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Successful International Experiences in Energy Communities: Rome case studies

Flavio Rosa

CITERA, Interdepartmental Research Centre for Territory, Building, Conservation and Environment

Sapienza University of Rome Italy

Sapienza Rome University

Sapienza University of Rome, founded in 1303 by Pope Boniface VIII, is one of the oldest universities in the world, and a top performer in international university rankings.

Since its foundation, Sapienza has constantly played a significant role in Italian history and has been directly involved in key changes and developments in society, economics and politics.

Merging centuries of tradition with cutting-edge didactic activities, research and innovation, Sapienza provides top quality education and research opportunities.

The main campus is a real city within the city located in the heart of Rome. Sapienza University is an extraordinary place for students and teachers from around the world to meet, exchange and develop new ideas and philosophies. And it all takes place in one of the most breath-taking cities in the world.

Main campus
Other campuses

Rome
Latina



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CITERA - Interdepartmental Research Centre for Territory, Building, Heritage and Environment – Sapienza University of Rome



It includes 6 Department of 3 Faculty of Sapienza University of Rome

FACULTY OF ARCHITECTURE

- Architecture and Design
- History Design and Restoration
- Planning Design and Architecture Technology
- Structures

FACULTY OF ENGINEERING

- Astronautical Electrical And Energy Engineering

FACULTY OF MEDICINE

- Environmental Hygiene

CITERA develops scientific and applied research and high-level training in the field of the study of architectural and urban space planning, the organization of the territory and the landscape, the preservation of monumental historical testimonies and the enhancement of their quality.

The vision of CITERA is centered on unified and integrated scientific cooperation, which provides the contribution of academics and designers in the fields of building technologies, construction sciences and techniques, representation art and technique, history of architecture and conservation, urban and land planning

Director: Prof. Spartaco Paris



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CITERA ACTIVITIES FOR RECS INNOVATIVE FRAMEWORK



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CITERA is partner in 3 projects on RECs

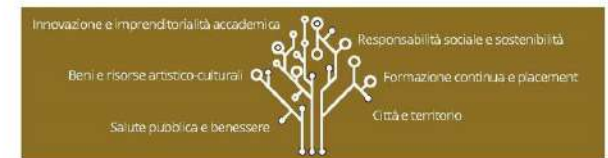
1. H2020 **Sun4All** solare per tutti



2. ICLEI Europe and Google org **Sun4U**



3. **Sapienza Third Mission**



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H2020 SUN4ALL PROJECT

<https://sunforall.eu/>



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Rome Pilot in Sun4All

The Rome pilot intends to strengthen the model of **Renewable Energy Communities for Solidarity (RECS)** that can be inclusive of vulnerable and energy-poor households.

Selecting 200 beneficiaries households to engage in a **participatory process** focusing:

- **energy transitions concepts discussed in WORKSHOPS**
- **individual energy advices**
- **the benefits** coming from the energy sharing scheme of the RECS

is the starting point for breaking down the barriers to integrating them into the REC model.

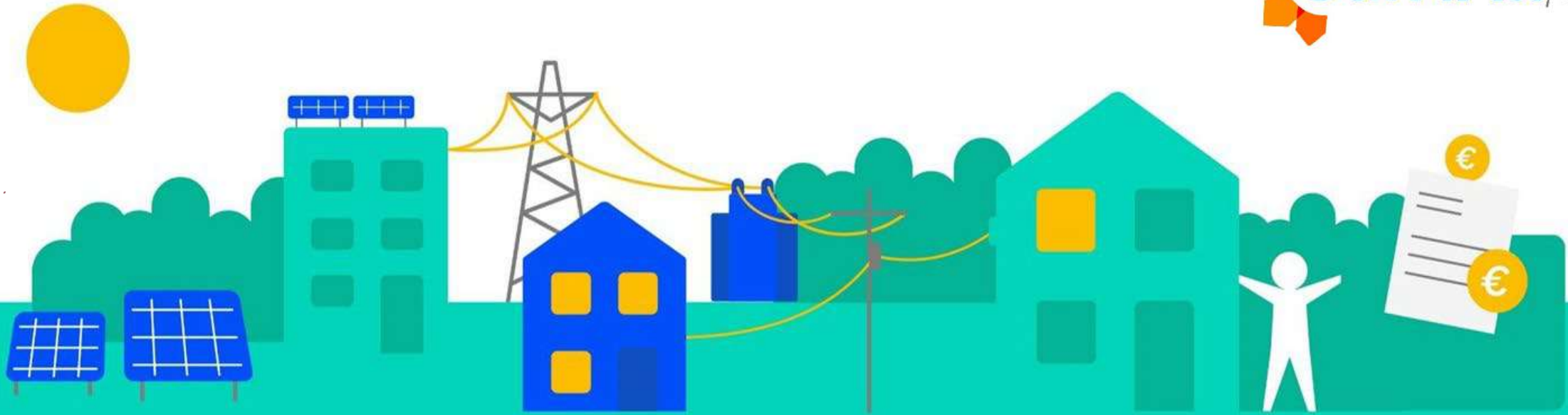


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The Sun4All support scheme



Solar energy is generated by local photovoltaic installations, owned by the municipality and located near to where eligible participants live

Depending on the pilot use case, the renewable solar energy is either provided for direct consumption by Sun4All beneficiaries or fed into the local power grid

Sun4All beneficiaries continue to get electricity as usual, with no need to install or maintain solar panels

Through the financial support scheme and its redistribution mechanism, Sun4All participants financially benefit from the renewable energy produced and its value



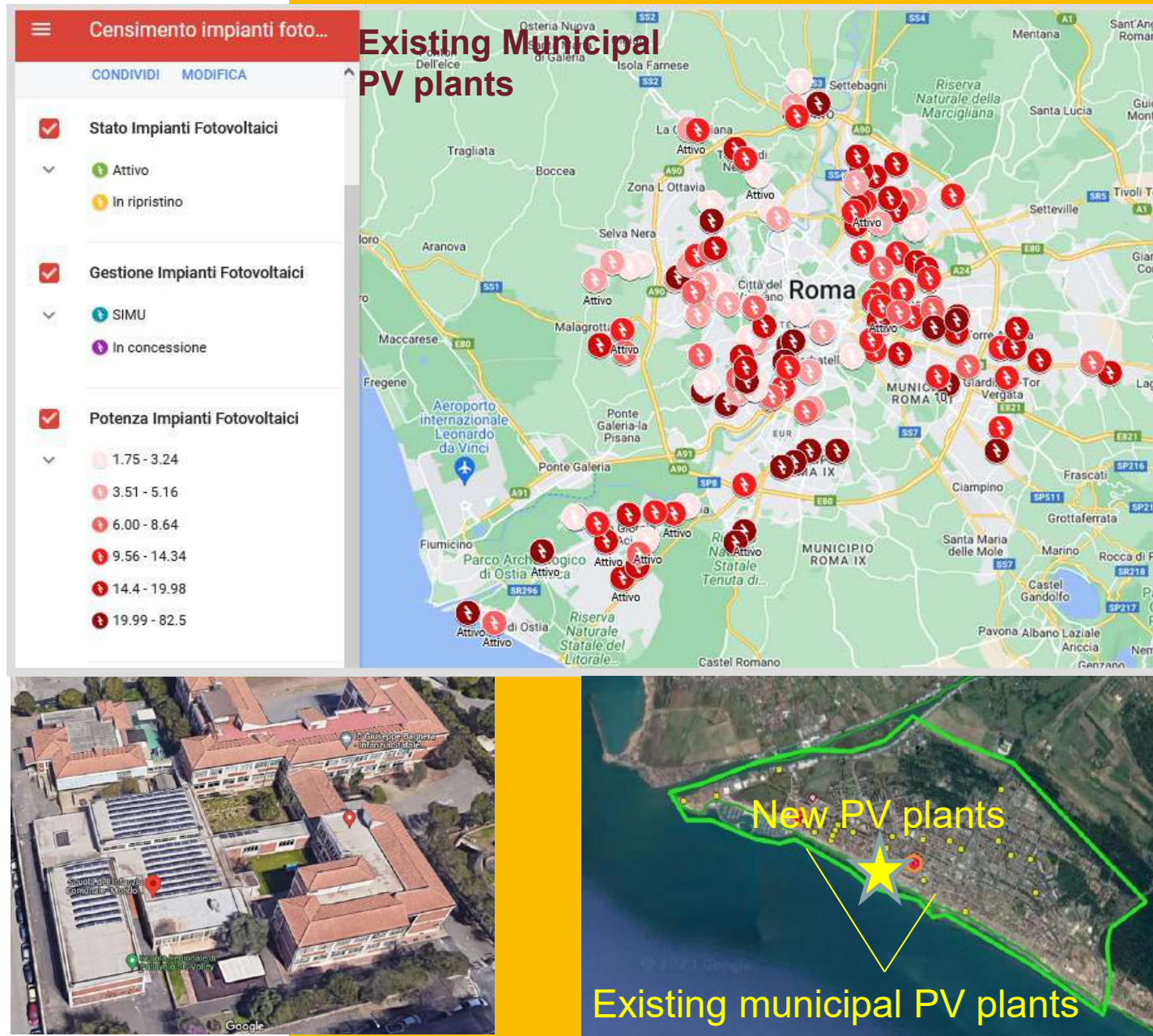
Scope of Rome Pilot

The Rome pilot will use the municipality owned PV plants already working on the many school roofs to simulate the innovative scheme of **Renewable Energy Communities for Solidarity (RECS)**.

The energy and the public incentives generated by these plants will be associated to the community-groups enabled in Sun4all.

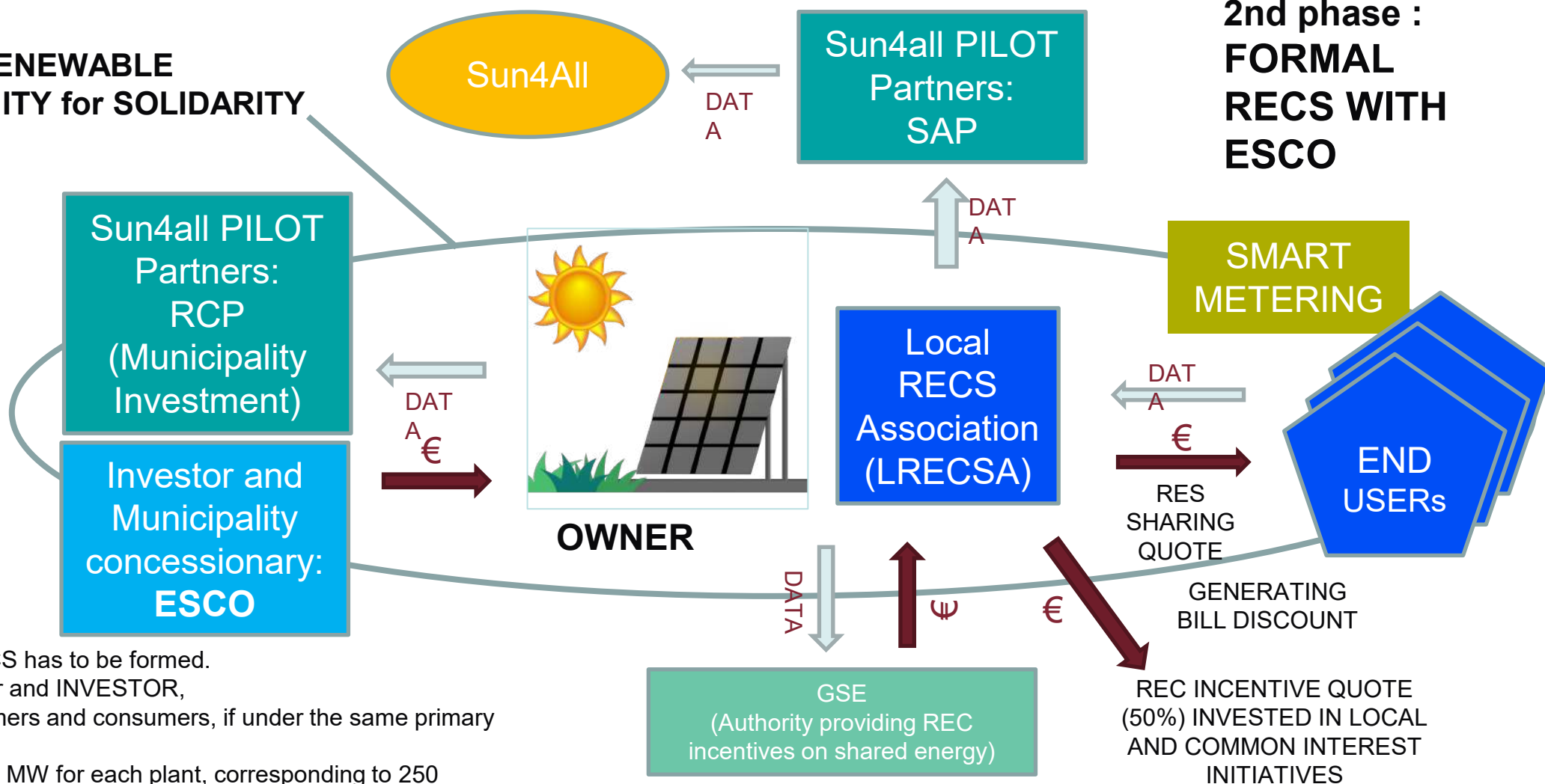
Each community adopts one PV plant proportioned to the dimension of the group.

Both energy PV productions and families consumptions will be monitored.



First scheme Main challenge ☐ innovative RECS scheme

**RECS : RENEWABLE
ENERGY COMMUNITY for SOLIDARITY**



**2nd phase :
FORMAL
RECS WITH
ESCO**

LRECSA:
A formal entity for each RECS has to be formed.
It includes RCP as prosumer and INVESTOR,
Must be open to new prosumers and consumers, if under the same primary
substation.
RES peak power limited to 1 MW for each plant, corresponding to 250
consumers. Receives incentives from GSE (20 years).



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The Rome Pilot Renewable Energy Community for Solidarity (RECS) model

Monitoring:

PV energy production

Households consumptions

Solidarity Approach:

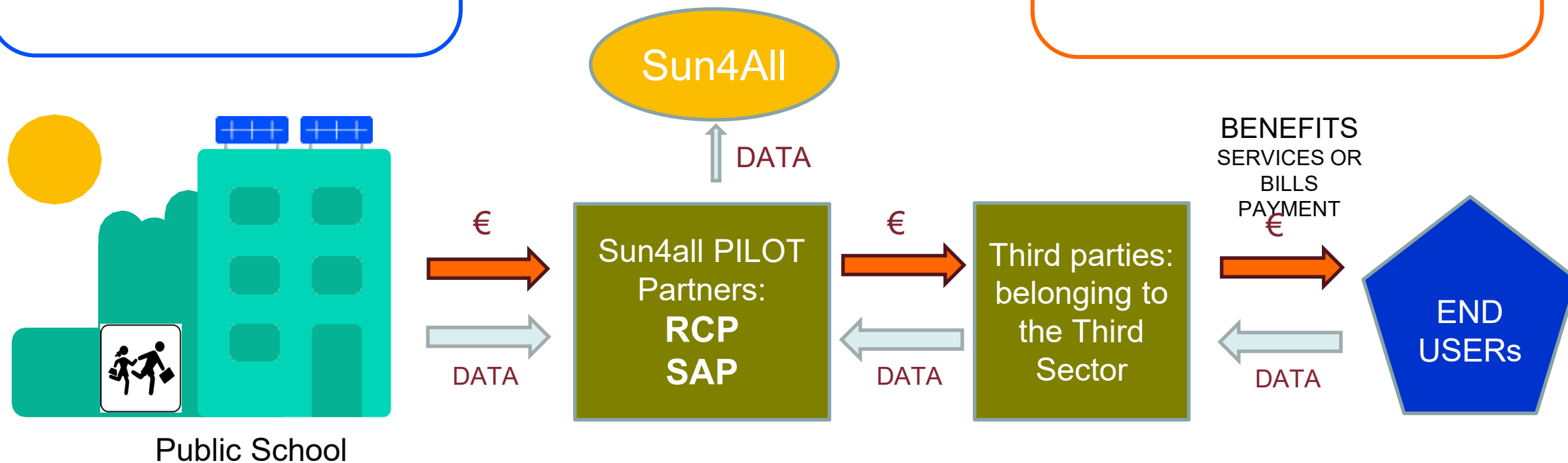
- The investment is public
- The incentives are used for social purposes

1st pilot phase

100 benefits x 200 € = 20.000€

2nd pilot phase

100 benefits x 200 € = 20.000€





SUN4U PROJECT

<https://sun4u.it/>



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Con il supporto di



ROMA
CAPITALE



Partners



- Coordinated by **Federesco**, Energy Service Company Association
- Promoted by **ICLEI** Local Governments for Sustainability, a global network of more than 2,500 local and regional governments.
- Funded by **Google Org**
- The project involves the creation of a digital platform able to guide users in the creation of Renewable Energy Communities (CERs) in the city of Rome.



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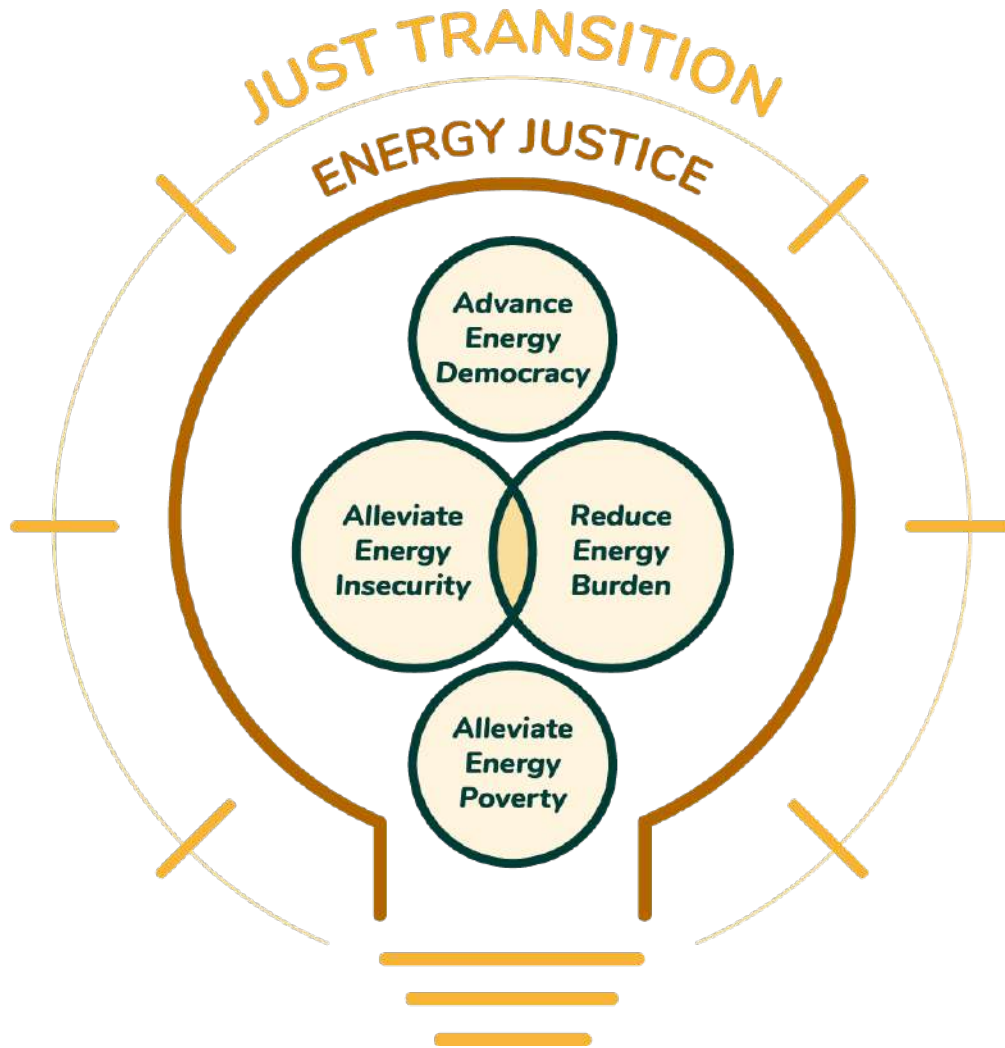
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The Sun4U challenge



Tools for sharing, strengthening and developing Renewable Energy Communities (REC)

- The challenge is to **overcome** the information, financial, social and procedural barriers that slow down the development of qualified and incentivized REC.
- REC today represents the most important **driver** for the increase in RES production in the urban context, in line with the European Agenda and the SECAP, **strengthening environmental justice, a fair energy transition and urban resilience**

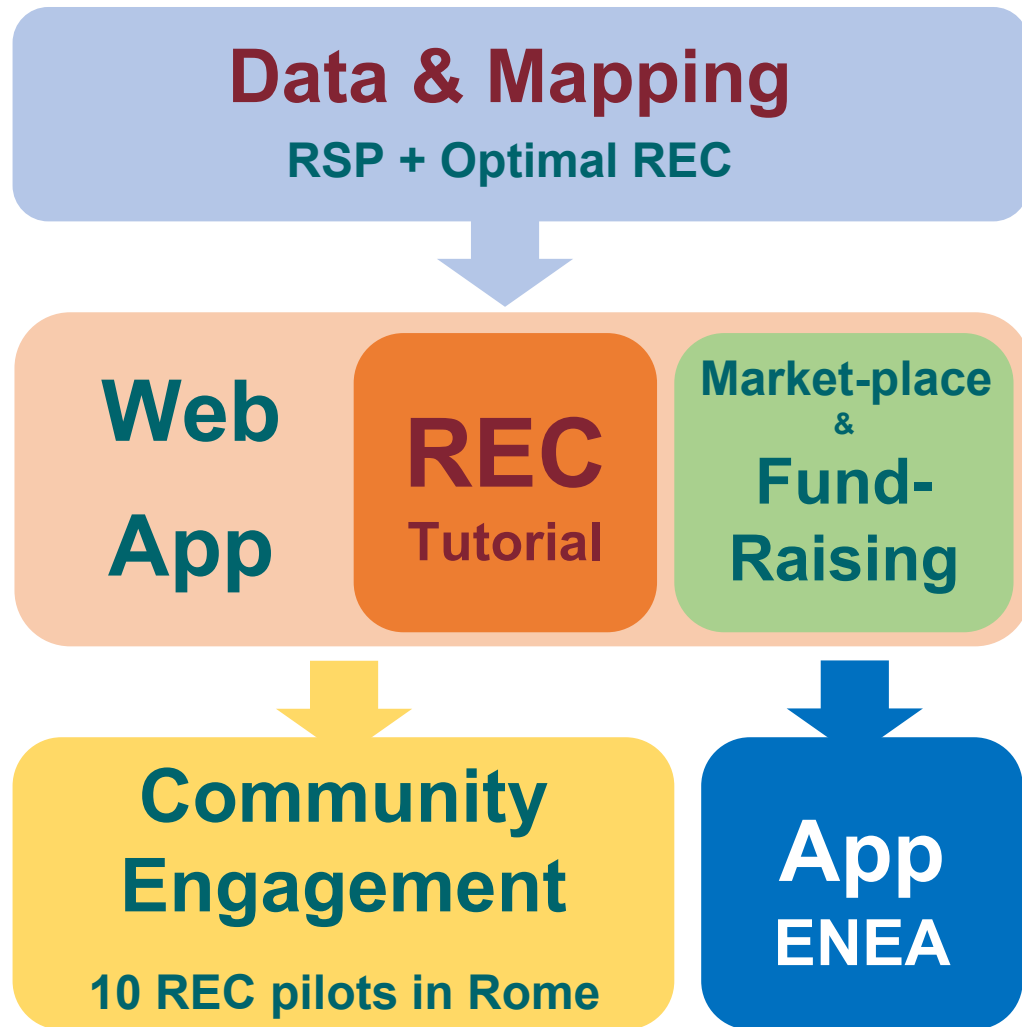




The target users of the platform are:

- CER animators
- Prosumers
- Consumers
- Providers (market place)
- Schools (training)
- Stakeholders,
- Local businesses,
- Professionals,
- Investors,
- ESCOs

Sun4U digital platform



The platform's main services on Web and App will provide:

- Roof photovoltaic potential
- Ideal and optimal REC simulations
- Interactive step-by-step tutorial
- Market place of expertise and suppliers
- Fund-raising tools
- Social tools for local aggregation and CER creation

• Tool for self-diagnosis (link)



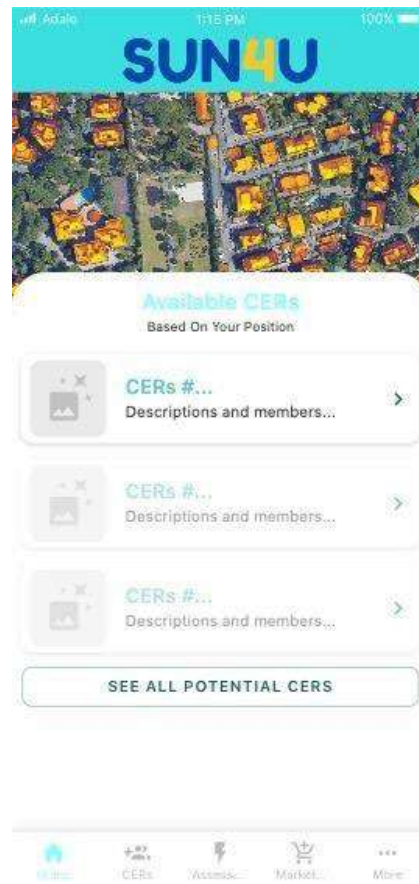
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Sun4U users experience



User Onboarding



Social



Self Assessment
Consumption



Self Assessment
Production



Energy Community
Creation

FOR ALL



SERVICE



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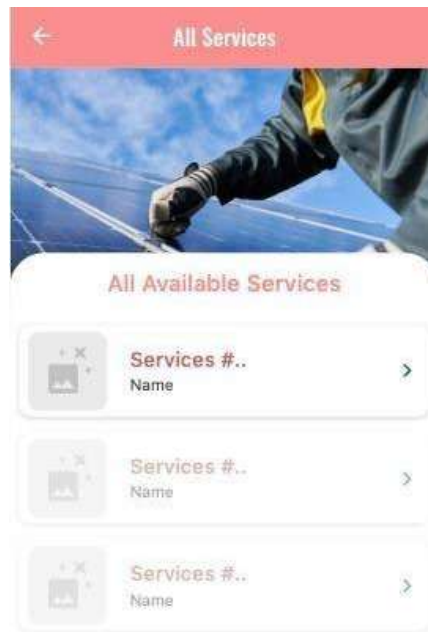
Sun4U users experience



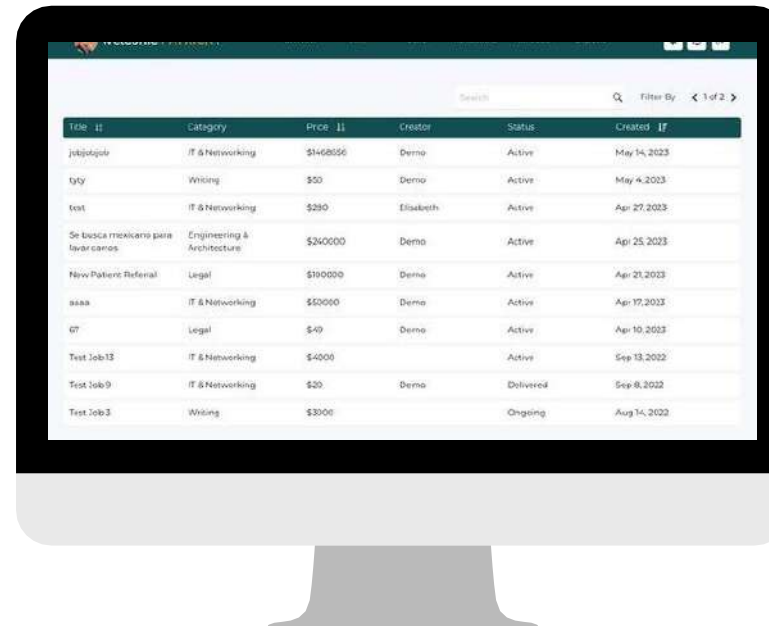
In the Marketplace, Service and Resource Providers and Investors can offer their services to users of the Energy Communities and respond to their requests or questions for assistance.



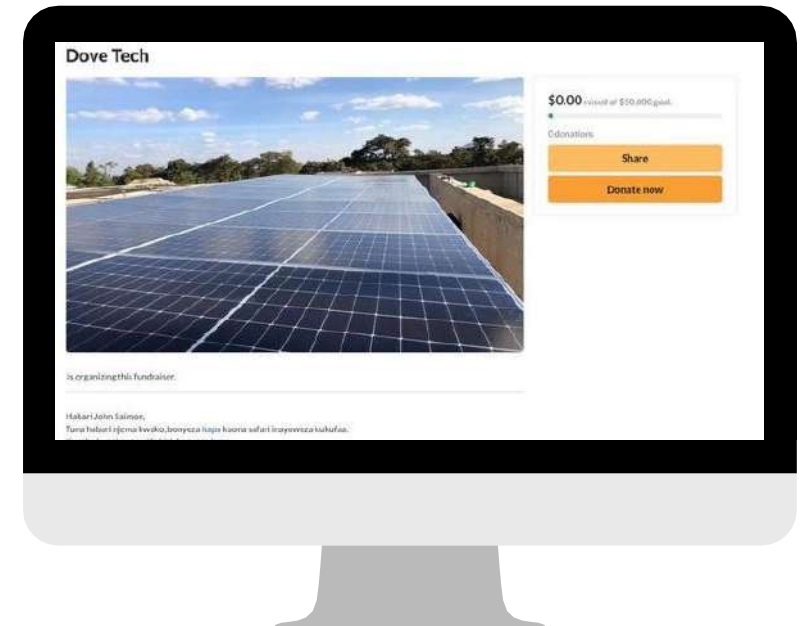
service



User interact
with Services



Service Provider
manages services



Investors can select
projects to invest



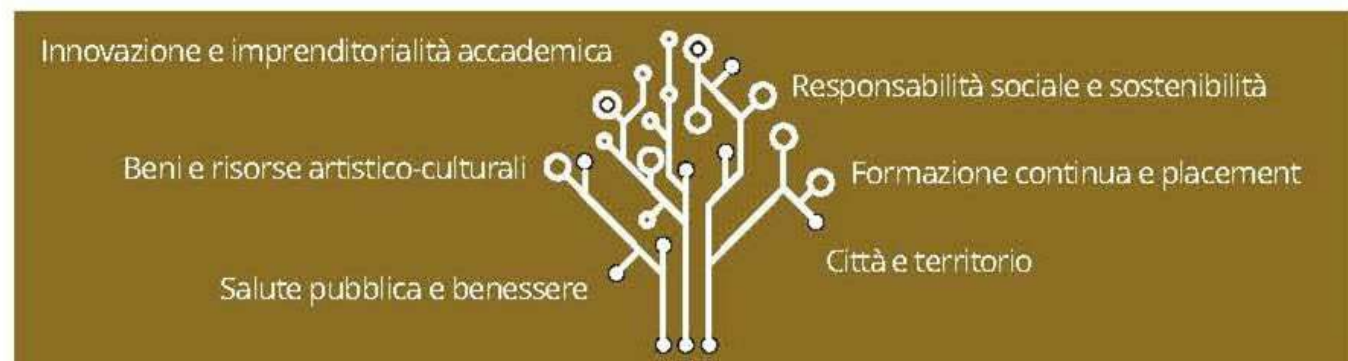
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CITERA CENTRO DI RICERCA
INTERDIPARTIMENTALE TERRITORIO
EDILIZIA RESTAURO AMBIENTE

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THIRD MISSION PROJECT

<https://web.uniroma1.it/citera/progetto-citera-bando-sapienza-terza-missione-2022>



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REC and Social impact: the Third Mission project

CENTRO DI RICERCA
INTERDISCIPLINARE TERRITORIO
EDILIZIA RESTAURO AMBIENTE CITERA

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Innovazione e imprenditorialità accademica
Responsabilità sociale e sostenibilità
Bene e risorse storico-culturali
Formazione continua e placement
Salute pubblica e benessere
Città e territorio

Progetto Terza Missione Sapienza - Centro di Ricerca Territorio,
Edilizia, Restauro Ambiente - CITERA

**Creare Comunità per una
migliore qualità della vita**

Giovedì 20 Luglio 2023 Ore 18:00

Punto Verde Polifunzionale Spinaceto
Viale Eroi di Cefalonia, 53 - 00128 Roma

Incontro aperto a tutti i cittadini
per presentare progetti pubblici,
europei e nazionali, che intendono
migliorare la qualità della vita a partire
da chi si trova in condizioni
di vulnerabilità socio-economica.

Si parlerà di come far nascere nel municipio IX comunità di cittadini per favorire l'aggregazione sociale informandoli come fare a riunirsi per ottenere risultati concreti sui temi della sostenibilità ambientale e dell'efficienza energetica e ridurre il costo delle bollette di energia. Durante l'incontro verranno illustrate le potenzialità di sviluppo dei temi dell'efficienza energetica attraverso gli strumenti delle Comunità di Energia Rinnovabili Solidali (CERS) e degli orti urbani comunitari.

Parteciperanno: Roma Capitale Municipio IX; Vivere In; Federconsumatori Lazio;
Forum Terzo Settore.

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roma@sunforall.eu

ROMA CAPITALE
GOVERNAMENTO REGIONALE
FEDERCONSUMATORI
Lazio
Forum Terzo Settore
Sun4All
SUN4U
ENERGY FOR ALL



- Just transition
- Urgent need to promote an inclusive energy transition.
- Leave no one behind
- Fit-for-purpose measures
- Bottom up approach



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PPP AND REC IN ITALY: AN OVERVIEW



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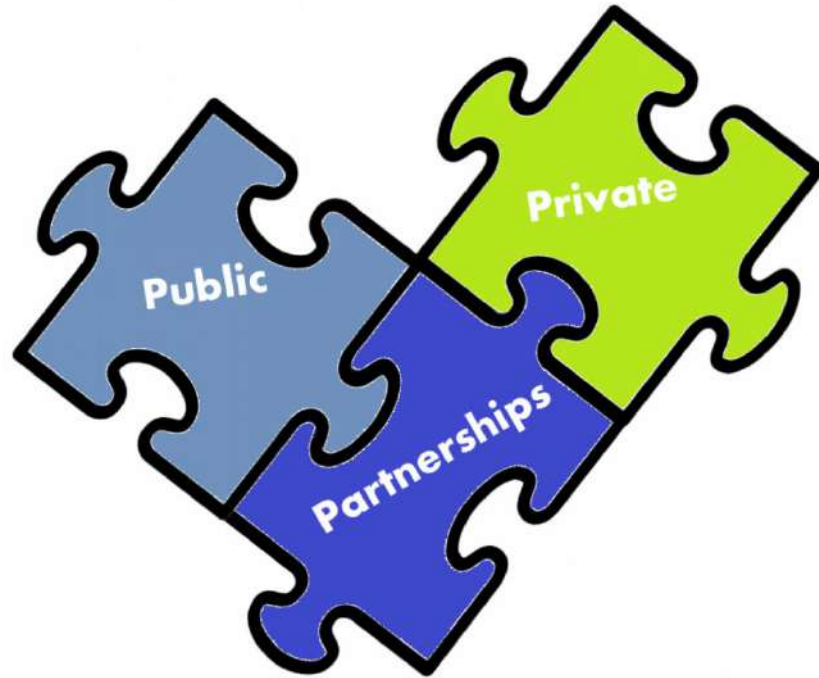
The Italian Court of Auditors and the RECs: first opinions



- From the RED II Directive to the constitution of RECs in Italy
- What options in the Italian legal system
- Initial opinions of the Italian Court of Auditors
- REC and legal forms: compatibility
- Which decisions for public bodies?



The Italian Court of Auditors and the RECs: first opinions



“Experimental” period

The upheaval of the reference corporate model as a limit not to be exceeded

Importance of the opinion for the municipalities but also for companies.

- legal flexibility
- dealing also with the pre-existing Italian legal schemes are particularly rigid and complex.



A legal negative opinion of the Court of Auditors

The legal vehicle chosen is that of the "limited liability consortium company" with founding partner, in addition to the Municipality itself, the concessionaire company resulting from the definitive award of the public tender procedure.

Public consultation

- The object of the public consultation is not the CER but the deliberative act.
- Public consultation must take place
- Compatibility with European legislation
- The meritorious purposes of the CER do not exempt public administrations from their motivational burdens.
- Distinction between main and subsidiary activities of the CER



First conclusions

- The legal form of a CER can only be tailor-made
- The company must not have a main profit-making purpose.
- CERs must have their own stability.
- Companies (both of people and capital) represent the model that is certainly furthest from the principles that inspire the CER scheme.
- In the debate that is developing in Italy on CERs, attention is being focused on the benefit corporation, the lucrative purpose, in fact, coexists with the identified common benefit which, however, is not prevalent





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THANK YOU



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