

WP5 Pilots in Geo Clusters

WP lead: Ove Mørck



The objective of this task is the testing, pilot implementations and **demonstration in real settings**, as well as *in industrial settings* (demonstration of **production**) as *in practice* (demonstration and testing of the developed modular renovation elements both in real settings as in real life learning lab (RLLL) settings).

The testing and demonstration in practice will be organised on six locations:

- The Netherlands (full real setting and RLLL setting for
- Latvia (full real setting)
- Estonia (full real setting)
- Denmark (full real setting)
- Portugal (partial in real setting)
- Czech Republic (real life learning lab (RLLL) setting for in deep testing)

Changes?



WP5 Tasks and deliverables

Tasks/deliverables (D5...)	1	2	3	4	5	6	7	8	9
5.1 Preliminary and preparation works	M 24								
5.2 Preparation of technical documentation		M 24							
5.3 Production of the prototypes of the prefabricated elements			M 27						
5.4 Construction work				M 29	M 29				
5.5 Performance criteria assessment in practice									
5.6 Total evaluation of the renovation process						M 30	M 36 48	M 48	M 48



D5.1 Preparations for the pilots including permits	- Month 24
D5.2 Specifications of design process	- Month 24
D5.3 Prototypes of prefabricated modular renovation elements in: <ul style="list-style-type: none">• The Netherlands and Belgium• Latvia and Estonia• Denmark• Czech Republic• Portugal	- Month 27
D5.4 Realization of 5 pilot sites	- Month 29
D5.5 Realization of of 2 Real life lab environments for in deep testing of basic modules and special features by Zuyd, CVUT	- Month 29
D5.6 Evaluation report of quality of construction works	- Month 30
D5.7 Monitoring reports of the pilot sites and the real life lab env.	- Month 36 and - Month 48
D5.8 Monitoring report of inhabitants involvement and experience	- Month 48
D5.9 Report with analyses of the total renovation processes in the pilots	- Month 48



- When do we have to complete the final material for a contract amendment/update for EASME?
- What documentation is needed?
- What needs to be accomplished for a pilot project to be successful? May a demonstration on a building be limited in some way?
- Time schedule of the pilot projects? Need for monitoring period of 12 months?



Country: Latvia

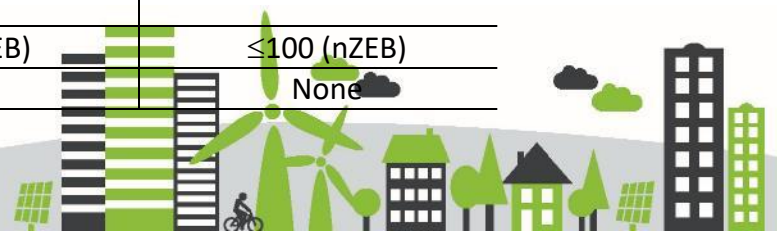
Photo of original pilot and present pilot:

Original Latvian Pilot –

Present Latvian Pilot – Saules iela 4a Cesis



Primary project parameters	Original pilot	Present pilot
Pilot name / designation:		Saules iela 4a Cesis
Construction year:	1977	1967
Typology	Apartment building	Apartment buildings
Net area, m ²		559 m ²
Number of apartments		4
The real primary energy use (underventilated, low temperature), kWh/m ² /year		≈303
The energy performance value (energy use in standard condition), kWh/m ² /year		300
Design target primary energy cons.	≤100 (nZEB)	≤100 (nZEB)
Historical/aesthetical characteristics – if any?	None	None



Country: Estonia

Photo of original pilot and present pilot:

Original Estonian Pilot – Karksi Nuia

Present Estonian Pilot - Akadeemia tee



Primary project parameters	Original pilot	Present pilot
Pilot name / designation:	Karksi Nuia	Akadeemia tee
Construction year:	1977	1986
Typology	Apartment building with shop	Apartment buildings
Net area, m ²	3870	3824 (with cellar ≈4300)
Number of apartments	36	80
The real primary energy use (underventilated, low temperature), kWh/m ² /year	263	303
The energy performance value (energy use in standard condition), kWh/m ² /year	290	239
Design target primary energy cons.	≤100 (nZEB)	≤100 (nZEB)
Historical/aesthetical characteristics – if any?	None	None



Country: Denmark

Photo of original pilot and present pilot:



Original Danish Pilot – Riffelhavevej



Present Danish Pilot - Parkvaenget

Primary project parameters	Original pilot	Present pilot
Pilot name / designation:	Riffelhavevej	Parkvaenget
Construction year:	1948	1972
Typology	Social housing apartment blocks	Social housing apartment blocks
Total area, m ²	4874	13472
Number of apartments	54	176
Heating energy consumption, kWh/m ² /year	131	96 (incl. DHW)
Design target heating energy cons., kWh/m ² /year	37	19 (incl. DHW)
Historical/aesthetical characteristics – if any?	None	none



Country: Portugal

Photo of original pilot and present pilot:

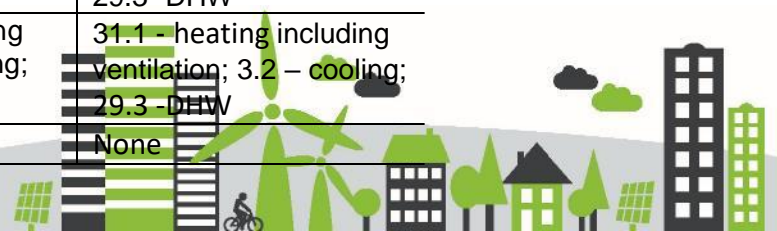


Vila d'Este - Lote 73



Edifício Sr. Professor Doutor Mota Pinto

Primary project parameters	Original pilot (In the proposal)	Present pilot
Pilot name / designation:	Vila d'Este - Lote 73	Edifício Sr. Professor Doutor Mota Pinto
Construction year:	1996	1997
Typology	Multifamily	Multifamily
Total area, m ²	6400	1414
Number of apartments	80	18
Heating energy consumption, kWh/m ² /year	70.0 - heating including ventilation; 2.0 -cooling; 95.0 -DHW	57.3 - heating including ventilation; 2.2 -cooling; 29.3 -DHW
Design target heating energy cons., kWh/m ² /year	35.0 - heating including ventilation; 2.0 -cooling; 30.0 -DHW	31.1 - heating including ventilation; 3.2 - cooling; 29.3 -DHW
Historical/aesthetical characteristics – if any?	None	None



Country: Czech Republic

Photo of original pilot and present pilot:



Primary project parameters	Original pilot	Present pilot
Pilot name / designation:	Residential House “dvouletka” type in Kladno.	Residential House “dvouletka” type in Milevsko.
Construction year:	1950	1950
Typology	Social housing apartment blocks	Social housing apartment blocks
Total area, m ²	1441	993,3
Number of apartments	36	24
Heating energy consumption, kWh/m ² /year	101	167
Design target heating energy cons., kWh/m ² /year	not set	21
Historical/aesthetical characteristics – if any?	None	None



Overview of pilot projects (from application)

Country	NL	LV	EE	DK	CZ	PT
Geo cluster (ref. E2B EI)	6	2	2	1	3	5
Building type						
single family	X					
multi family		X	X	X	X	X
Pilot type						
full setting	X	X	X	X		
partial setting						X
RLLL setting	X				X	
Renovation						
facade	X	X	X	X	X	X
roof	X	X	X	X	X	X
building services	X	X	X	X	X	
Method						
full replacement	X					
partial replacement				X	X	X
no replacement, only addition		X	X		X	X

