

FINAL PROJECT REVIEW MEETING

Tuesday, 11th May 2021

09:00-17:15 CET































Paolo Zancanella, (POLIMI)



Heat4Cool objectives





To develop integrate and demonstrate, easy to install energy efficient, cost effective heating and cooling solutions for retrofitting

20÷30% Energy savings compared to preretrofitting

Payback period: ~10 yrs

To demonstrate replicability potentials at residential building and district level

To identify target groups in the market interested in the integrated heating and cooling technologies

To develop a business model

To support EU energy efficiency policies and promote nearly-zero energy buildings



Heat4Cool project phases



Phase 1

Retrofitting Designment

Retrofitting Design tool

Solar thermal assisted
 Adsorption Heat Pump

- Electrical Heat Pump + Heat storages
- Wastewater heat recovery system SCI-BEMs

Phase 3

Integration and Optimization

- o Engineering and design
- Validation in 4 demonstration pilots
- Manual Guidelines and Training
- Data monitoring and comparison against planned results



- o Retrofitting toolkit dataset
- Optimization algorithm for the solution set
- User interface design

Phase 2

Development

 Simulation, modelling and sizing

- Integration & Optimization
- Scale up at different case studies.

Phase 4

Evaluation

END



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WP1 Objectives



- To ensure sound, efficient, and transparent coordination and management of the project, and clear reporting throughout the project.
- To create the necessary governance structure for an effective project direction and management
- To establish the communication flow and methods
- Performing the financial, legal, administrative and technical coordination.
- Project monitoring.
- Managing knowledge and promoting gender equality in the project.
- Assurance of the technical quality of work packages deliverables.
- Establishing the links and interrelations with all project WPs.
- Coordination activities with the EC.



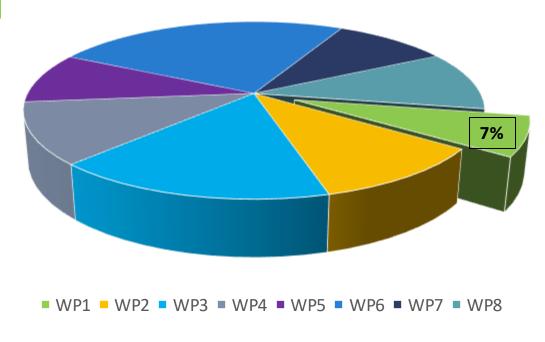


WP1 Planned use of PMs



WP1	53,5	7%
WP2	82	11%
WP3	126	16%
WP4	99	13%
WP5	70	9%
WP6	188	24%
WP7	73	9%
WP8	81	10%

PM dedication for WP1





WP1 Tasks (Polimi, Solintel, All)



- Task 1.1 Financial and administrative management (M1-M54)
 Completed
 - ➤ D1.1 (M3) Governance structure, quality plan, risk analysis and contingency plan report *submitted*
 - > D1.2 (M3) Users' Manual private intranet tool report submitted
 - ➤ D1.3 (M18) First Periodic Report submitted
 - ➤ D1.4 (M36) Second Periodic Report submitted
 - > D1.5 (M54) Final Periodic Report to be submitted
- Task 1.2 Coordination technical & scientific (M1-M54)
 Completed ✓
- Task 1.3 Private intranet web tool and internal communication (M1-M54) Completed ✓





Task 1.1 activities performed M37-54



- Finalised the 2nd GA amendment.
- Supported replacement of Hypertech and entry of WVT in the Consortium.
- Established new CA.
- Implemented a Risk Management Plan (COVID-19) until the end of the extended project.
- Transferred payments to partners (remaining interim payment – costs accepted by EC 2nd Periodic Report).
- Supported partners with internal M41-M48 and final Financial Statement. (Eligibility of costs, justifications)
- Supported & managed budget's transfer btw partners.



Task 1.2 activities performed M37-54



- Integrated 3 additional deliverables in the DoW allowing Fahrenheit to test, develop and document the results of the solar assisted AHP prototype in Toledo.
- Supported consortium partners with the revision of deliverables before submission and .ppt presentations
- Organised progress GA, final review meeting (remotely).
- Replaced partner in managing WP6 calls to ensure continuity/monitoring of WP activities, especially at pilot site level.



Task 1.3 activities performed M37-54



- Supported EHPA for project communication and dissemination activities during on-line events.
- Supported DG RTD, EHPA, SCIS to disseminate project results and key messages through social media
- Supported partners with the exploitation, dissemination and publication of project results (KERs) in the Horizon Project Result platform.
- Supporting the EC with the Innovation radar questionnaire.



Deliverables submitted in M37-M54



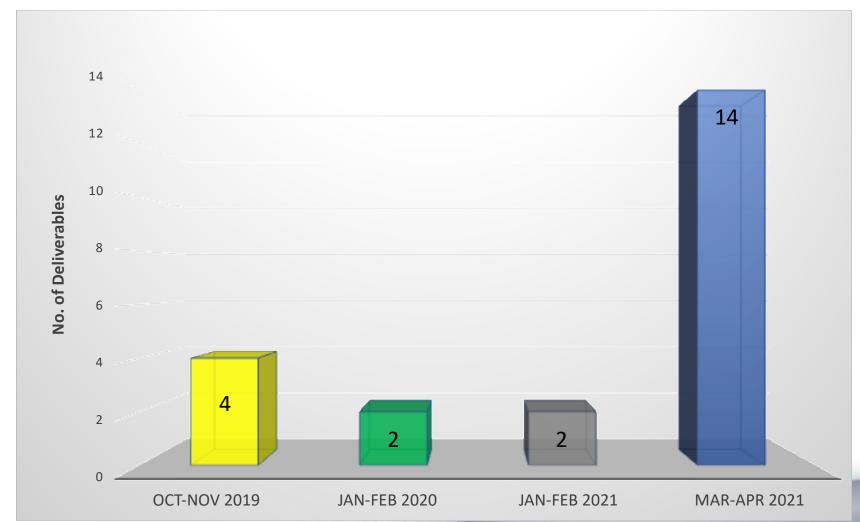
Del No.	Title	Lead Beneficiary	Est. Del. Date (annex I)	Receipt Date
D1.4	2nd periodic report	POLIMI	02 Oct 2019	08 Jan 2020
D3.3	Optimized prototype of Solar assisted Thermal driven Adsorption Heat Pump	FAHR	02 Mar 2019	23 Oct 2019
D3.4	Optimized prototype of the integration of Solar PV, DC Heat Pump and PCM scalable heat storage system	Sunamp Ltd	02 Mar 2019	08 Jan 2020
D3.6	Test report for the integration of Solar PV, DC Heat Pump and PCM scalable heat storage system	TECNALIA	02 Mar 2019	05 Nov 2019
D3.9	Additional test report for the solar assisted AHP in Toledo	FAHR	02 Mar 2021	02 Mar 2021
D4.6	Post-retrofit assessments and guidelines of the integrated Heating&Cooling equipments, RES solutions and wastewater heat recovery systems	POLIMI	02 Apr 2021	20 Apr 2021
D4.7	Modelling, sizing and evaluation of the Solar assisted AHP system in Toledo	FAHR	02 Apr 2021	03 May 2021
D5.6	Third prototype of the SCI-BEMS	WVT	02 Aug 2020	06 Apr 2021
D6.1	Documentation and Drawings from Engineering and Design	BALKANIKA	02 Jul 2018	25 Feb 2021
D6.5	Executed Retrofitting Plan at Demo Sites	POLIMI	02 Sep 2019	15 Apr 2021
D6.6	Report of Data from Monitoring Period	POLIMI	02 Apr 2021	20 Apr 2021
D6.7	User Acceptance and Evaluation Report	BALKANIKA	02 Apr 2021	01 Apr 2021
D6.8	Report of Life Cycle Analysis	IZNAB	02 Nov 2020	03 May 2021
D6.9	Documentation and drawing from Engineering and design. Execution of the retrofitting plan for the Solar assisted AHP system in Toledo	FAHR	02 Feb 2021	02 Feb 2021
D7.1	Industrial viability of technologies and replication potential analysis	SOLINTEL	02 Apr 2021	16 Apr 2021
D7.2	Market analysis	SOLINTEL	02 Apr 2021	09 Apr 2021
D7.3	Preliminary business model	SYMELEC	02 Nov 2019	11 Nov 2019
D7.4	Business plan	SOLINTEL	02 Apr 2021	29 Apr 2021
D8.6	Exploitation and Standardization Plan for the 4th year	SOLINTEL	02 Oct 2019	18 Oct 2019
D8.7	Dissemination activities carried out and Final Plan	EHPA	02 Apr 2021	15 Mar 2021
D8.8	Final Exploitation Plan	SOLINTEL	02 Apr 2021	19 Apr 2021
D8.9	Report on education and training activities	EHPA	02 Apr 2021	15 Mar 2021





Deliverables submitted in M37-M54







Tasks to be completed by 02/06



- Submission of Innovation radar filled in questionnaire to DG.
- Collection and review of FS from partners.
- ➤ Ensuring partners subject to an audit will submit a CFS by 02/06/2021.
- > Submission of FINAL REPORT to EC (Technical Report Part B).
- ➤ Upon approval of all the cost claims from partners, process FINAL payment, (remaining 15% of Max. grant amount to partners).



Beneficiaries subject to an audit



BENEFICIARY	CFS ready by 02/06/2021
POLIMI	YES
FAHRENHEIT	YES
Thermowatt	YES
TECNALIA	YES
SOLINTEL	YES
SYMELEC	YES
IZNAB	YES

"Such a certificate is needed if the beneficiary/linked third party requests a total financial contribution of EUR 325000 (or more) as reimbursement for actual costs and unit costs calculated according to its usual accounting practices (average personnel costs and costs for internally invoiced goods and services)." AMGA pag. 190





Tot. deliverables submitted per partner

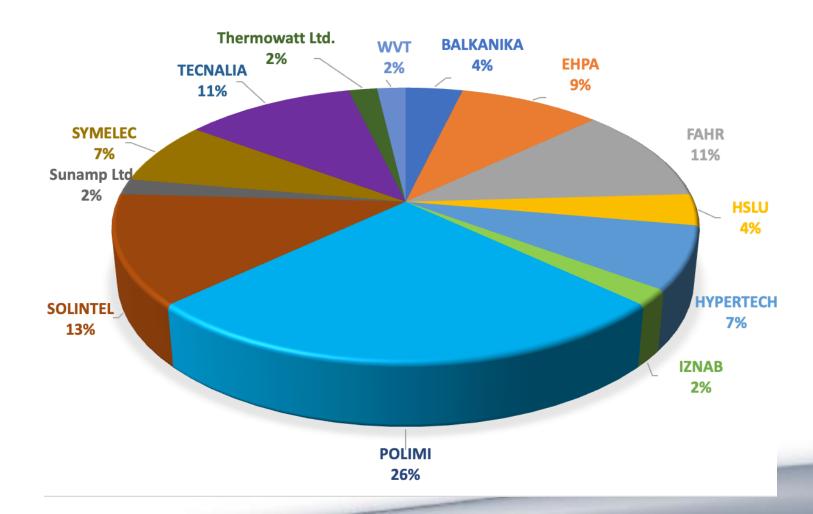


Beneficiary	No. Of deliverables submitted
BALKANIKA	2
∞ ЕНРА	5
∘ FAHR	6
∘ HSLU	2
∘ HYPERTECH	4
∘ IZNAB	1
∘ POLIMI	14
∘ SOLINTEL	7
Sunamp Ltd	1
∘ SYMELEC	4
∘ TECNALIA	6
∘ Thermowatt Ltd.	1
∘ WVT	1
Grand Total	54



Tot. deliverables submitted per partner









PMs planned vs. PMs used per beneficiary



BENEFICIARY	Tot Person/Months	Diff btw PMs Used vs. PMs Planned
POLIMI (planned)	102	50.34
POLIMI (used)	152.34	50.54
FAHR (planned)	46.5	23.94
FAHR (used)	70.44	25.94
Thermowatt (planned)	33.5	14.2
Thermowatt (used)	47.7	14.2
HYPERTECH (planned)	22.94	0
HYPERTECH (used)	22.94	U
TECNALIA (planned)	81.5	14.00
TECNALIA (used)	95.58	14.08
Sunamp (planned)	41.5	2 F
Sunamp (used)	39	-2.5
AES (planned)	23.5	4.24
AES (used)	27.74	4.24





PMs planned vs. PMs used per beneficiary



BENEFICIARY	Tot Person/Months	Diff btw PMs used vs. PMs planned
Balkanika (planned)	36.5	2
Balkanika (used)	34.5	-2
SOLINTEL (planned)	89	19.2
SOLINTEL (used)	108.2	19.2
SYMELEC (planned)	97.5	24.77
SYMELEC (used)	72.73	-24.77
IZNAB (planned)	74.5	-0.5
IZNAB (used)	74	-0.5
EHPA (planned)	20.5	10.7
EHPA (used)	31.2	10.7
HSLU (planned)	28.5	10 E
HSLU (used)	47	18.5
WVT (planned)	74.56	1.04
WVT (used)	76.5	1.94

*forecasted



Heat4COOL project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 723925



Project effort in Person-months per WP



BENEFICIARY	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	Tot Person/Months per beneficiary	Diff btw PMs used vs. PMs planned
POLIMI (planned)	30	7	4	30	1	10	10	10	102	50.34
POLIMI (used)	41.45	14.75	7.01	47.12	1.65	16.16	10.44	13.76	152.34	
FAHR (planned)	0.5	0	30	0	4	10	1	1	46.5	23.94
FAHR (used)	0.55	0	44.74	3.5	3.88	15.38	1	1.39	70.44	
Thermowatt (planned)	0.5	0	15	5	1	10	1	1	33.5	14.2
Thermowatt (used)	0.7	0	17.7	6.6	1	18.7	1.2	1.8	47.7	
HYPERTECH (planned)	0.11	13	2	0.83	7	0	0	0	22.94	0
HYPERTECH (used)	0.11	13	2	0.83	7	0	0	0	22.94	
TECNALIA (planned)	0.5	25	20	15	10	9	1	1	81.5	14.08
TECNALIA (used)	2.01	29.44	25.6	13.22	10.49	11.68	0.91	2.23	95.58	
Sunamp (planned)	0.5	0	20	5	4	10	1	1	41.5	-2.5
Sunamp (used)	0.5	0	18	4.5	3	12	0.5	0.5	39	
AES (planned)	0.5	0	10	0	1	10	1	1	23.5	4.24
AES (used)	0.8	0	9.7	0	1	13.2	1.2	1.84	27.74	
BALKANIKA (planned)	0.5	0	0	10	0	25	0	1	36.5	-2
Balkanika (used)	0.5	0	0	10	0	23	0	1	34.5	





Project effort in Person-months per WP



BENEFICIARY	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	Tot Person/Months per beneficiary	Diff btw PMs used vs. PMs planned
SOLINTEL (planned)	18	5	0	7	0	14	25	20	89	19.2
SOLINTEL (used)	18.21	5	0	7	0	32.34	25.15	20.5	108.2	
SYMELEC (planned)	0.5	11	16	11	2	40	11	6	97.5	-24.77
SYMELEC (used)	0.51	11.01	14.78	10.92	1.88	29.92	3.26	0.45	72.73	
IZNAB (planned)	0.5	6	3	3	0	35	16	11	74.5	-0.5
IZNAB (used)	0.52	6	3	4.51	0	35	12.85	12.12	74	
EHPA (planned)	0.5	0	0	0	0	0	0	20	20.5	10.7
EHPA (used)	1.3	0	0	0	0	0	0	29.9	31.2	
HSLU (planned)	0.5	15	6	6	0	0	0	1	28.5	18.5
HSLU (used)	0.5	26	9	9	0	0	0	2.5	47	
WVT (planned)	0.39	0	0	6.17	40	15	6	7	74.56	1.94
WVT (used)	1	0	0	6	38	16.2	6.8	8.5	76.5	
PMs planned per WP	53.5	82	126	99	70	188	73	81	772.5	
Tot PMs used per WP	68.66	105.2	151.53	123.2	67.9	223.58	63.31	96.49	899.87	
% Difference btw PMs used vs. PMs planned	28.34%	28.29%	20.26%	24.44%	-3%	18.93%	-13.27%	19.12%	16.49%	

*forecasted



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Project effort in Person-months per WP



WP C	WP1	WP2	WP3	WP4	WP5	WP6	WP7	WP8	Tot Person/Months per beneficiary
PMs planned per WP	53.5	82	126	99	70	188	73	81	772.5
Tot PMs used per WP	68.66	105.2	151.53	123.2	67.9	223.58	63.31	96.49	899.87
% Difference btw PMs used vs. PMs planned	28.34%	28.29%	20.26%	24.44%	-3%	18.93%	-13.27%	19.12%	16.49%





- ➤ Effective project management and robust governance structure established and maintained
- Clear communication flow
- ➤ Productive coordination of the financial, legal, administrative and technical aspect of the project
- Consistent project monitoring
- > Technical quality assurance of deliverables
- ➤ Increased number of female in Workforce to 27%
- Established links btw all WPs
- ➤ Effective coordination activities with EC





Issues and lessons learnt



- ➤ Meeting project deadlines (tasks, deliverables, int./ext. requests)
- > Importance of clear and timely interaction
- ➤ Quality assurance
- Efficiency of responsiveness
- > Technical issues resolution
- ➤ Anticipating potential issues and suggest early solutions
- Complex yet inspiring and successful project!





Thank you

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