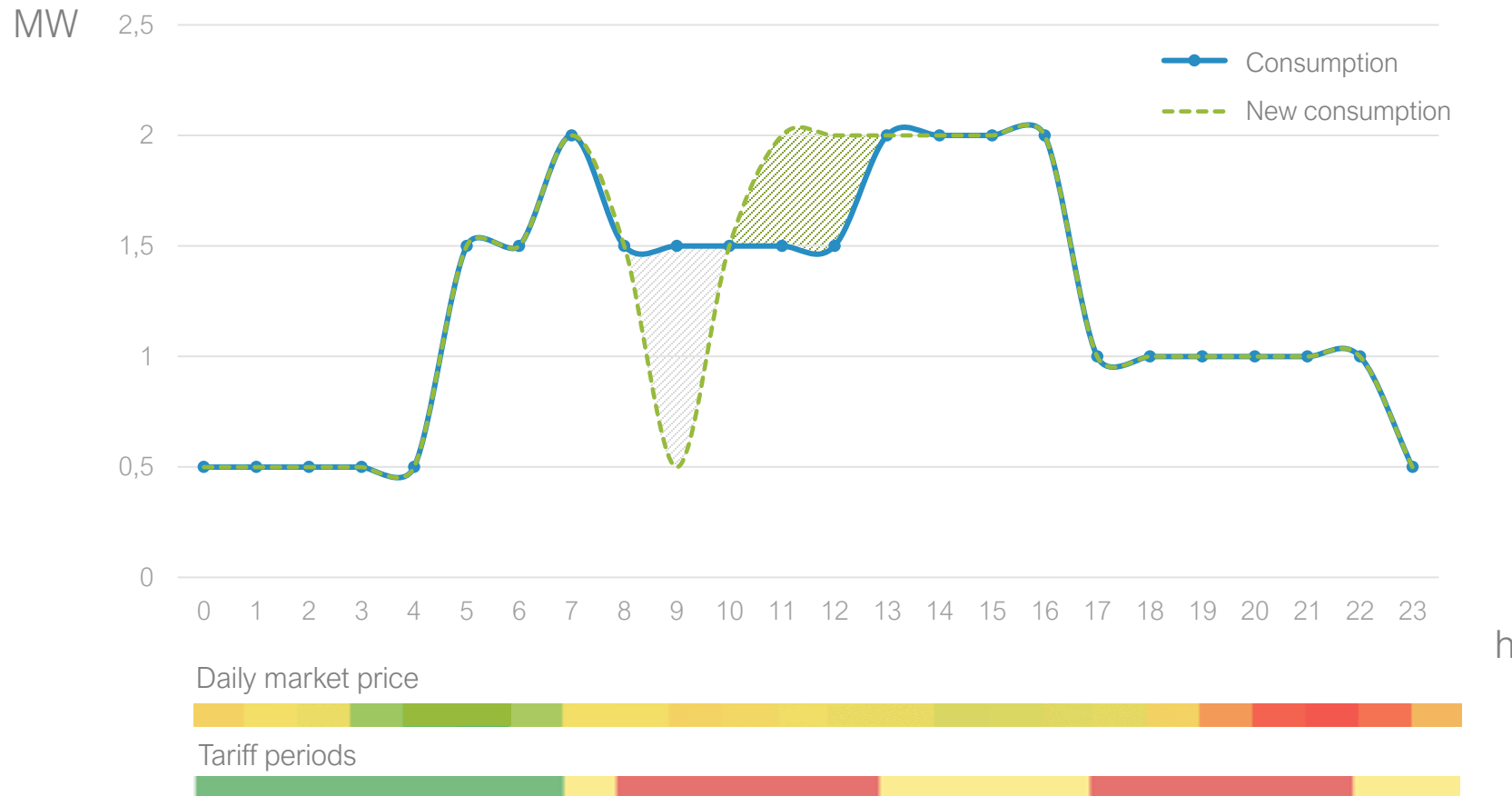
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How can I be flexible?



Example of a consumer with water pumping and a mill.

13/09/2022



By activating

1 MWh

Net profit from being flexible

392 €



140 k€/year

Actively participate in the energy transition



Make better consumption decisions thanks to detailed information and better control of your resources.



Savings on bills by consuming more efficiently.



Receive new revenue from your participation in the electricity markets, regardless of the price structure of your bill.



Reduce environmental impact (CO2 emissions), gas dependency and allow for more renewable generation by helping to stabilise the electricity system.



 **Flex**
Community

Who can be flexible?



Those with any sort of **storage**: thermal, mechanical, electrical, chemical.



Residential



Commercial



Agro-industrial



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IoT devices to retrofit existing equipment from all sectors



Domestic hot water



Batteries



Heat pumps (HVAC)



EV charging posts



Refrigeration



Milling



PV Communities



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Demo sites and user types

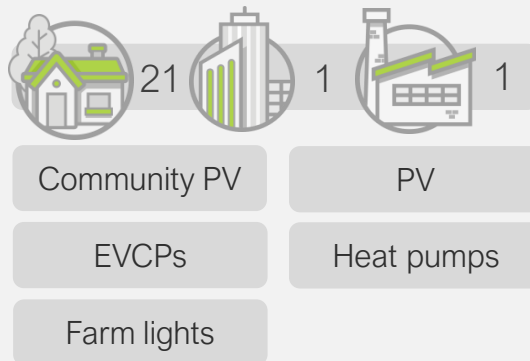
1st Sept
2020



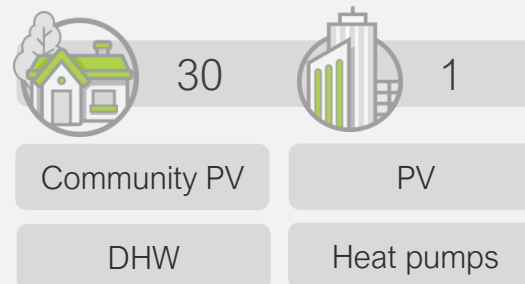
1st March
2024



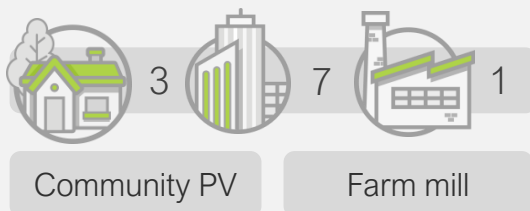
Spain



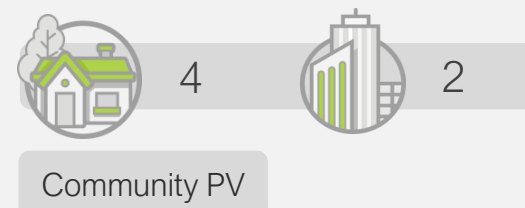
United
Kingdom



Italy



Croatia



Leverage points and user archetypes



Spain

Environment & economic

Mixed awareness

Tech conformists



United Kingdom

Environment & community

Active for change

Tech wary



Italy

Environmental

Active for change

Tech wary



Croatia

Economic & functional

Non-conscious

Tech conformists



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Main challenges



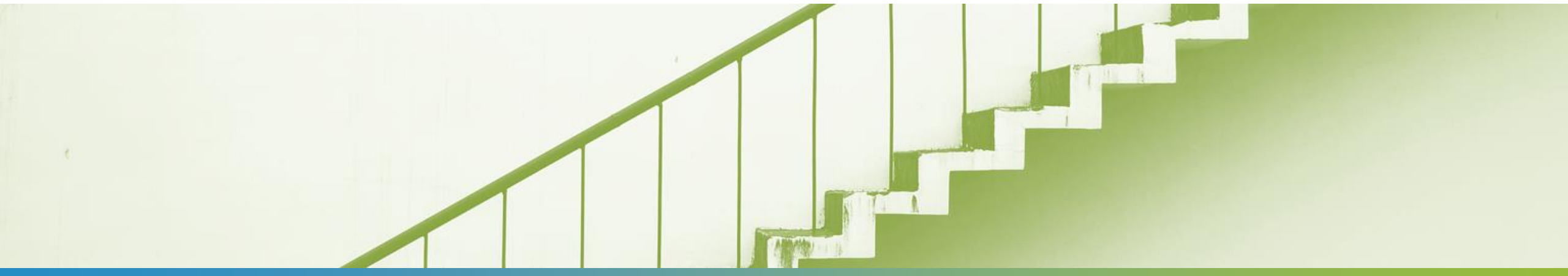
Difficulty **explaining** the demand response concept

Lack of **technical knowledge** of required info to define customer's solutions


Mixed levels of **tech knowledge** and dependence


Nonhomogeneous regulation in relation to what you can install in fuse boards


Difficulty **finding installers** due to boom of PV and heat pump installations



Energy ecosystem

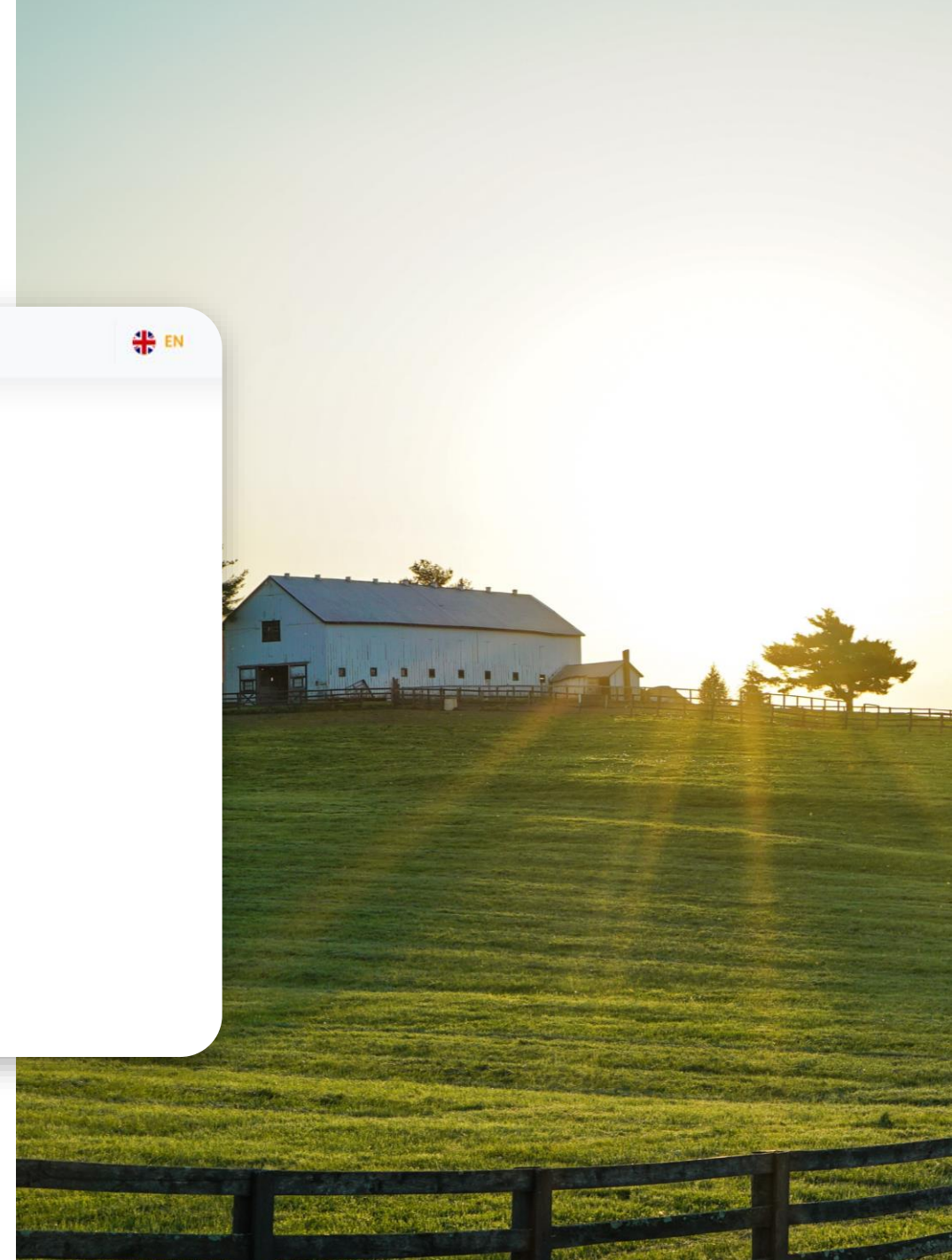
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LOG IN

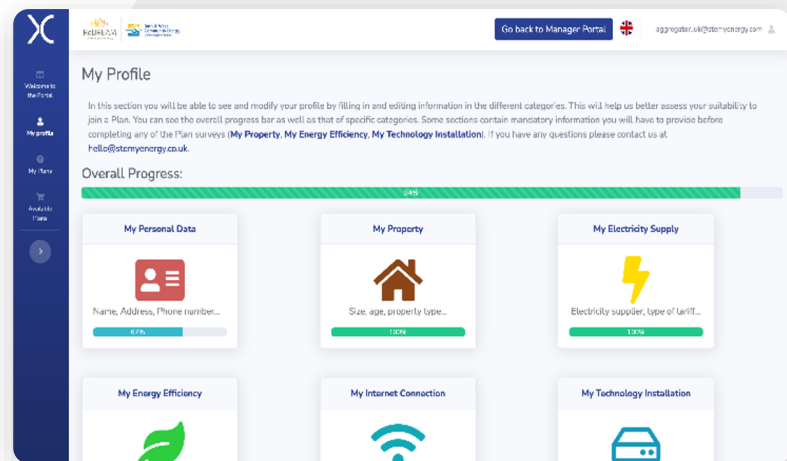
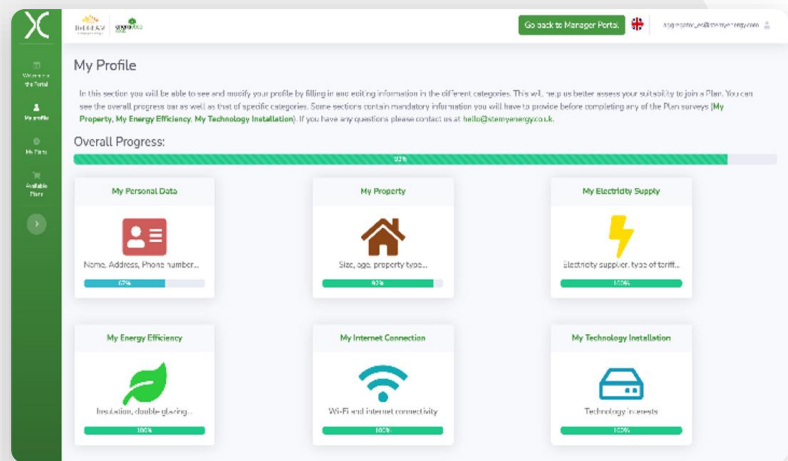
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Energy ecosystem (II)



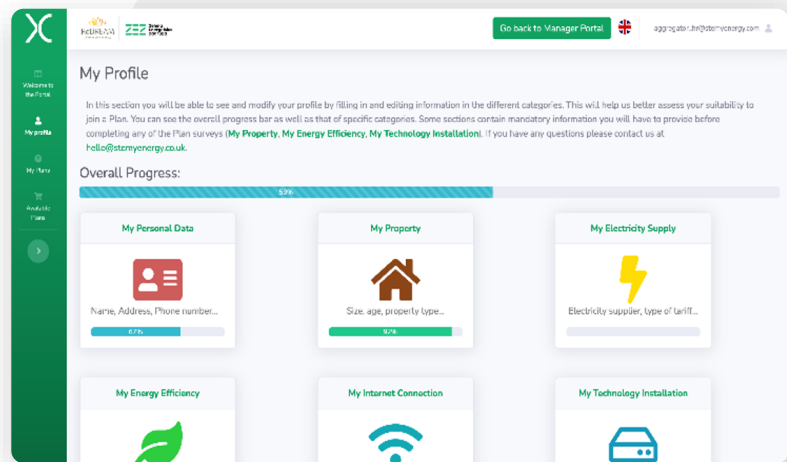
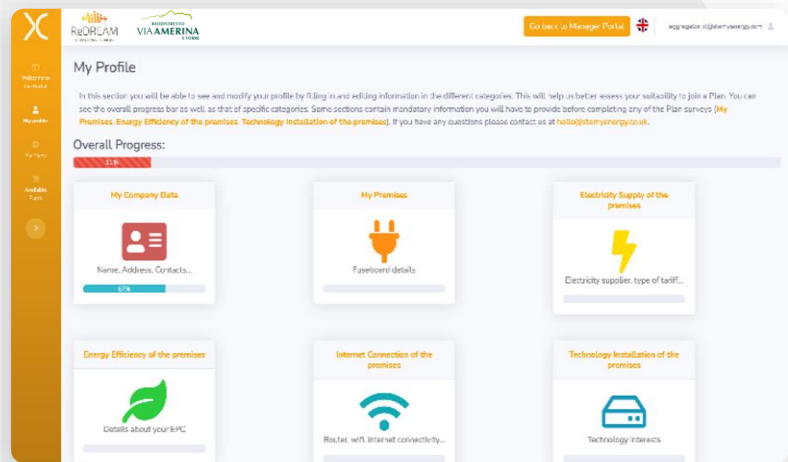
Spain



United Kingdom



Italy



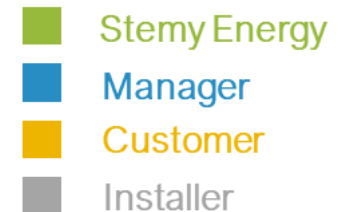
Croatia

Custom onboarding and engagement



Advantages

- ✓ Custom onboarding process adapted to each country.
- ✓ Managers can fill in user's information.
- ✓ Managers can work with multiple installers.
- ✓ Info can be presented in small pills.



Unleashing the future of energy

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