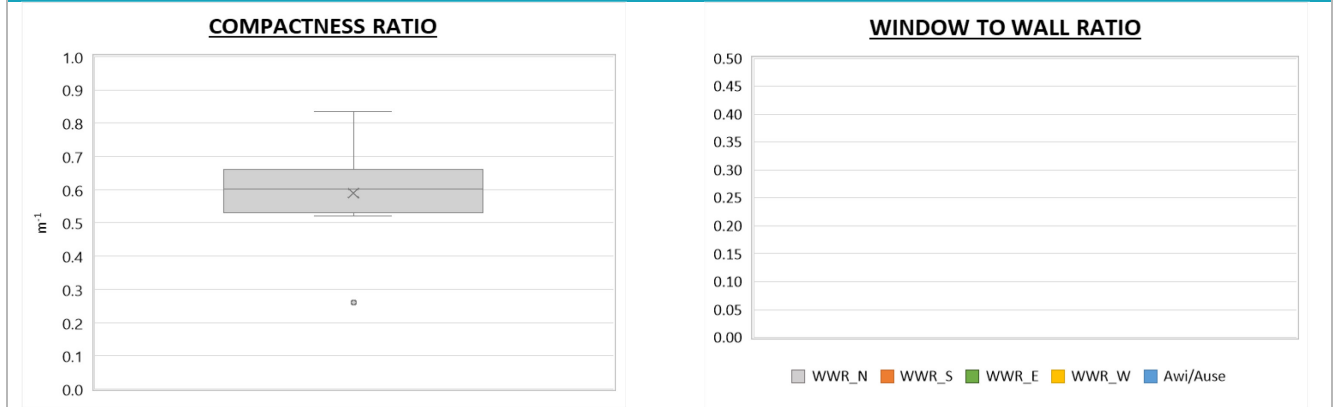


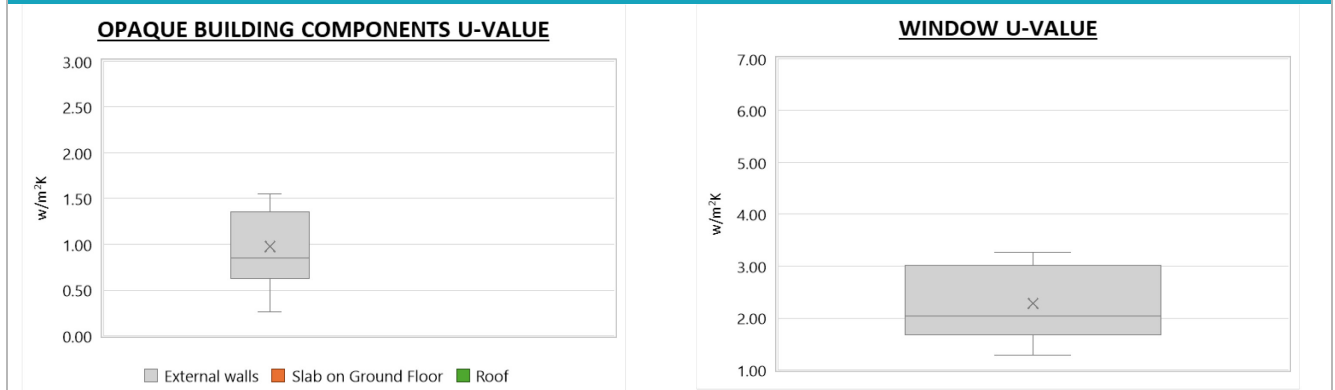
Region:	Lombardy						Archetype code: RES_APPBLOCK_- 1900_E_LOM	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	< 1900							
Climatic zone:	E	Number of records:		39				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: Solid Brick masonry (60 cm) (cod. MLP01) Roof slabs: Masonry with lists of bricks and concrete (6 cm + 24 cm) (cod. SOL03)							Data sources: Municipal database (28%) CURIT database (27%) CENED database (APE) (15%) Others (30%) #	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	n_f	-	4.10	0.91	3.00	4.00	5.00
	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	-	-	-	-	-
	Heated gross volume	$V_{H;g}$	m ³	-	-	-	-	-
	Heated net volume	$V_{H;n}$	m ³	-	-	-	-	-
	Compactness ratio	$A_{\text{env}}/V_{H;g}$	m ⁻¹	0.59	0.15	0.53	0.60	0.66
	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}	-	-	-	-	-	-
	ENVELOPE	Roof type	Wood structure and planking with tiles: 100%					
U-value of the roof		$U_{fi;up}$	W/(m ² ·K)	-	-	-	-	-
External walls type		Solid Brick masonry: 58%; Hollow brick masonry, low insulation: 21%; Hollow brick masonry, medium insulation: 17%; Hollow brick masonry, high insulation: 4%						
U-value of the wall		U_{wl}	W/(m ² ·K)	0.98	0.44	0.62	0.85	1.36
Slab on ground floor type		Masonry with lists of stones and concrete: 100%						
U-value of the floor		$U_{fi;lw}$	W/(m ² ·K)	-	-	-	-	-
Windows type		-						
U-value of the windows		U_w	W/(m ² ·K)	2.29	0.73	1.68	2.04	3.02
GAINS and VENTILATION	Shading system type	Shutter: 89%; Roller blinds: 11%						
	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: 100%						
	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	Heating system type	Autonomous: 71%; Centralized: 29%						
	Heating generator	Traditional boiler: 100%						
	Daily operating time of the heating system *	t_H	h	14.00	0.00	14.00	14.00	14.00
	Energy carrier	Natural gas: 100%						
	Heating emission sub-system	Radiators: 100%						
	Cooling system type	Heat pump: 100%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	-						
	DHW system type	Autonomous - coupled with heating: 68%; Autonomous - detached from heating: 32%						
	DHW generator	Natural gas boiler: 77%; Electric boiler: 23%						
	# Visual inspection (15%), Expert Assumption (11%), Standards (3%), Energy audits (1%) * These values were not available in the considered sources, and are thus derived from UNI EN Standards							

Region:	Lombardy	Archetype code: RES_APPBLOCK_- 1900_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	Before 1900	
Climatic zone:	E	
Number of records:		39

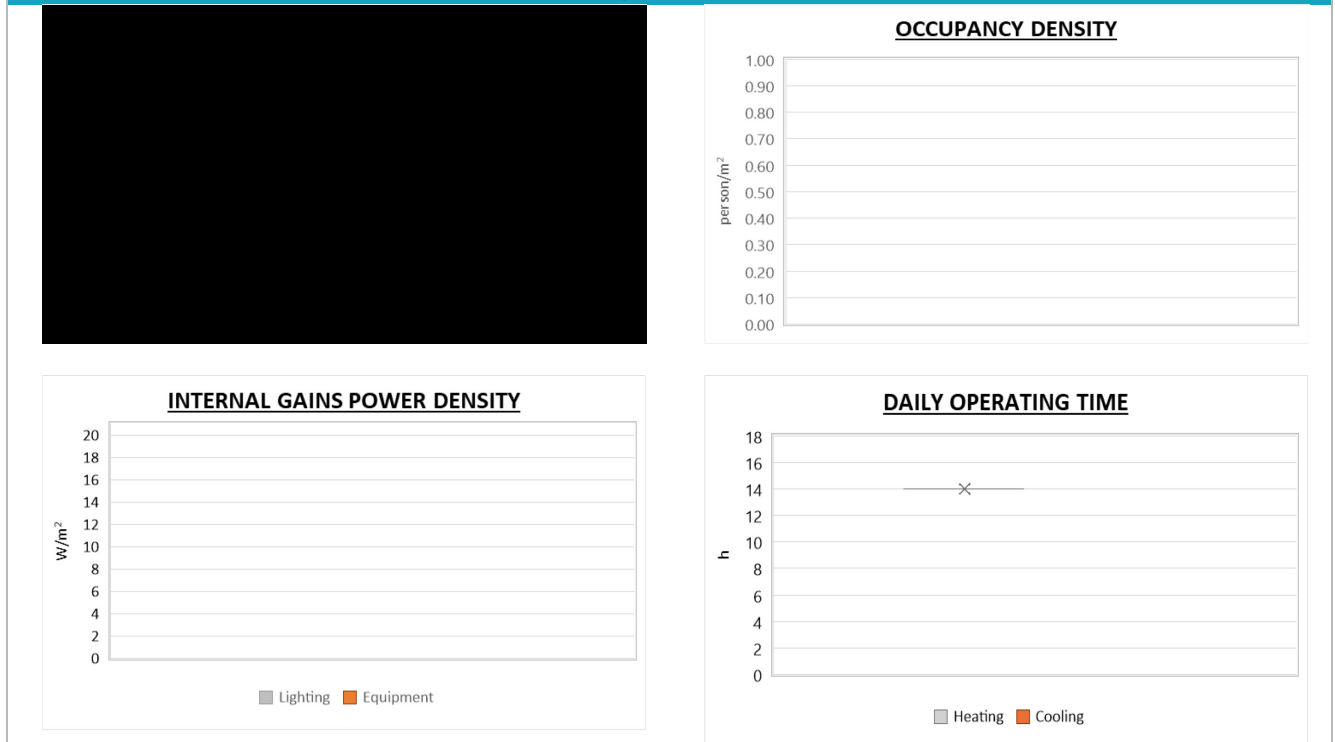
Numerical variables – GEOMETRY



Numerical variables – ENVELOPE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

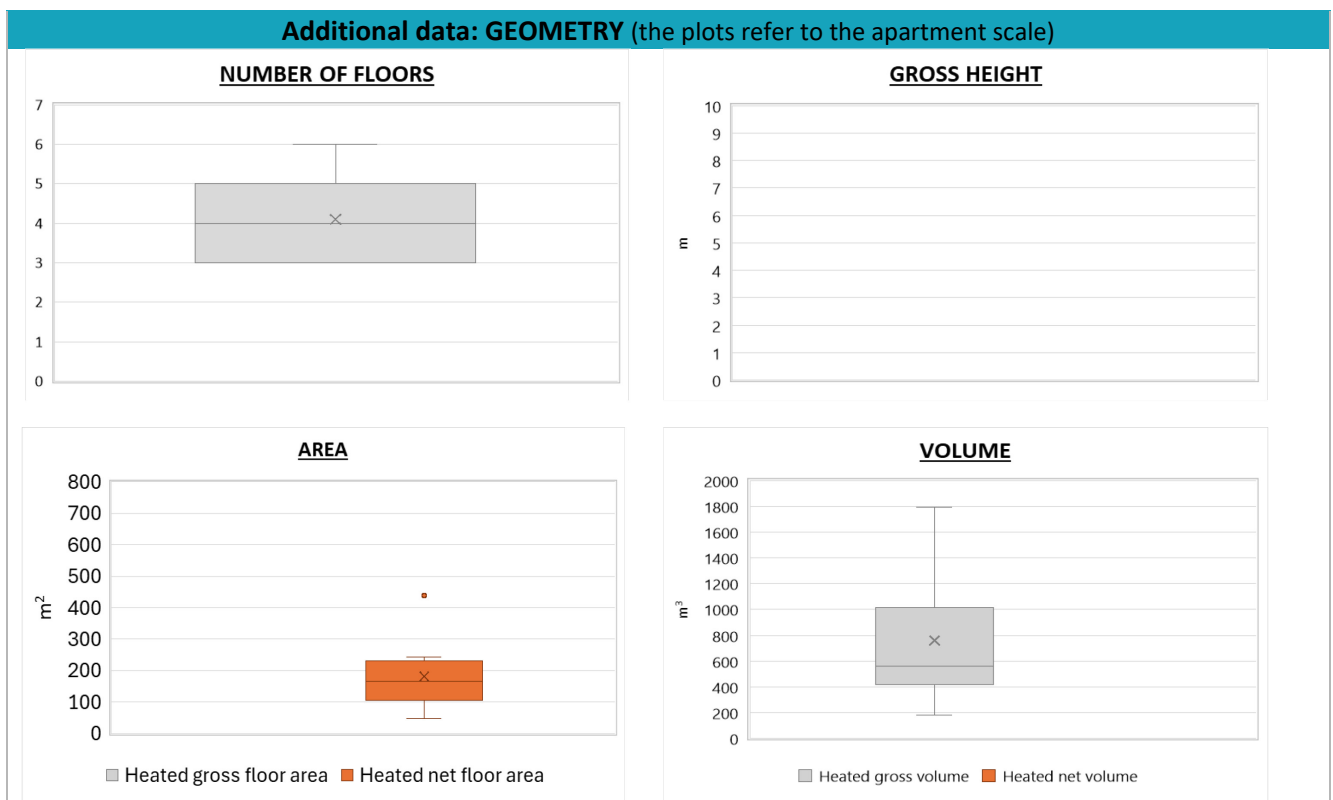


The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:	Lombardy	Archetype code: RES_APPBLOCK - 1900_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	Before 1900	
Climatic zone:	E	
Number of records:		39

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	-	-	-	-	-
	Heated gross floor area	$A_{H;g}$	m ²	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m ²	181.82	114.15	106.08	166.66	230.46
	Heated gross volume	$V_{H;g}$	m ³	759.97	487.08	415.03	562.53	1015.80
	Heated net volume	$V_{H;n}$	m ³	-	-	-	-	-
THERMAL SYSTEMS	Heating efficiency or COP	$\eta_{H;gen}$ or $COP_{H;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total heating power *	$P_{H;gen}$	kW	36.82	25.32	24.00	26.60	51.60
	Cooling efficiency or EER	$\eta_{C;gen}$ or $EER_{C;gen}$	-	This value has to be retrieved from suitable datasheets				
	Total cooling power *	$P_{C;gen}$	kW	19.42	32.97	3.55	6.80	20.43
	Temperature of DHW	ϑ_W	°C	40.00	0.00	40.00	40.00	40.00
	DHW system power *	$P_{W;gen}$	kW	37.89	34.26	18.50	26.60	51.60

* These values refer to the apartment scale



Region:	Lombardy	Archetype code: RES_APPBLOCK_- 1900_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	Before 1900	
Climatic zone:	E	
Number of records:		39

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

