



D2.6 – PILOT INFORMATION DATA SHARING

Author(s): RINA, R2M, E2C

Contributor leaders Sara Botto (RINA) & Thomas Messervey (R2M)

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Deliverable Contributors				
	Name	Organisation	Role / Title	E-mail
Author(s)	Sara Botto	RINA	Researcher	sara.botto@rina.org
	Thomas Messervey	R2M	Coordinator	thomas.messervey@r2msolution.com

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1. Executive Summary

This report/deliverable, D2.6 (Pilot Data Sharing) of the SUPER-HEERO project (contract no. 894404) formalizes the concept of making data available related to project pilot activities as part of the Horizon 2020 Open Research Data Pilot (ORDP) activities. Three types of data are present, those related the energy baseline (energy auditing process), those related to the intervention measure (both PV in this case), and those related to the crowdlending campaign (who invested, from where, how much, and their feedback).

This document provides the methodology and serves as a pointer to the data repository which in this case is the Super-Heero crowdlending platform at www.super-heero.com. What the platform does (with respect to data) is to capture the KPIs and story of each project put online for crowdlending. The more data that is made available, the more confidence all sides of the platform will have and this will accelerate ecosystem growth. On the platform, data types extend related to who is doing the project, the environmental benefits, and datasets that can be created looking at the sum of projects across time (how many projects per year, size of projects, how fast closing, ...).

This report also provides data from the two first project pilots / crowdlending campaigns. Both are PV installations involving the supermarket chain Natusasi in Italy. The first pilot was a 25 kWp installation raising 40k euro from the crowd and the second an 83 kWp system raising 60k euro from the crowd. Baseline, EE measure and campaign data are provided.

2. Introduction & Methodology

2.1. Introduction & Purpose of the document

This document provides the approach to data availability and in specific, data related to project pilot activities. It is included within the framework of the Horizon Europe Open Research Data Pilot which enables open access and reuse of research data generated by Horizon 2020 projects when possible¹. In the case of Super Heero, this is possible for the two Italian pilots involving Naturasi which were the two pilots that made it through the entire Super-Heero process within the project timeline (Discovery, Audit, Design, Implementation, Monitoring). Separately, the project has a data management plan. For the data repository, the project directly publishes data on the crowdlending portal at www.super-heero.com.

2.2. Types of Data

In Super Heero, data can be framed / organized into the following categories:

- Energy auditing data
- Intervention design & performance data
- Monitoring data of the intervention measure
- Project proponent data (who is carrying out campaigns)
- Crowdlending Campaign data (who invested in the project, from where, how much, demographics)
- Ecosystem data (data compiled across projects aggregating totals, averages, environmental KPIs, ecosystem statistics, campaign statistics, investor statistics, ...)

Three primary uses of data are present:

- To assess, design or implement across time a specific project / EE intervention to carry out the contractual phase and/or report on that single project
- To make analytics related to supermarkets and interventions across a portfolio of projects, supermarket typologies and intervention measures to be able to better design future projects, gain understanding on technology packages, gain understanding on various supermarkets and be able to work more efficiently from a fleet management perspective
- To make analytics related to the ecosystem, investors, supermarkets, technology providers, project developers in order to understand what works best in growing the ecosystem and carrying out campaigns.

¹ <https://www.openaire.eu/what-is-the-open-research-data-pilot>

2.3. Approach to data accessibility

Super Heero makes data accessible on its crowdlending platform at www.super-heero.com. Each project has a dedicated page where pilot descriptions, KPIs and results are available. This is required to show investors what they are investing in and also to build confidence in the ecosystem attracting new investors and participants. It helps building the story of each project and each time data is compiled, lodged or communicated, it is an opportunity to reach out to the investors and stakeholders involved in that project.

2.4. Super Heero at project conclusion

At project conclusion, Super Heero has implemented two pilot activities. The first is in the monitoring phase and the second has completed fundraising and is progressing through the installation phase. Project pages are online and the technical documentation that support those projects are available. The journey to scale the project and build datasets that help propel the project forward is just beginning. In the future, data will become a tool for ecosystem growth to better convince parties on all sides of the multi-sided platform and to design better EE interventions.

3. Super-Heero platform as a data repository

3.1. Landing Page

The landing page displays aggregated KPIs. Number of projects, euro collected, energy savings and carbon savings. The accompanying image is after the first project pilot.



3.2. Project pages

Each project has a page for the documentation and historical record of each crowdlending campaign. KPIs associated with the specific project are clearly presented. These KPIs are for both the campaign (interest rate, duration, rating and investment parameters) and also for the environmental benefits (energy production, carbon benefit and equivalent trees planted).

Next there are a series of tabs that describe project details. Across these tabs, data are available related to the project, the proponent, financial data, environmental benefits and related campaign documents. It is in the document section that additional data can be uploaded. This data can include the energy audit results, documentation related to the technical interventions, exit survey results, monitoring data in the implementation phase or other relevant data.

A screenshot of the first pilot project page with the associated KPIs and tabs is shown in the accompanying image.



4. Data of the first two Super-Heero Pilots

Data is provided. Analysis of data is provided in the assessment deliverables.

4.1. NaturaSì: Via Parini 2, Ponte San Nicolò (PD), Italy

4.1.1. Energy Baseline NaturaSì Padova 2 – Ponte San Nicolò Via Parini

Energy Consumption Data	
Energy sources	Electricity
Electricity consumption (kWh/year)	71,488
Electricity share of energy consumption (%)	100
Natural gas consumption (kWh/year)	0
Natural gas share of energy consumption (%)	0
“Other energy source” consumption (kWh/year)	0
Other energy sources share of energy consumption (%)	0
Total energy consumption (kWh/year)	71,488 (in terms of final energy)
Economic data on Energy Consumption	
Annual electricity expenditure (€)	12,715
Annual natural gas expenditure (€)	0
Annual “Other energy sources” expenditure (€)	0
Total energy expenditure (€)	12,715
GHG Emissions	
Emission factor of the national electricity grid (kg CO ₂ /kWh)	0.245
Emission factor of Natural gas (kg CO ₂ /kWh)	n.a.
Emission factor of “Other energy source” (kg CO ₂ /kWh)	n.a.
Total GHG emissions (kg CO ₂ /year)	17,514
Destination of consumed energy	
Refrigeration equipment (kWh)	33,742 (estimated)
Rest of equipment (kWh)	-
Lighting (kWh)	18,229 (estimated)
Heating and Cooling (kWh)	15,906 (estimated)
Domestic Hot Water DHW (kWh)	-
Other (kWh)	3,610 (estimated)



Indirizzo	POD PNR	Anno	Mese	Consumi kWh F1	Consumi kWh F2	Consumi kWh F3	Consumi kWh Totali	Costo Medio kWh	Tot. Fattura Netto Iva
VIA GIUSEPPE PARINI, 2 B - 35020 PONTE SAN NICOLO'	IT001E34180572	2022	Totali	33.100	19.925	22.850	75.875	0,401	30.420,55
			GENNAIO	2.975	1.700	2.525	7.200	0,312	2.247,22
			FEBBRAIO	2.625	1.575	1.850	6.050	0,295	1.783,47
			MARZO	2.600	1.600	1.850	6.050	0,400	2.418,91
			APRILE	2.125	1.500	1.650	5.275	0,325	1.716,01
			MAGGIO	2.700	1.600	1.925	6.225	0,307	1.913,27
			GIUGNO	3.175	1.775	2.025	6.975	0,358	2.499,36
			LUGLIO	3.250	2.025	2.150	7.425	0,557	4.132,87
			AGOSTO	3.100	1.700	1.950	6.750	0,660	4.456,94
			SETTEMBRE	2.825	1.625	1.725	6.175	0,539	3.326,68
			OTTOBRE	2.425	1.575	1.725	5.725	0,290	1.661,52
			NOVEMBRE	2.550	1.475	1.600	5.625	0,311	1.751,41
DICEMBRE	2.750	1.775	1.875	6.400	0,393	2.512,89			

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4.1.2. Future Energy Simulations

Month	Ta (°C)	EPOA (Mwh)	Eshading (MWh)	EEff (MWh)	EGrid (MWh)
January	2.64	1.10	0.87	0.69	0.64
February	4.58	1.44	1.23	0.99	0.93
March	9.29	2.58	2.28	1.93	1.82
April	13.94	3.25	2.90	2.62	2.47
May	18.92	4.19	3.73	3.44	3.25
June	23.13	4.48	3.94	3.64	3.44
July	25.38	4.70	4.09	3.77	3.56
August	24.80	4.05	3.49	3.20	3.02
September	19.23	2.82	2.40	2.10	1.97
October	14.45	1.84	1.55	1.28	1.20
November	8.97	1.06	0.85	0.68	0.63
December	3.95	0.84	0.66	0.53	0.48
Annual production	169.29	32.34	27.99	24.88	23.42

4.1.3. Financial Crowdfunding Data: Via Parini 2

Investitori Via Parini Naturasi Aprile 2023				
Numero Investitore	Importo Investito	Tasso d'Interesse	Provenienza	
1	150.00 €	5.00	Campania / Casapulla	
2	150.00 €	6.00	Campania / Santa Maria la Fossa	
3	3,000.00 €	5.00	Emilia-Romagna / Castelfranco Emilia	NUOVO INVESTITORE
4	1,000.00 €	5.00	Emilia-Romagna / Ostellato	
5	100.00 €	6.00	Friuli-Venezia Giulia / Moimacco	
6	100.00 €	6.00	Lazio / Frosinone	
7	500.00 €	5.00	Lazio / Sacrofano	
8	2,500.00 €	6.00	Liguria / Pietra Ligure	
9	450.00 €	5.00	Lombardia / Castano Primo	
10	500.00 €	5.00	Lombardia / Gussago	
11	100.00 €	5.00	Lombardia / Mantova	
12	200.00 €	5.00	Lombardia / Milano	
13	100.00 €	6.00	Lombardia / Paderno Dugnano	
14	1,042.60 €	6.00	Lombardia / Pavia	
15	100.00 €	6.00	Piemonte / Ovada	
16	1,500.00 €	5.00	Piemonte / Settimo Torinese	
17	1,349.52 €	5.00	Piemonte / Settimo Torinese	
18	1,500.00 €	6.00	Piemonte / Torino	NUOVO INVESTITORE
19	100.00 €	5.00	Puglia / Massafra	
20	200.00 €	5.00	Sicilia / Caltanissetta	
21	5,000.00 €	6.00	Toscana / Cascina	
22	100.00 €	5.00	Toscana / Montopoli in Val d'Arno	
23	499.00 €	6.00	Veneto / Mestrino	NUOVO INVESTITORE
24	4,500.00 €	7.00	Veneto / Noventa Padovana	NUOVO INVESTITORE
25	1,533.57 €	6.00	Veneto / Noventa Padovana	
26	4,000.00 €	6.00	Veneto / Padova	NUOVO INVESTITORE
27	250.00 €	6.00	Veneto / Pieve di Soligo	
28	1,000.00 €	5.00	Veneto / Riese Pio X	
29	400.00 €	5.00	Veneto / San Dona' di Piave	
30	5,000.00 €	5.00	Veneto / Treviso	
31	1,100.00 €	6.00	Veneto / Trichiana	
32	1,231.00 €	5.00	Veneto / Venezia	
33	200.00 €	6.00	Veneto / Verona	
34	100.00 €	5.00	Veneto / Verona	
35	500.00 €	5.00	Veneto / Volpago del Montello	

TOTALE 40,055.69 €

Number of Investors	35
Mean interest rate	5.49
Weighted interest rate	5.68
Regional Investors	13
Regional Investors	20313 euro
New Investors	5
New Investors	13499 euro

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4.2. NaturaSi Pordenone, Via Ungaresca, Italy

4.2.1. Energy Baseline NaturaSi Pordenone

Mese	Consumi kWh F1	Consumi kWh F2	Consumi kWh F3	Consumi kWh Totali	Costo Medio a kWh	Tot. Fattura Netto Iva	Spesa Materia Energia	Spesa Trasporto/Gestione Contatore	Spesa Oneri	Imposte	Altre Voci di Spesa
Totale	94.518	51.839	49.064	195.421	0,411	80.326,19	74.325,38	3.558,05	0,00	2.442,76	0,00
GENNAIO	9.103	4.904	5.310	19.317	0,320	6.180,07	5.581,15	357,45	0,00	241,47	0,00
FEBBRAIO	8.354	4.121	3.106	15.581	0,301	4.686,13	4.183,76	307,61	0,00	194,76	0,00
MARZO	7.995	3.988	3.393	15.376	0,407	6.257,03	5.780,33	284,50	0,00	192,20	0,00
APRILE	5.882	3.852	3.495	13.229	0,327	4.323,30	3.929,23	228,71	0,00	165,36	0,00
MAGGIO	7.741	4.177	4.650	16.568	0,307	5.084,81	4.572,94	304,77	0,00	207,10	0,00
GIUGNO	9.303	4.773	4.512	18.588	0,365	6.784,24	6.220,81	331,09	0,00	232,34	0,00
LUGLIO	9.795	5.926	5.489	21.209	0,567	12.025,54	11.397,64	362,78	0,00	265,12	0,00
AGOSTO	9.467	5.021	4.929	19.417	0,653	12.673,58	12.090,86	340,00	0,00	242,72	0,00
SETTEMBRE	7.359	4.063	3.968	15.390	0,541	8.328,14	7.840,06	295,71	0,00	192,37	0,00
OTTOBRE	6.084	3.872	3.692	13.648	0,293	3.994,80	3.607,87	216,33	0,00	170,60	0,00
NOVEMBRE	6.148	3.195	3.036	12.379	0,321	3.975,33	3.583,77	236,82	0,00	154,74	0,00
DICEMBRE	7.287	3.947	3.484	14.718	0,409	6.013,22	5.536,96	292,28	0,00	183,98	0,00

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4.2.2. Future Energy Simulations NaturaSì Pordenone – Via Ungaresca

Month	Ta (°C)	EPOA (Mwh)	Eshading (MWh)	EEff (MWh)	EGrid (MWh)
January	3.72	4.81	4.16	3.78	3.61
February	5.34	6.24	5.61	5.10	4.87
March	10.13	9.87	8.95	8.16	7.80
April	14.27	11.16	10.17	9.26	8.84
May	18.94	14.24	12.76	11.61	11.10
June	23.11	14.91	13.24	12.09	11.55
July	25.06	15.88	14.00	12.75	12.18
August	24.76	14.14	12.41	11.29	10.79
September	19.70	10.32	8.99	8.21	7.84
October	15.21	7.07	6.24	5.69	5.43
November	9.75	4.44	3.88	3.52	3.36
December	4.81	3.90	3.26	2.96	2.83
Annual production	174.81	116.98	103.67	94.42	90.22

4.2.3. Financial Crowdfunding Data Pordenone

Investitori Naturasi Pordenone Giugno 2023						
Numero Investitore	Importo Investito	Tasso d'Interesse	Provenienza		ETA'	GENERE
1	350.00 €	5.00	Campania / Napoli		48	M
2	100.00 €	6.00	Campania / San Vitaliano		40	M
3	500.00 €	5.00	Emilia-Romagna / Albinea		55	M
4	200.00 €	5.00	Emilia-Romagna / Bertinoro		42	M
5	500.00 €	5.00	Emilia-Romagna / Bologna		37	M
6	100.00 €	6.00	Emilia-Romagna / Bologna		55	M
7	150.00 €	5.00	Emilia-Romagna / Cento		51	M
8	1,000.00 €	6.00	Emilia-Romagna / Forlì		65	M
9	2,000.00 €	5.00	Emilia-Romagna / Gatteo		66	M
10	150.00 €	5.00	Emilia-Romagna / Imola		27	M
11	5,000.00 €	6.50	Emilia-Romagna / Parma	NUOVO INVESTITORE	53	M
12	1,000.00 €	5.50	Emilia-Romagna / Poggio Renatico	NUOVO INVESTITORE	70	M
13	585.00 €	6.00	Emilia-Romagna / Ravenna		36	F
14	100.00 €	6.00	Friuli-Venezia Giulia / Moimacco		34	M
15	200.00 €	6.00	Friuli-Venezia Giulia / Trieste		49	M
16	100.00 €	5.00	Lazio / Roma		31	M
17	5,000.00 €	6.50	Lazio / Roma	CODICE AMICO	40	M
18	300.00 €	6.00	Lazio / Roma		42	M
19	5,000.00 €	6.50	Lazio / Roma	NUOVO INVESTITORE	44	F
20	5,000.00 €	5.00	Liguria / Genova		39	M
21	2,314.54 €	6.00	Liguria / Pieve Ligure		56	M
22	100.00 €	5.00	Lombardia / Bergamo		35	M
23	1,000.00 €	6.00	Lombardia / Bergamo		34	M
24	100.00 €	5.00	Lombardia / Cologno al Serio		39	M
25	156.11 €	6.00	Lombardia / Como		42	M
26	413.54 €	5.00	Lombardia / Concorezzo		41	F
27	1,000.00 €	5.00	Lombardia / Lodi		31	M
28	100.00 €	5.00	Lombardia / Lodi		44	M
29	100.00 €	5.00	Lombardia / Mantova		42	M
30	1,100.00 €	5.00	Lombardia / Milano		61	F
31	800.00 €	6.00	Lombardia / Milano		57	M
32	100.00 €	5.00	Lombardia / Milano		45	M
33	750.00 €	5.00	Lombardia / Milano		35	M
34	5,000.00 €	6.00	Lombardia / Ornago		63	F
35	350.00 €	5.00	Lombardia / Palazzo Pignano		35	M
36	333.00 €	6.00	Lombardia / Pavia		66	F
37	2,000.00 €	6.00	Lombardia / Pavia		51	M
38	200.00 €	5.00	Lombardia / Suello		41	F
39	250.00 €	5.00	Lombardia / Suello		43	M
40	300.00 €	5.00	Lombardia / Ternate		43	M
41	500.00 €	5.00	Piemonte / Borgofranco d'Ivrea		54	M
42	100.00 €	5.00	Piemonte / Costigliole d'Asti		43	M
43	100.00 €	6.00	Piemonte / Ovada		64	M
44	679.89 €	5.00	Piemonte / Settimo Torinese		37	F
45	1,000.00 €	5.00	Piemonte / Settimo Torinese		61	M
46	550.21 €	5.00	Piemonte / Settimo Torinese		37	F
47	500.00 €	6.00	Piemonte / Torino		55	F
48	400.00 €	5.00	Puglia / Alberobello		65	M
49	100.00 €	5.00	Puglia / Cerignola		44	M
50	4,000.00 €	6.00	Puglia / Corato		43	M

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51	100.00 €	5.00	Puglia / Molfetta		42	M
52	500.00 €	5.00	Sardegna / Cagliari		36	M
53	100.00 €	5.00	Sicilia / Catania		27	M
54	100.00 €	5.00	Toscana / Livorno		40	M
55	100.00 €	5.00	Toscana / Ponsacco		35	M
56	500.00 €	5.00	Toscana / Pontedera		33	M
57	152.51 €	5.00	Toscana / Rufina		36	M
58	300.00 €	5.00	Trentino-Alto Adige / Dro		41	M
59	499.00 €	7.50	Veneto / Padova	NUOVO INVESTITORE	34	M
60	200.00 €	5.00	Veneto / Pianiga		49	M
61	150.00 €	6.00	Veneto / Pieve di Soligo		50	M
62	200.00 €	5.00	Veneto / San Dona' di Piave		41	M
63	5,000.00 €	5.00	Veneto / Treviso		47	M
64	750.00 €	5.00	Veneto / Volpago del Montello		55	F

TOTALE 60,383.80 €

Number of Investors	64
Mean Interest Rate	5.40
Weighted Interest Rate	5.7
Average Age	45
Number Male	53
Number Female	11
% Women	21%
Cardholders Naturasì	22
Cardholders Naturasì	34237 euro
Regional Investors	8
Regional Investors	7100 euro
New Investors	4
New Investors	11499 euro

5. Conclusions

This report entitled “Pilot Data Sharing” has described the approach and methodology to data sharing in the Super Heero Project and it has provided data related to the first two project pilots. The document falls within the scope of the Open Data Research Pilot in the Horizon 2020 Framework Programme and serves the purpose of ensuring that data is findable and accessible for other researchers.

Super Heero has an additional purpose for the accessibility and transparency of its datasets apart from accessibility for scientific / dissemination purposes. The information can be used to build confidence and accelerate growth of the Super Heero ecosystem. For this reason, the main data repository for the Super Heero project and future pilots is the crowdlending platform at www.super-heero.com where each project has a dedicated page with KPI information and a document section for data upload.