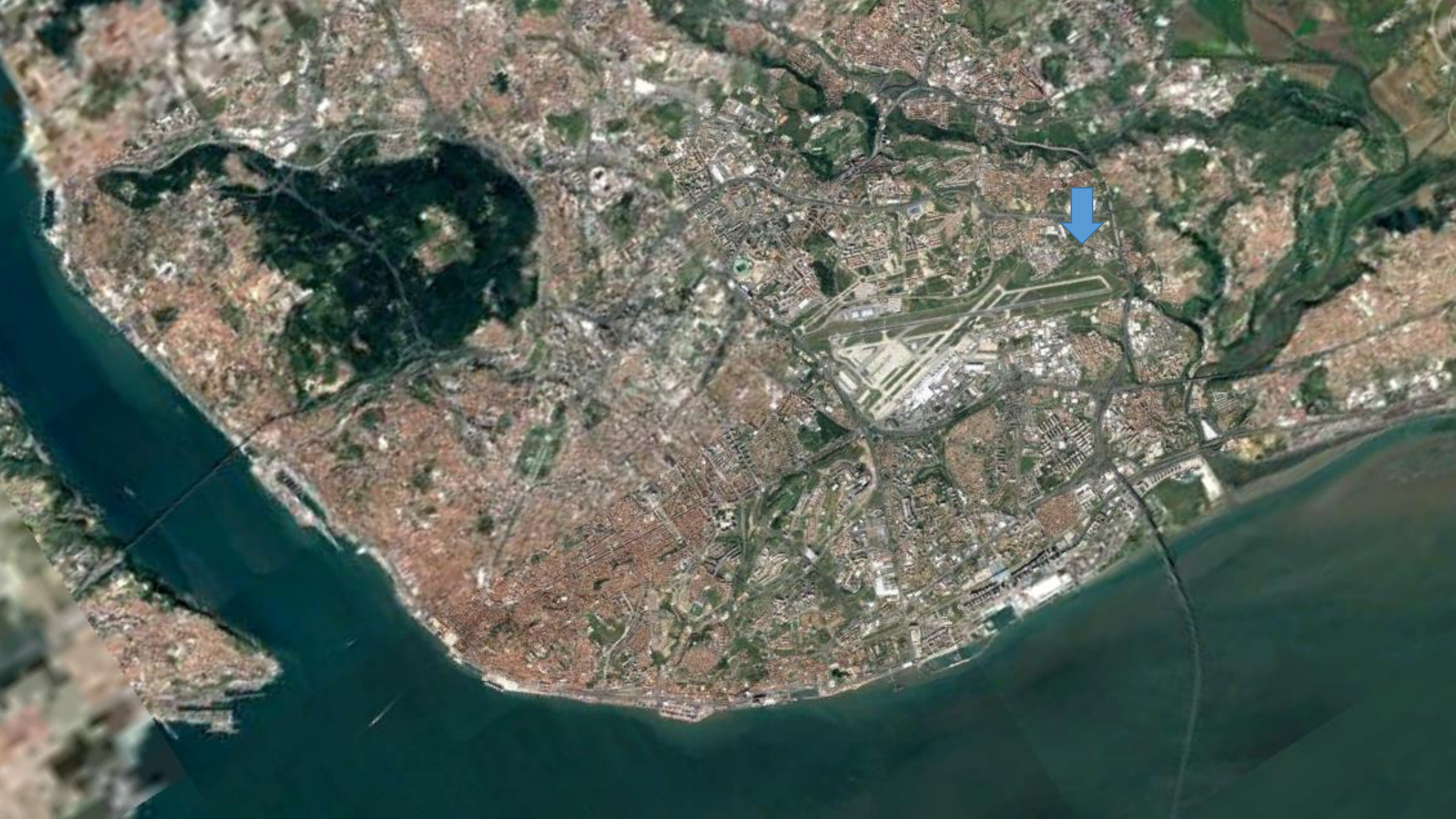


Bairro da Torre

- Built in the 60s
- Gipsy and African families
- 67 families; 227 inhabitants

- Children (0-14): 32,4%
- Young population (15-24): 22,2%
- Active age (25-64): 37,8%
- Elderly (from 65 up): 7,6%

- Students: 40,5%
- Unemployed: 44,4%
- Self-employed: 2,6%
- Employee: 3,3%

Problem

- 2016: there was intensive activity with local NGOs working with the community in capacitation, child education, hygiene and even a local “waste cleanup” action
- October 2016: EDP Distribuição has cut energy supply to the whole neighbourhood due to ilegal clamping of the public lighting system

- Strong feeling of demotivation and abandonment in the community
- Whole neighbourhood 100% in the dark
- No electricity for appliances


KRUPS

Possible Solutions

	PROS	CONS
Microgrids w/ centralized production	• Assures usability of currently existing appliances • Best cost-benefit?	• Susceptible to clamping • No ownership feeling • Conflicting with DSO concession? • Need for meters / responsible use • Not usable on the long term (in case of family reallocation or public grid is implemented)
Small DC system	• Cheapest solution	• Doesn't work with the currently existing home appliances/electricity network (fridge, lighting, tv, etc) • Not applicable on the long terms
Domestic PV + Storage	• Compatible with the future (Off-grid now, Grid connected self-consumption in case of refurbishment of houses, grid implementation or reallocation) • Assures usability of existing appliances	• More expensive • Might need additional support infrastructure in less robust houses

Optimal solution

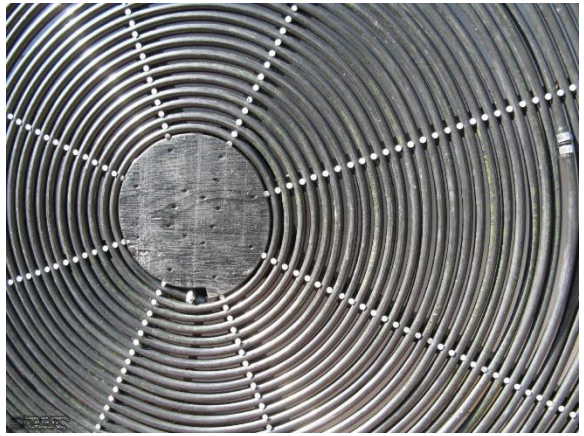
- Hybrid 3000VA up to 2400W
- 500W to 1500W
- 1 Installed per household
- Shared by neighbours from same family when possible
- Enough storage for: lighting, fridgeT L
- “Future-proof”

Chosen solution - financial scheme

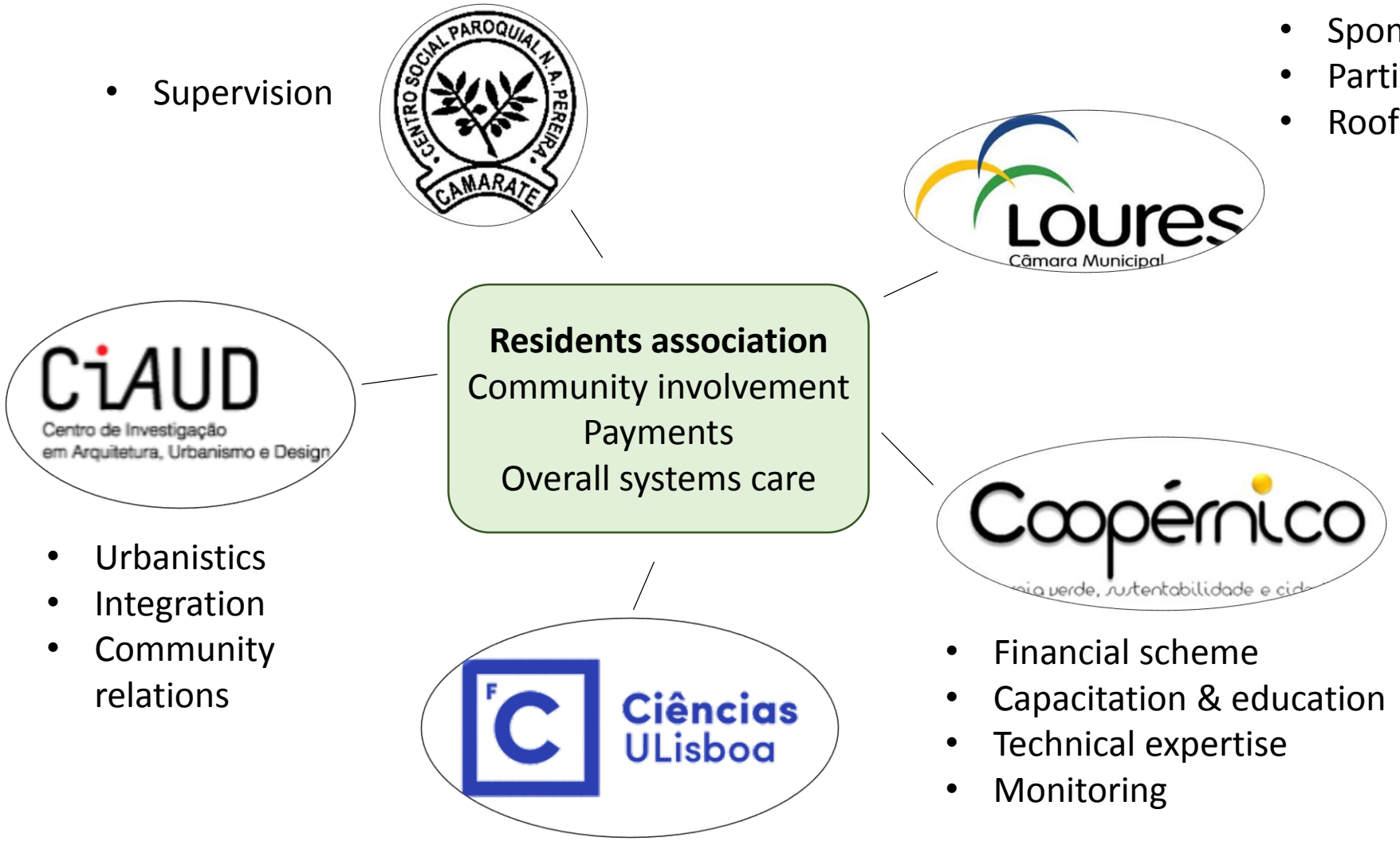
- One low-cost loan (circa 2%) provided to local organization: Resident's association: 30.000€ to 60.000€
- Association sells equipments to families at monthly installment they can afford
- Initial payments are suggested to lower monthly installments
- Rewards to good payers

	Inversor 3000VA	250W Panels	Batteries	Estrutura	kWh storage	Cost	Monthly	5 year cost
Kit Basico	1	2	2	2	6000	1161	21	1260
Kit Médio	1	4	2	4	6000	1462	26	1560
Kit completo	1	6	2	6	6000 (more?)	1737	31	1860

Other improvements



Chosen solution – community scheme



Role of EU RESCOOPs and RESCOOP.eu

✓ Co-funding

✓ Risk sharing

✓ Sponsorship

RESCOOP.EU

Why you should join

✓ Improving the life of those families

✓ Energy poverty action

✓ Make a case for energy cooperatives in Portugal (and EU)

✓ European collaboration among cooperatives

✓ Caring for community

✓ ***We've done this before!!***