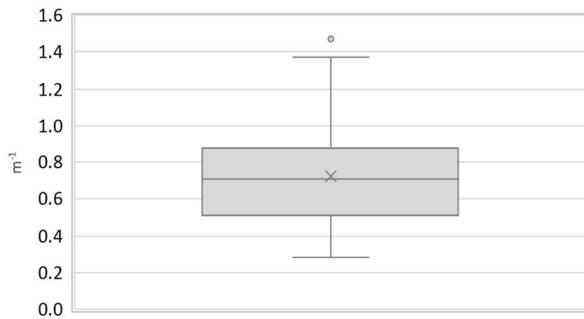


Region:		Liguria					Archetype code: RES_BLDGS_ 1981-1990_E_LIG	
Building category:		Residential buildings – Entire multifamily blocks						
198		1981-1990						
Climatic zone:		E	Number of records:		64			
Description: <u>External walls</u> : no data available <u>Roof slabs</u> : no data available							Data sources: EPC databases (100%)	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Q2 (Median value)	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	-	-	-	-	-
	Gross height	H_g	m	-	-	-	-	-
	Footprint area	$A_{\text{footprint}}$	m ²	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m ²	266.6	554.7	62.4	87.5	150.6
	Heated gross volume	$V_{H,g}$	m ³	1081.9	2465.0	232.0	317.7	495.0
	Heated net volume	$V_{H,n}$	m ³	872.7	2071.4	166.6	234.3	379.7
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m ⁻¹	0.73	0.26	0.51	0.71	0.88
	WWR – North orientation	WWR_N	-	-	-	-	-	-
	WWR – South orientation	WWR_S	-	-	-	-	-	-
	WWR – East orientation	WWR_E	-	-	-	-	-	-
	WWR – West orientation	WWR_W	-	-	-	-	-	-
	Window to useful floor area ratio	A_{wi}/A_{use}	-	0.12	0.04	0.09	0.11	0.12
	ENVELOPE	Roof type	-					
U-value of the roof		$U_{f,up}$	W/(m ² ·K)	1.32	0.69	0.67	1.66	1.82
External walls type		-						
U-value of the wall		U_{wl}	W/(m ² ·K)	1.24	0.53	1.09	1.18	1.33
Slab on ground floor type		-						
U-value of the floor		$U_{f,lw}$	W/(m ² ·K)	1.45	0.60	1.19	1.52	2.02
Windows type		-						
U-value of the windows		U_w	W/(m ² ·K)	3.98	1.23	3.15	4.29	5.00
Shading system type		-						
GAINS and VENTILATION	Occupancy density *	O_c	person/m ²	UNI EN 16798-1 - Table A.19				
	Lighting power density *	W_L	W/m ²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	W_A	W/m ²	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 98%; Mechanical: 2%						
	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Unknown: 95%; Autonomous: 5%						
	Heating generator	Unknown: 47%; Traditional boiler: 39%; Fireplace: 6%; Condensing boiler: 5%; Air-source heat pump: 3%						
	Daily operating time of the heating system *	t_H	h	14	0	14	14	14
	Energy carrier	Unknown: 51%; Natural gas: 23%; Electricity and natural gas: 9%; Electricity and solid biomass: 6%; Electricity: 3%; Gas Oil: 2%; Solid biomass: 2%; Electricity and gas oil: 2%; LPG: 2%						
	Heating emission sub-system	Unknown: 47%; Radiators: 44%; Air Ducts: 3%; Radiant panels: 3%; Fan-coil: 3%						
	Cooling system type	Unknown: 94%; Heat pump air-air: 6%						
	Daily operating time of the cooling system *	t_c	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	-						
	DHW generator	Unknown: 76%; Electric boiler: 9%; Condensing boiler: 8%; Natural gas boiler: 5%; Electric heat pump: 2%						
	* These values were not available in the considered sources, and are thus derived from UNI EN Standards							

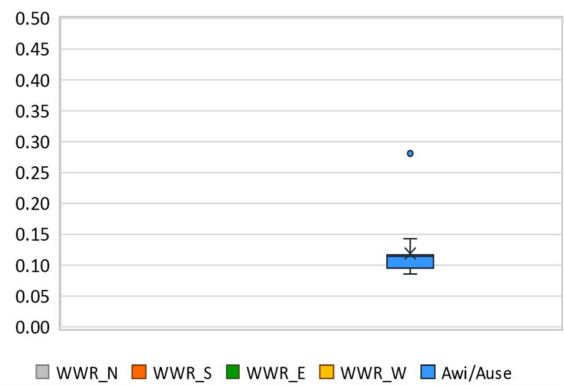
Region:	Liguria	Archetype code: RES_BLDGS_ 1981-1990_E_LIG
Building category:	Residential buildings – Entire multifamily blocks	
198	1981-1990	
Climatic zone:	E	
Number of records:		64

Numerical variables – GEOMETRY

COMPACTNESS RATIO

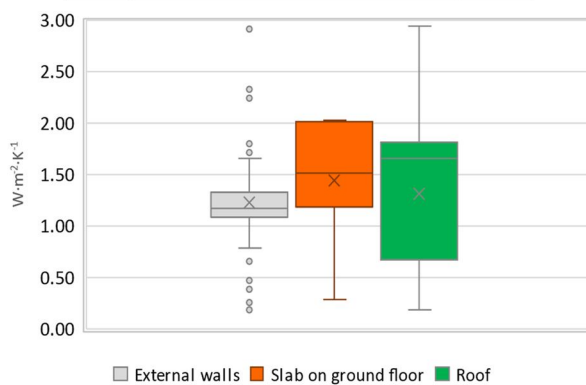


WINDOWS TO WALL RATIO

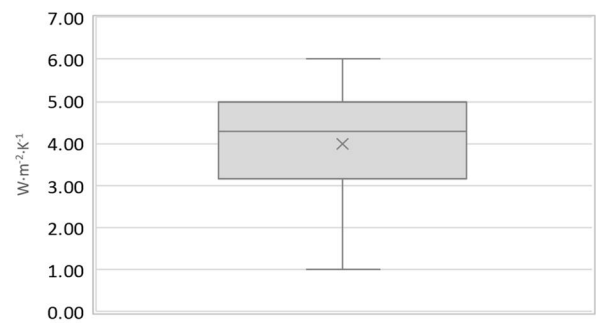


Numerical variables – ENVELOPE

OPAQUE BUILDING COMPONENTS U-VALUE

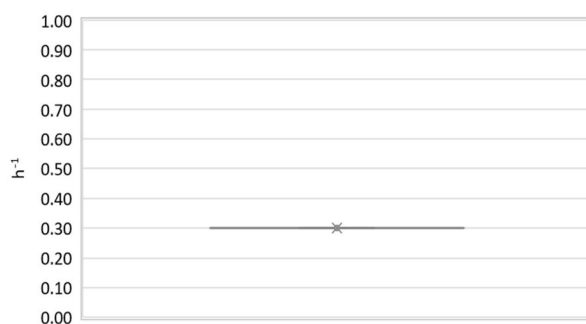


WINDOWS U-VALUE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE (Standard Values)

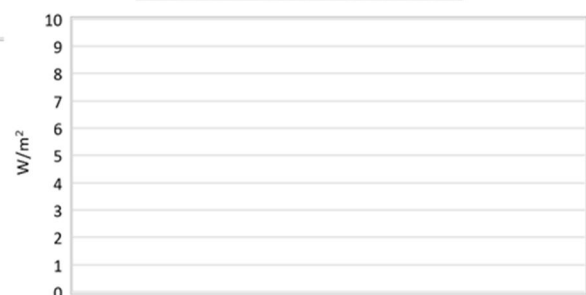
AIR EXCHANGE RATE



OCCUPANCY DENSITY



INTERNAL GAINS POWER DENSITY



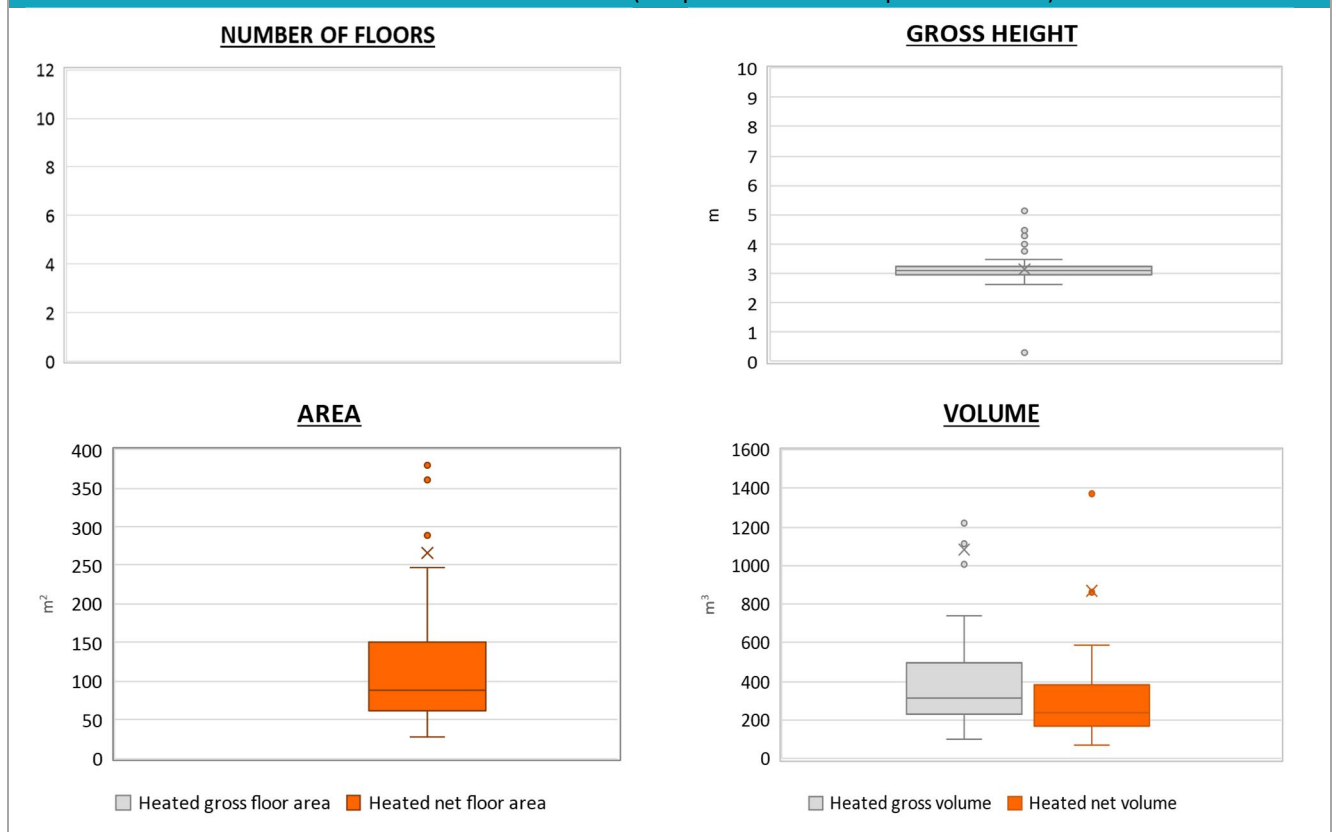
DAILY OPERATING TIME



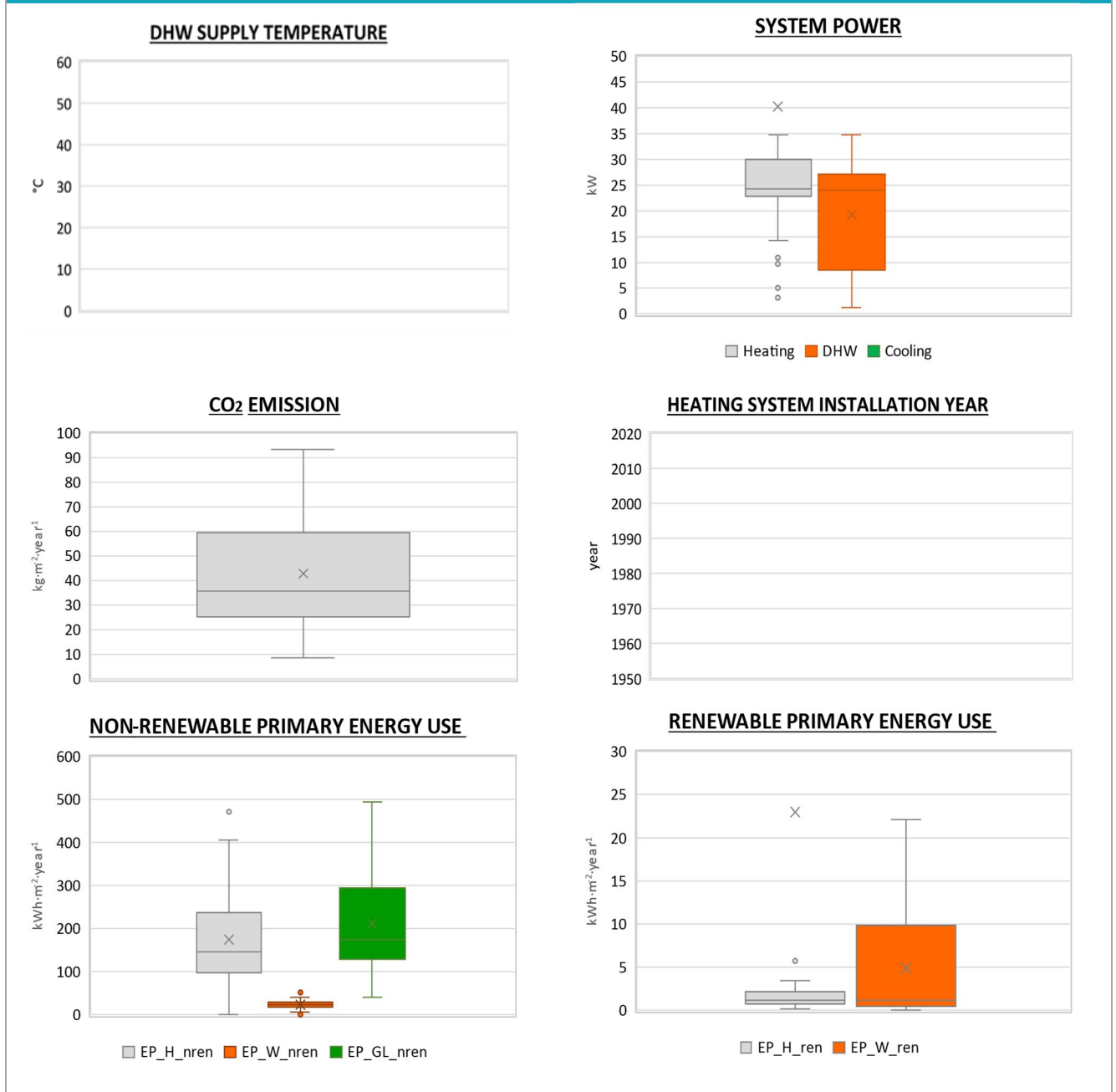
The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:		Liguria				Archetype code: RES_BLDGS_ 1981-1990_E_LIG			
Building category:		Residential buildings – Entire multifamily blocks							
198		1981-1990							
Climatic zone:		E	Number of records:		64				
ADDITIONAL DATA									
	Data		Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height		H_n	m	3.2	0.4	3.0	3.1	3.3
	Heated gross floor area		$A_{H,g}$	m ²	-	-	-	-	-
	Heated net floor area		$A_{H;n}$	m ²	-	-	-	-	-
	Heated gross volume		$V_{H,g}$	m ³	-	-	-	-	-
	Heated net volume		$V_{H;n}$	m ³	-	-	-	-	-
THERMAL SYSTEMS	Heating efficiency or <i>COP</i>		$\eta_{H,gen}$ Or $COP_{H,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *		$P_{H,gen}$	kW	40.2	55.4	23.0	24.4	30.1
	Cooling efficiency or <i>EER</i>		$\eta_{C,gen}$ Or $EER_{C,gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power *		$P_{C,gen}$	kW	-	-	-	-	-
	Temperature of DHW		θ_W	°C	-	-	-	-	-
	DHW system power *		$P_{W,gen}$	kW	19.4	11.2	8.6	24.0	27.2
	* These values refer to the apartment scale								

Additional data: GEOMETRY (the plots refer to the apartment scale)



Region:	Liguria	Archetype code: RES_BLDGS_ 1981-1990_E_LIG
Building category:	Residential buildings – Entire multifamily blocks	
198	1981-1990	
Climatic zone:	E	
Number of records:		64

Additional data: other numerical variables that are not included in the archetype


NOTE: Sample size of the analysed data.

Compactness ratio: 64; Window to useful floor area ratio: 17; U-value of the roof: 29; U-value of the wall: 58; U-value of the floor: 10; U-value of the windows: 64; Inter-storey height: 64; Heated net floor area: 64; Heated gross volume: 63; Heated net volume: 63; Total heating power: 33; DHW system power: 39; CO₂ Emission: 62; EP_H_nren: 63; EP_W_nren: 57; EP_GL_nren: 63; EP_H_nren: 49; EP_W_nren: 26