



This project receives funding
from the ICLEI Action Fund

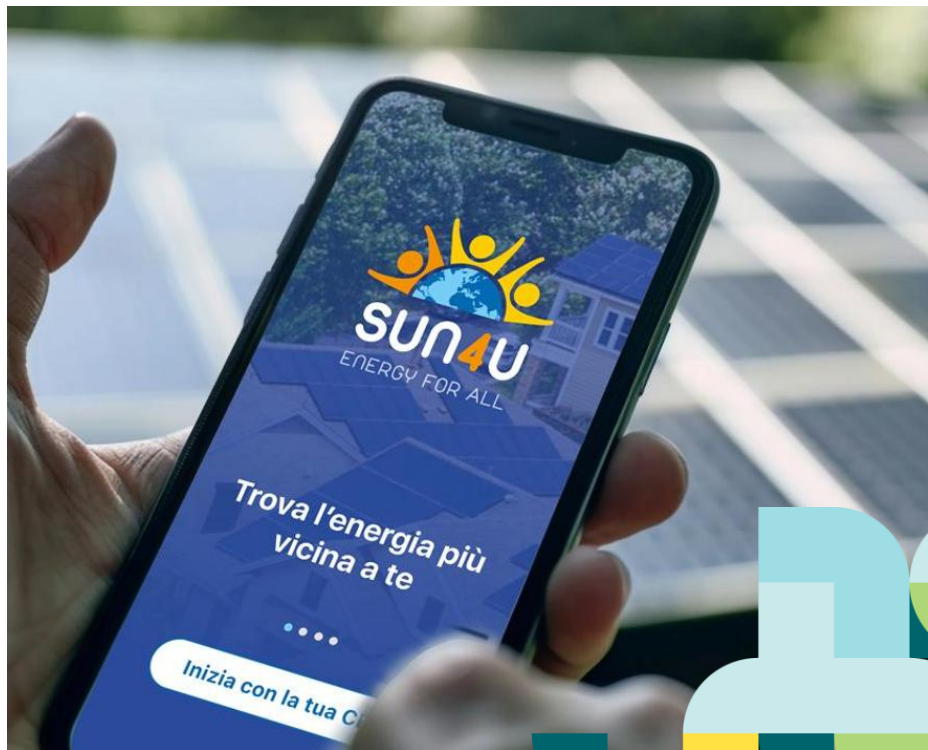
action-fund.iclei-europe.org

SUN4U

Your REC with a click

**Empowering and Sharing Tools to enable
Renewable Energy Communities in Rome**

Rotterdam, The Netherlands
24th June, 2025

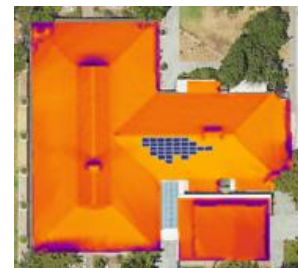
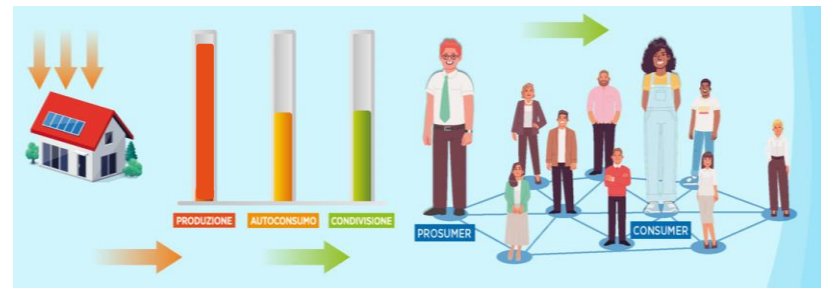


Project Goals & Outcomes



Goals: **Deploy the SUN4U APP** with the scope of

- Facilitating the **access** to REC initiatives
- Supporting the **creation** of RECs bottom-up
- Enforcing the **fair energy transition**
- **Empowering** Local Communities
- Increasing the **knowledge** on Solar PV local potentialities
- **Involving** stakeholders, suppliers, experts and funders around concrete REC initiatives
- Increasing the **renewable energy** produced locally
- Offering a **toolbox for an effective One-Stop-Shop** for REC
- **EXTRA :** Integration and Calibration of Google Solar-API Service

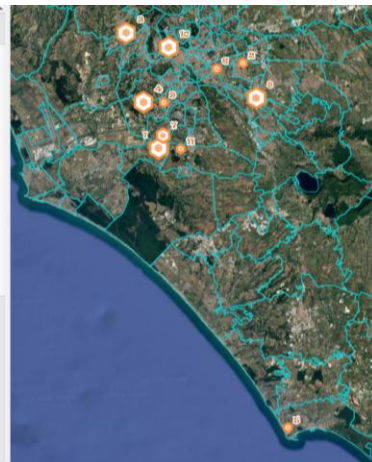


Project Outcomes



PILOT SUN4U DATA

✓ 1°	24570 - 50000 kWh/yr
✓ 2°	50000 - 100000
✓ 3°	100000 - 135850
✓ 4°	puntapalaceo capite
✓ 5°	01 - CERS CASAL BRUNORI ETS
✓ 6°	02 - CERS QUARTICCIOLIO ETS
✓ 7°	03 - NUOVA COMUNITA' VERDE XIV ETS
✓ 8°	04 - CORVIALCERS COOP
✓ 9°	05 - CERS ANZO NETTUNO ETS
✓ 10°	06 - CER VILLINI DEL PIGNETO ETS
✓ 11°	07 - CERS MOSTACCIANO ETS
✓ 12°	08 - CEROLE A CINEST ETS
✓ 13°	09 - CERS PORTUENSE ETS
✓ 14°	10 - CER LE VELE ETS
✓ 15°	11 - CER VALLERANELLO ETS



PILOTS

→ 11 RECs supported and established in Rome (279 members) with legal, technical and financial services

SUN4U APP fully working for Android and IOS

→ 117 REC Groups are on-board

→ + 755 users are on-board

→ + 55 suppliers in the market Place

→ 1846 RECs mapped (formal and informal, at national level)

→ 95 REC initiative mapped in Rome

ROOFTOP SOLAR one-click CALCULATOR

→ Fully implemented for any building
(14.000.000)



751

Utenti App
SUN4U



117

Gruppi CER
SUN4U



1.846

CER mappate



55

Aziende nel
Marketplace
SUN4U



14.000.000

Tetti raggiunti
da Simula il
tuo tetto

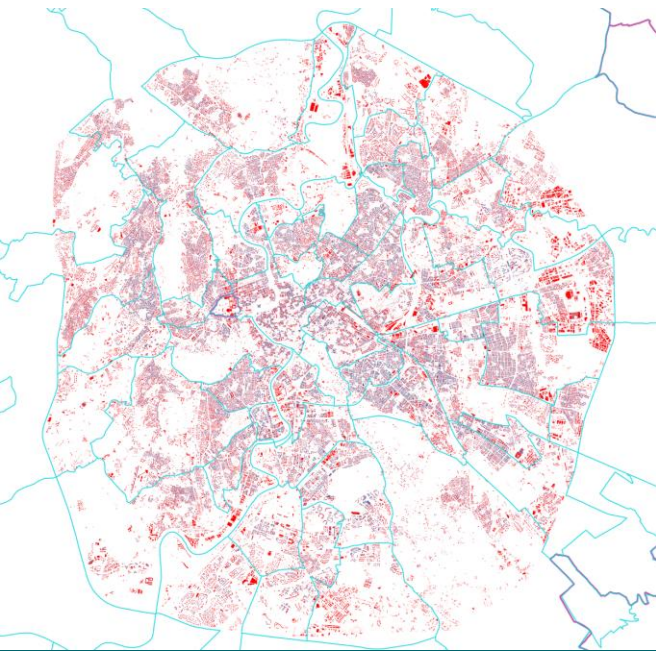


Local Government
for Sustainability
EUROPE

This project receives funding from the ICLEI Action Fund

action-fund.iclei-europe.org

- **Rooftop Solar Potential (RSP) → 198.000 roofs**
- **Calibration of Google SolarAPI data → 14 ML roofs**

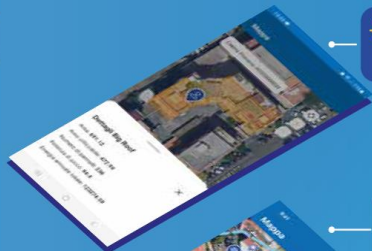


Project Demo

<https://sun4u.it/>



Your REC with a click



Calculate the rooftop
solar potential

Google API Solar
Fully integrated



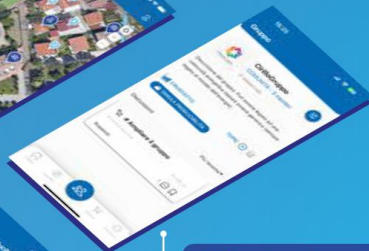
Find other REC users
in your area



Simulate
your REC



Create your
REC group



Finance and
develop your REC



Interact with technical and financial
service providers in the marketplace



The SUN4U platform is
composed by the APP
and the WebAPP

completed by

- Informative Kit
- Training material
- Story telling and Videos



Project Demo

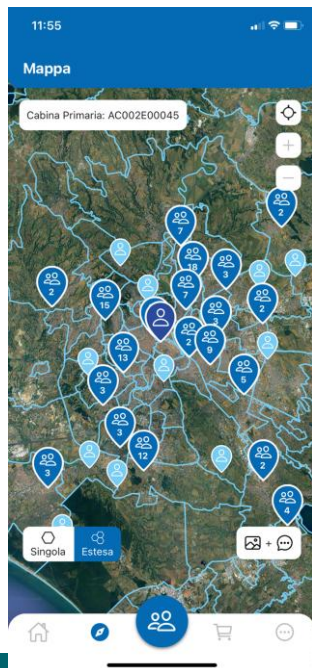
The first One-Stop-Shop platform to build a REC bottom-up with User Generated Data shared within REC initiatives Groups



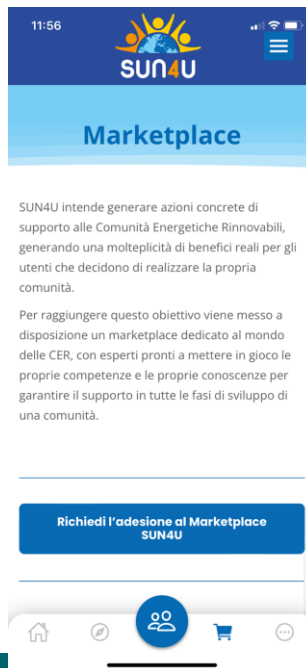
Spatial Analysis and google API solar



Social for each primary cabin area



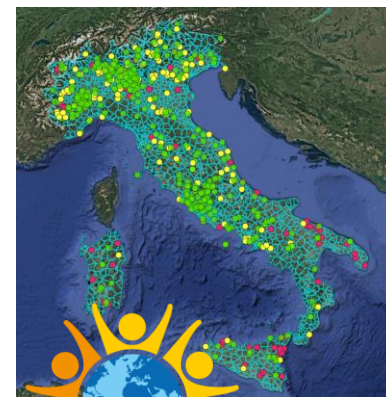
Services to interact with experts



Financial resources



Mapping all RECs initiatives to facilitate the requests via APP to access them by local consumers or prosumers

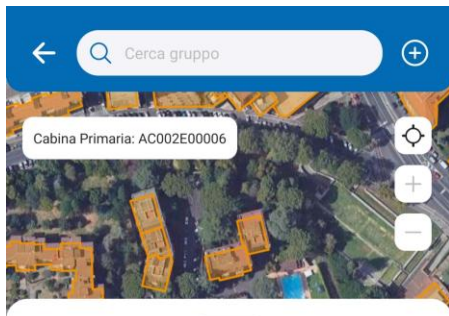


SUN4U
ENERGY FOR ALL

FE
federesco

Project Demo

Creating a new Group or joining an existing Group



Seleziona Gruppo

Ci sono 20 gruppi nella tua cabina primaria.
Clicca su di un gruppo per vedere le informazioni.



Roma Nord

Creato 2 mesi fa
1 membro

GRUPPO



Nuovo Salario

Creato 2 mesi fa
6 membri

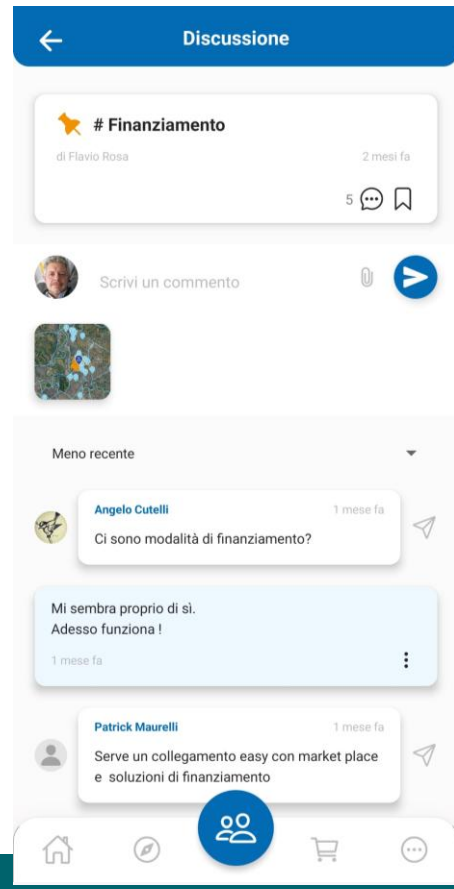
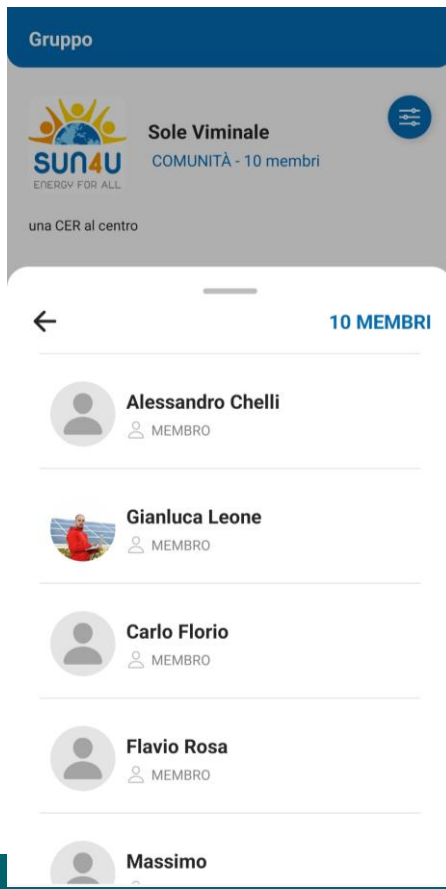
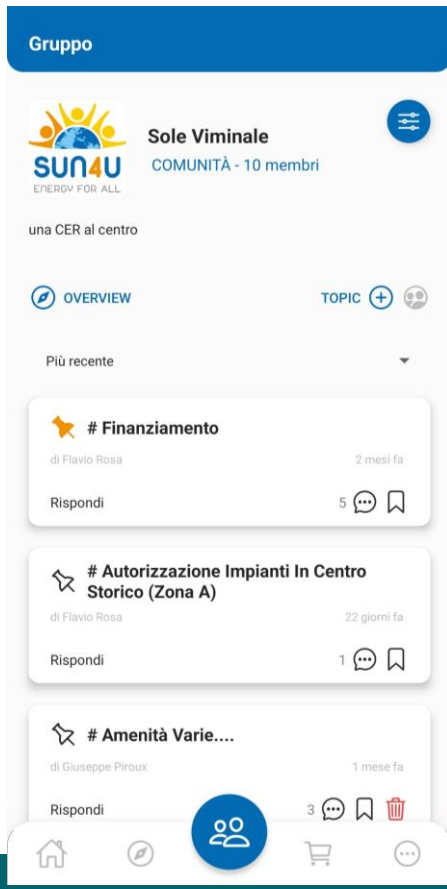
GRUPPO



Roma Sud

Creato 2 mesi fa

Social Tools



Project Demo

... Energy Data collection / REC simulation

Cross-platform
invitation to the Group



18:46 72%

Consumi

Inserisci i dati dei tuoi consumi con una delle modalità per guadagnare dei punti!

Consumi presi dalla bolletta

	F1	F2	F3
Gennaio	195	46	69
Febbraio	58	50	56
Marzo	73	60	52
Aprile	65	60	56
Maggio	66	60	57
Giugno	64	58	63
Luglio	48	40	46
Agosto	41	33	44
Settembre	55	46	54

Consumi

Inserisci i dati dei tuoi consumi con una delle modalità per guadagnare delle stelle!

Consumo annuale

Consumo F1

Consumo F2

Consumo F3

SALVA

9:41

Foscari

ANIMATORE Non definito

CONTROLLA MAPPA

La tua comunità energetica

Descrizione alla CER ottimale ed alla CER Ideale. Lo scopo è quello di introdurre brevemente i dati che mostreremo di seguito.

	OTTIMA	IDEALE
Numero di membri	12	19
Tipologia di membri	Residenziale	Con Privati
Numero di kW prodotti	1000 kWh	100000 kWh
Numero di kWh consumati	900 kWh	90000 kWh
Massimizzazione incentivo	78%	94%
Risparmio di CO2	89 t	123t

Profilo

Giuseppe Piroux
Via Cirillo Monzani, 7, Roma, RM, Italia
MODIFICA PROFILO

Residenziale Utenza Sole Viminale Gruppo 0 Punti

- I tuoi dati energetici
- Consumi
- Gruppo
- Assistenza clienti

Condividi

Invite friends to join the Group

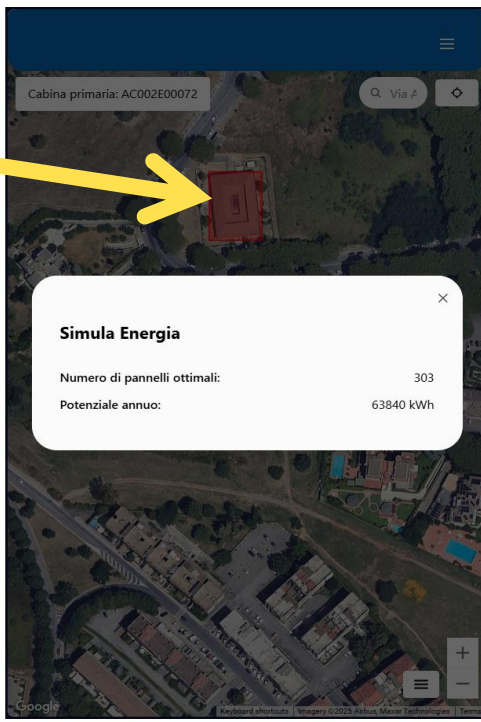
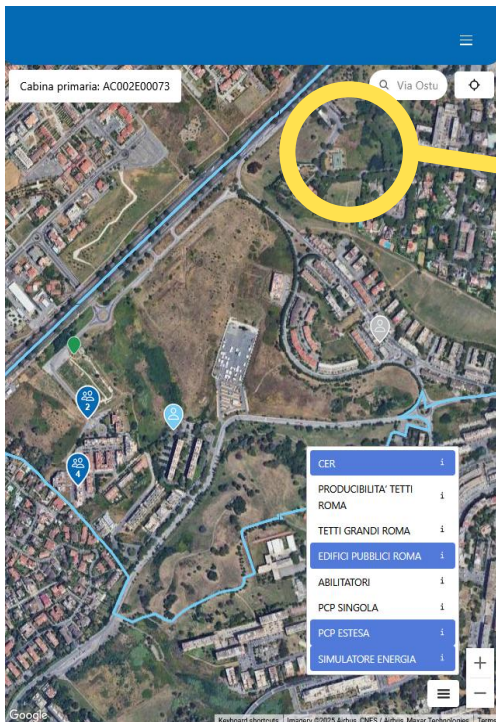
Gmail Outlook PayPal E-mail Altro

Project Demo

SUN4U integrates GOOGLE SOLAR API



Calculate any Roof PV Potential with a click



Google
Solar
API



S4U
integration

+

Optimal REC
(batch calculation
for multiple roofs
in the group)

Project Demo

SUN4U integrates GOOGLE SOLAR API



Calculate any Roof PV Potential with a click



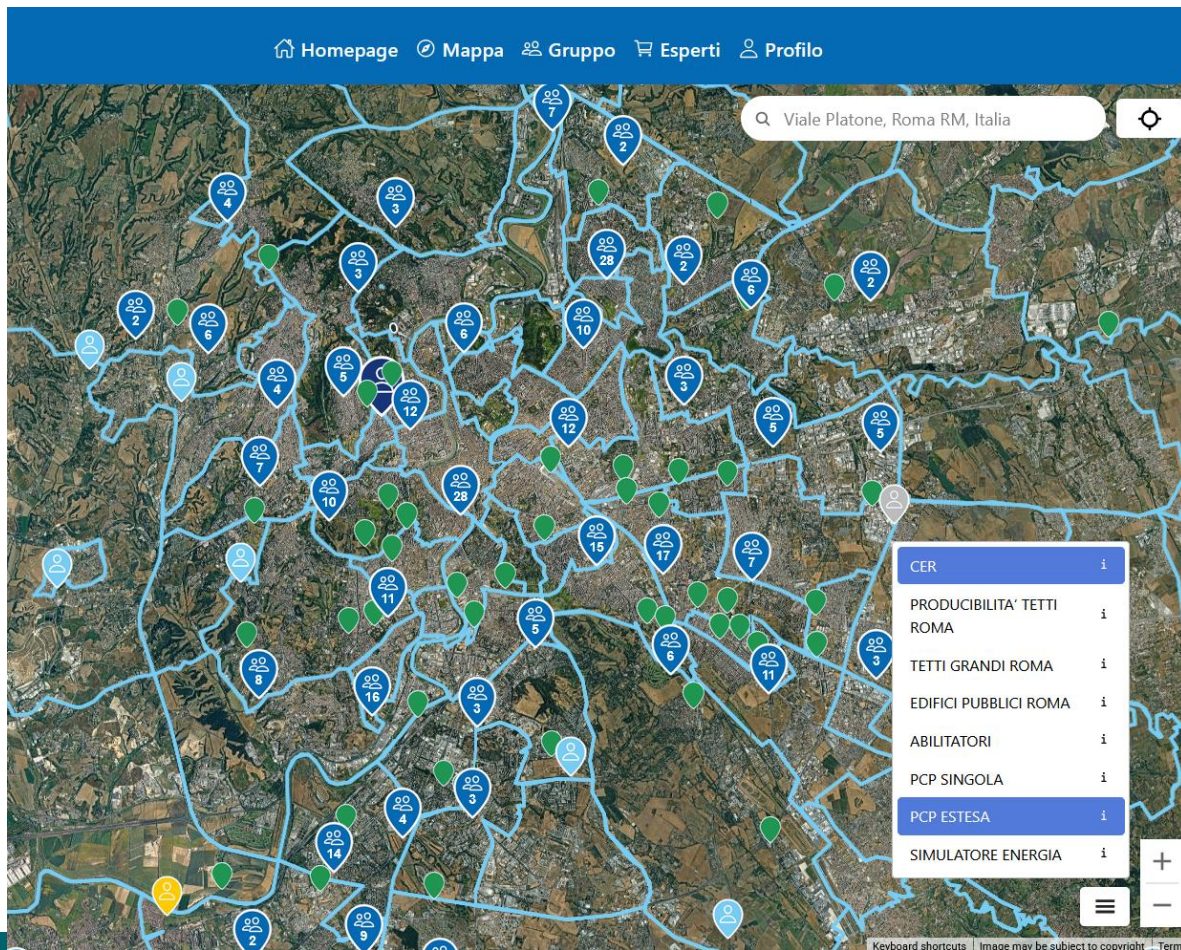
One-touch
Calculator
using quotes,
Irradiation,
shadows,
building
exposures,
for 14 million
buildings in
ITALY



**Replicable in
any country
(exploitation plan)**

Project Demo

SUN4U APP and WebAPP



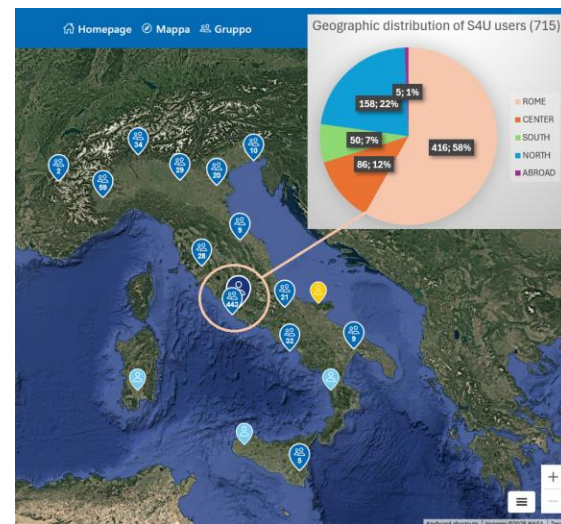
Today:

755 Users on board

→ 436 in Rome

1846 Informal RECs mapped

→ 95 in Rome



Upscaling at national level
(exploitation plan)

Project Demo

The Bridge Finance Scheme as Business Model for the REC first collective PV plant

Caso 1: Associazione Casal Brunori APS

CERS costituita il 18.02.2023

Consumers = 40

Prosumer = Parco Ort-9 Sergio Albani

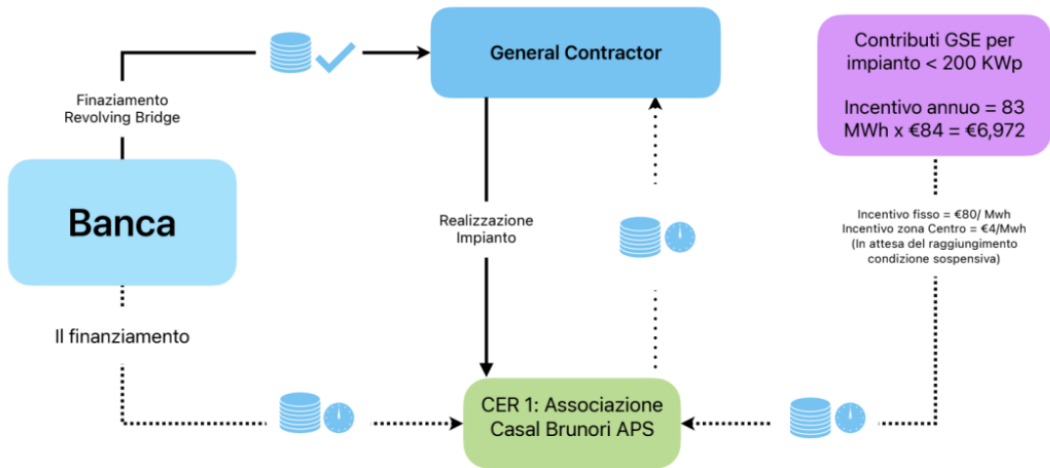
Prestatore sito = IX Municipio Roma, Via Armando Brasini 179

Potenza impianto = 83kWp = 83 MWh

Moduli = 183 da 444 Wp

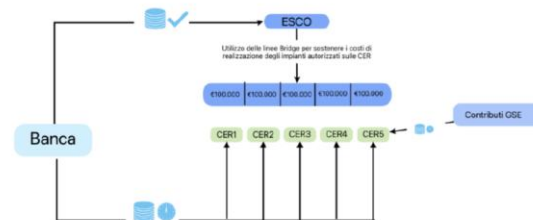
Produzione energetica = 100.000 kWp / anno

Costo realizzazione = circa €60.000



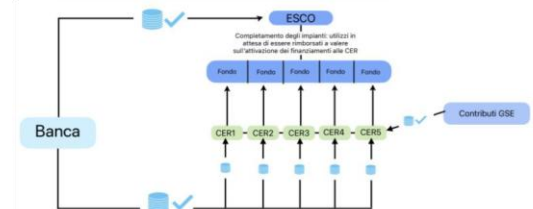
Erogazione linea Bridge su ESCO

T1



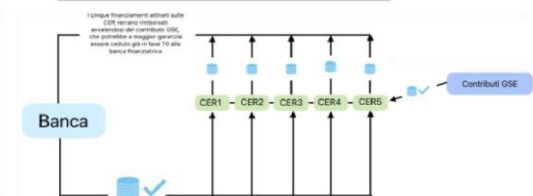
Completamento impianti e attivazione linee CER

T2



Inizio rimborso finanziamenti

T3



Project Demo

SUN4U Media Kit



Video SUN4U



Guida alle CER



Scarica



Infografica



Scarica

Presentazione



Scarica

Brochure



Scarica prima edizione

Scarica seconda edizione

ANIMATED GUIDE TO THE RECs

- + 12 Posters For the Pilots
- + Over 20 Video Clips and interviews
- + SUN4U Web Sites for Each Pilots «RECs Stories»

Project Demo

SUN4U hosts Web Sites for all Pilots
in the section «RECs Stories»



Home Chi siamo Scopri l'App Marketplace Info **Storie di CERS** Contatti

Italiano

Mapa dei Pilots SUN4U



CER Villini Pigneto

Pigneto Municipio V Roma

Dati della CER

- Forma giuridica: ETS
- Numero membri CER: 21
- Numero impianti: 1
- Energia fabbisogno (kWh/anno): 52.000
- Energia prodotta (kWh/anno): 25.005
- Energia condivisa (kWh/anno): 20.308
- % condivisione: 62%

Impianto progettato

- Potenza impianto (kWp): 18,9
- Numero moduli: 42
- Potenza modulo (W): 450
- Energia prodotta (kWh/anno): 25.005



CER Le Vele

Talete Municipio I Roma

Dati della CER

- Forma giuridica:
- Numero membri CER: 7
- Numero impianti: 2
- Energia fabbisogno (kWh/anno): 453.349
- Energia prodotta (kWh/anno): 134.906
- Energia condivisa (kWh/anno): 31.078
- % condivisione: 64%

Impianto esistente

- Potenza impianto (kWp): 82,17
- Numero moduli: 198
- Potenza modulo (W): 415
- Energia prodotta (kWh/anno): 108.711



Impianto progettato

- Potenza impianto (kWp): 19,80
- Numero moduli: 44
- Potenza modulo (W): 450
- Energia prodotta (kWh/anno): 26.195



Casal Brunori APS

Comunità Energetica Rinnovabile e Solidale

Via Armando Brasini, 179 - 00128 Roma

Video

Sito Web

Dati della CER

- Forma giuridica: APS
- Numero membri CER: 25
- Numero impianti: 1
- Energia fabbisogno (kWh/anno): 241.220
- Energia prodotta (kWh/anno): 104.784
- Energia condivisa (kWh/anno): 92.740
- % condivisione: 88%

Impianto progettato

- Potenza impianto (kWp): 78,8
- Numero moduli: 190
- Potenza modulo (W): 415
- Energia prodotta (kWh/anno): 104.784



Scarica la presentazione



CorvialèCers

Corviale Municipio XI Roma

Video

Dati della CER

- Forma giuridica: Soc. Cooperativa
- Numero membri CER: 61
- Numero impianti: 1
- Energia fabbisogno (kWh/anno): 224.331
- Energia prodotta (kWh/anno): 124.624
- Energia condivisa (kWh/anno): 93.594
- % condivisione: 75%

Impianto progettato

- Potenza impianto (kWp): 93,72
- Numero moduli: 213
- Potenza modulo (W): 440
- Energia prodotta (kWh/anno): 124.624

Gallery



Video



Guarda su YouTube



Guarda su YouTube

EX POST

EX ANTE

11 RECs Pilots in Rome Metropolitan City



Funded by Action Fund 2.0

EX ANTE

EX POST



CER 02 QUARTICCILO



CER 06 VILLINI DEL PIGNETO



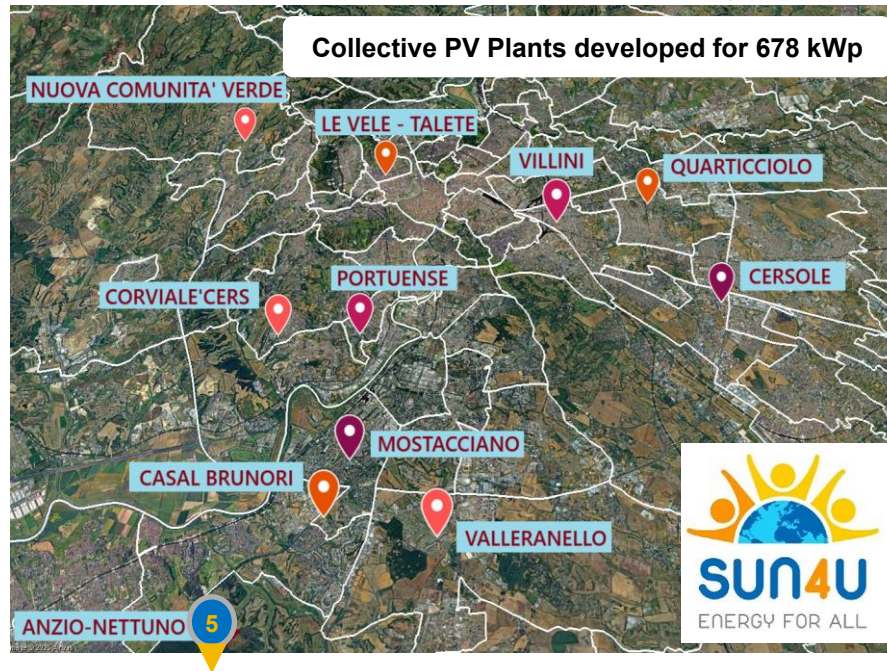
CER 08 CERSOLE A CINEST



CER 05 ANZIO - NETTUNO



CER 07 MOSTACCIANO

CER 11
VALLERANELLO

CODICE	NOME	MUNICIPIO	MEMBRI	POTENZA	ENERGIA
C01	CASAL BRUNORI	IX	25	79	88%
C02	QUARTICCILO	V	11	20	85%
C03	MONTE DEL MARMO	XIV	11	99	10%
C04	CORVALE	XI	61	94	75%
C05	ANZIO-NETTUNO	Comuni CdM	27	65	53%
C06	VILLINI (COOP TERMINI)	V	21	19	82%
C07	MOSTACCIANO	IX	36	66	74%
C08	CERSOLE	VII	29	77	35%
C09	PORTUENSE	XI	21	17	84%
C10	TALETE	I	7	20	64%
C11	VALLERANELLO	IX	30	20	32%



CER 03 NUOVA COMUNITA' VERDE



CER 10 LE VELE - TALETE



CER 04 CORVALE CERS



CER 09 PORTUENSE



CER 01 CASAL BRUNORI



Project Environmental Impact



Results from the **Pilots**: **11 RECs supported**

S4U PILOTS RESULTS	SUBTOTALS	CO2 avoided [Ton/y] 0,236kg CO2/kWh
	Total Power in SUN4U PILOTS	
TARGET POWER - kWp	725,59	84,8%
DESIGNED POWER - kWp	577,27	
INSTALLED POWER - kWp	144,07	
ENERGY PRODUCTION - kWh / y	759729	179,30
ENERGY SELF-CONSUM - kWh / y	207129	48,88
ENERGY IN GRID - kWh / y	552600	130,41
ENERGY SHARED in REC - kWh / y	435022	102,67
% SHARED in REC - kWh / y	57,3%	

Peak POWER NEED

825,38 kWp

**20 years CO2
avoided
3.586 tons**

MEMBERS	QTA IN 11 PILOTS
Total members	279
Prosumers	38
Consumers	241
- households	248
- activities	31

Energy NEED per year

1.112.232 kWh

Project Environmental Impact

Results from the App :

117 REC Groups onboard

755 users onboard

55 suppliers and funders in the Market Place

1846 RECs mapped in App

Work in progress



S4U PILOTS RESULTS	SUBTOTALS	CO2 avoided [Ton/y]
	Total Power in SUN4U PILOTS	0,236kg CO2/kWh
TARGET POWER - kWp		
DESIGNED POWER - kWp		
INSTALLED POWER - kWp		
ENERGY PRODUCTION - kWh / y		
ENERGY SELF-CONSUM - kWh / y		
ENERGY SHARED in REC - kWh / y		
% SHARED in REC - kWh / y		

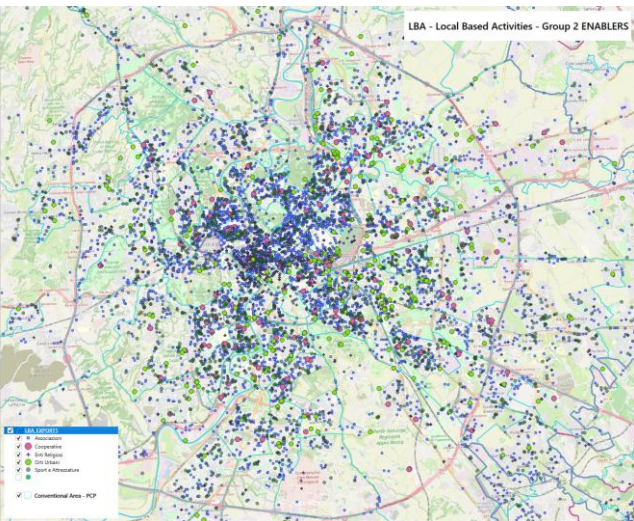


Users									
User energy data									
Groups total									
Name	User type	PID	PEP	Consumption year f 1	Consumption year f 2	Consumption year...	Consumption year	Pv installed	Map
GEORGIA	Residential user	17001580265366	AC001E04573	2,500	3,400	4,500	4,500	✓	3
Xavier	Residential user	1700270018782	AC002F04310	1,326	1,854	3,773	3,773	✓	5
Engr V	Residential user	030030000300000	N/A	3,000	3,000	3,000	3,000		0
Luca S	Residential user		AC001E01561	3,000	3,000	3,000	3,000	✓	9
Mauro M	Residential user	17001E30421029	AC001E04961	606	1,261	2,962	2,962	✓	5,4
Genesio	Residential user	03000	N/A	3,000	2,500	2,500	2,500		0
Vincenzo	Residential user	17001D06727149	AC001E04967	1,252	1,114	2,343	2,343		0
Yuseika	Residential user	030020000	N/A	2,000	2,000	2,000	2,000		0
Yareli G	Residential user	0300200003	N/A	3,000	2,000	2,000	2,000		0
Andreo	Residential user	17001580364744	AC001F04364	1,626	1,767	1,903	1,903	✓	6
DFM En	Non Residential Supermarket	800145653154	AC002E04072	5,630	2,300	1,860	1,860	✓	50
Frances	Residential user		AC001F04372	854	1,718	1,536	1,536	✓	4
Carlo G	Residential user		AC002E04062	0	0	1,500	1,500		0
Daniela	Residential user		AC001E04275	500	900	1,460	1,460		0
Alfredo	Residential user	17002E31060214	AC002E04061	1,125	704	1,140	1,140		0

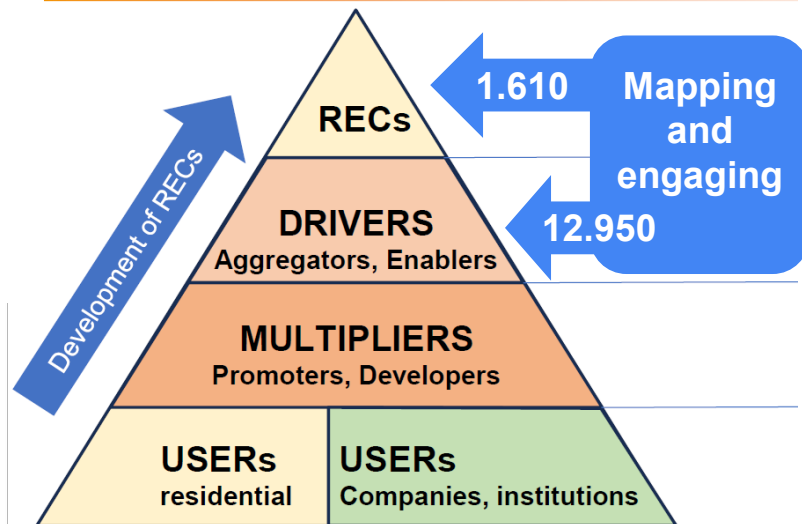
Stakeholder Engagement & City Role

5 typologies of **Drivers** subjects identified from the REC & Local Based Activities (LBA) analysis:

- Ideal local **actors** as **aggregators** and **enablers** of RECs
- Mapped in S4U (→ **all in Rome** ; starting at **national level**)
- Contacted and invited to use S4U (→ **upscaling national level**)



The Pyramid of RECs evolution



DRIVERS	In Rome 12.950	In Italy (370.000 estimated)
Associations	8.042	200.000
Community Gardens	353	5.600
Sport Centres	2.699	112.000
Religious Entities	2.004	40.000
Social Cooperatives	173	18.000

Stakeholder Engagement & City Role



Marketplace

[VISITA IL MARKETPLACE WEB](#)

Siamo entusiasti di presentarvi il primo portale in Italia dedicato a mettere in contatto domanda e offerta nel mondo delle CER – comunità energetiche rinnovabili. La nostra piattaforma è un punto di incontro unico in Italia, dove cittadini, aziende e professionisti possono connettersi e collaborare alla creazione di CER e costruire insieme un nuovo futuro energetico sostenibile.

Seleziona dalla lista di esperti sotto quello che fa per te ed invitalo alla discussione all'interno del tuo gruppo o contattalo tramite le informazioni presente nella scheda.

Chiavi In Mano (37)

Installatori (9)

Fornitori Storage (3)

Fornitori Inverter (3)

Fornitori Moduli (2)

Mini Eolico (1)

Efficienza Energetica (8)

Contratti Energia (4)

Gestionali Consumi (1)

Software Gestionali Cer (5)

MAPS S.P.A.
marcello.sajeva@mapsgroup.it

Sistematica Spa
info@es-101.it

Enercade Srl
marco@enercade.com

Western Engineering Srl
info@westernengineering.it

CER LUCE S.C.R.L. SB
f.santocella@lucellalia.it

Consulenza Legale (9)

Verificatori (3)

Progettisti (24)

Promotori Sviluppatori Cer (13)

Formazione (2)

Software Gestionali Cer (5)

Monitoraggio Iot (8)

Servizi Bancari (6)

Crowdfunding (4)

Benefit (1)

PARTNERS : 42 LOS

MARKET PLACE to interact with suppliers, experts and funders.

● **Suppliers → 55 on board**

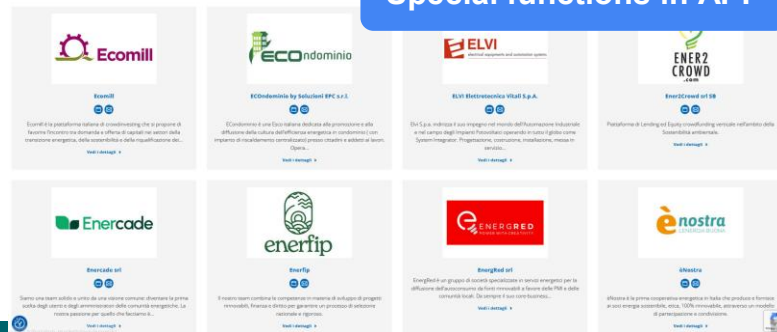
including

Professionals, Experts ...

and **REC Developers (NEW JOB !)**

● **Funders → 6 on board**

Special functions in APP

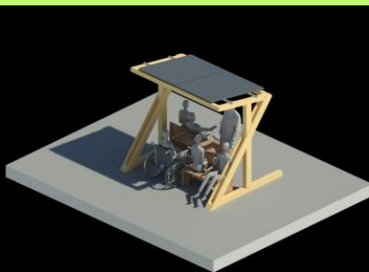


City Role



- Promoting Third Mission Sapienza / SUN4U / Municipality common project → **Solar Bench Pilot**
- Analyzing **116 Municipal Roofs** proposed by the **District IX** → establishing a **co-working group**

**REC
Mostac
ciano**



- **Next step** : propose to the Municipality, the Province, the Region to adopt SUN4U as the toolbox for the **One-Stop-Shop for REC**
- (upscaling) RENAEL is evaluating S4U Toolbox and our service model for a national O.S.S.

City Role



- Co-working on Energy Poverty policies → from **SECAP** to **RECs Regulation**
- Including the **Rooftop Solar Potential (RSP)** for public building → defining transfer to **GeoRoma Portal**
- Including [direct links](#) to Rome **RECs Regulation from the APP** → querying a public building RSP



Project Exploitation and Upscaling

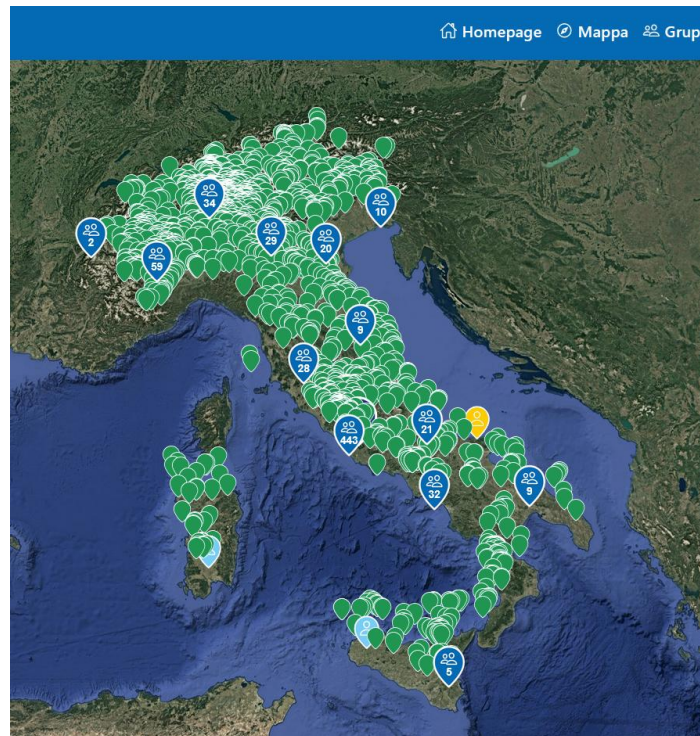
Upscaling from Rome to National Level

Maintenance plan costs → (Y3+Y4+Y5)
(see exploitation plan)

Replication and adaptation of the platform and services for other countries

R&D projects participation

- networking for new Calls and Consortia
- HORIZON D-3-20 (Febb. 2026): *tools and service to empower RECs*
- Google Solar-API exploitation



Project Exploitation and Upscaling



Licensing & Subscription Plans for Suppliers in Market Place

Standard	Premium	Gold
Prova il Marketplace di SUN4U	Maggiore interazione	Espandi il tuo business
Gratis	€ 39,90 /mese	€ 59,90 /mese
Disponibile - SCRIVITI ORA	Iscrizione disponibile a breve	Iscrizione disponibile a breve
✓ Possibilità di iscriversi ad 1 gruppo ✓ Un solo utente supplier per il team	✓ Possibilità di iscriversi in più gruppi ✓ Max 2 utenti Supplier	✓ Possibilità di iscriversi in più gruppi ✓ Accesso al Database CER ✓ Account Supplier illimitati

Design of gamefication for reward and reputation:

All the gamification dynamics for further development of the project are planned, a series of graphic badge to help users to understand the various role of the SUN4U user, and other to help groups to find supplier & service.

GRAPHIC BADGE (ICON) FOR USERS AND GROUPS

BADGE GRAFICI PER UTENTI E GRUPPI STANDARD (G1)

01 - Utente verificato	02 - Gruppo CER costituito	03 - Animatore CER	05 - Ricerca servizio	06 - Gruppo con impianto FV	07 - GSE Operating REC	08 - Funded via SUN4U	09 - Fair & Just RECS

BADGE GRAFICI PER UTENTI MARKETPLACE "SUPPLIER" (G2)

01 - Azienda verificata	02 - Super Supplier	03 - Funder Expert	04 - Tokenized Supplier	11 - Balanced REC Seeking Consumers REC Seeking Prosumers REC	10 - Tokenized REC

Make grown Your Group to become a REC !

- A Collaborative Game
- Collecting Badges
- Reputation Dynamics for Suppliers

Project Exploitation and Upscaling



Tokenization →

connectors to **LTE**



& **RECON** simulator

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BADGE GRAFICI PER UTENTI MARKETPLACE "SUPPLIER" (G2)



01 - Azienda verificata



02 - Super Supplier



03 - Funder Expert



04 - Tokenized Supplier



11 - Balanced REC
Seeking Consumers REC
Seeking Prosumers REC



10 - Tokenized REC

+ Gamefication → (Training)

Make grown Your Group to become a REC !

- A Collaborative Game
- Collecting Badges
- Reputation Dynamics for Suppliers

Links and Team

<https://test--sun4u.netlify.app/map>

<https://sun4u.it/>



www.sun4u.it - info@sun4u.it



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UNIVERSITÀ DI ROMA

CITERA CENTRO DI RICERCA
INTERDIPARTIMENTALE TERRITORIO
EDILIZIA RESTAURO AMBIENTE

scenario **B**
aps





Thank you!

For any information please contact

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