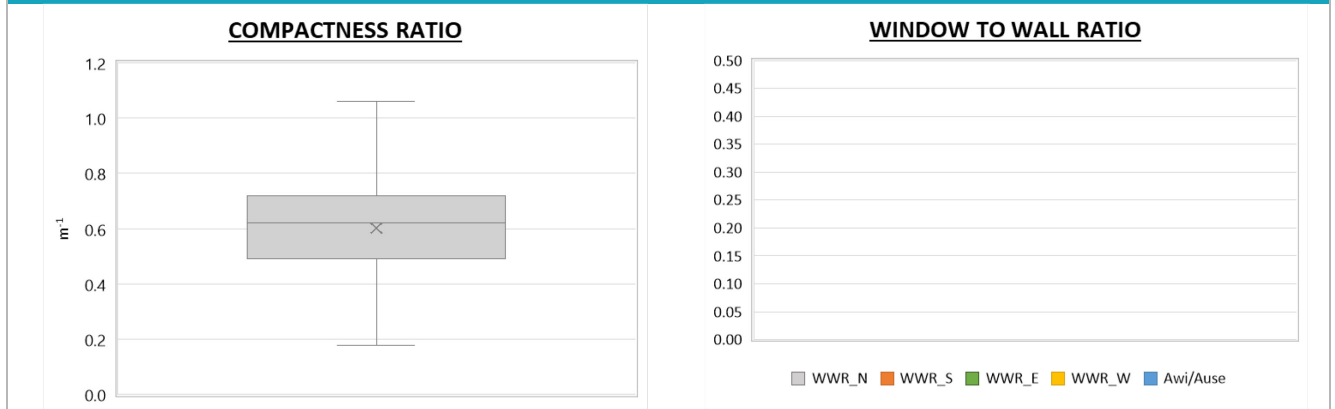


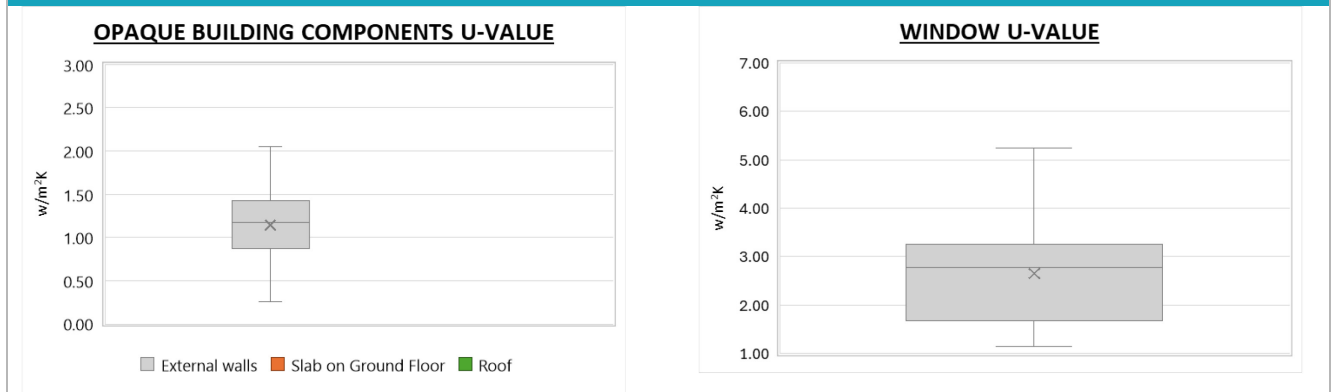
Region:	Lombardy						Archetype code: RES_APPBLOCK_1946-1960_E_LOM	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1946-1960							
Climatic zone:	E	Number of records:		123				
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: double layer of hollow bricks (8 cm + 12 cm) with uninsulated air gap (cod. MCV01). Roof slabs: reinforced brick-concrete slab (22 cm) plus uninsulated concrete screed (4 cm) (cod. SOL04)							Data sources: CURIT database (28%) Municipal database (25%) Visual inspection (17%) 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	-	4.80	1.30	5.00	5.00	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	0.60	0.20	0.49	0.62	0.72
	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	Prefabricated panels: 50%; Reinforced brick-concrete slab: 50%						
	U-value of the roof	$U_{fi,up}$	W/(m ² ·K)	-	-	-	-	-
	External walls type	Prefabricated panels: 37%; Hollow brick masonry, medium insulation: 33%; Hollow brick masonry, low insulation: 14%; Hollow brick masonry, high insulation: 9%; Hollow brick masonry: 7%						
	U-value of the wall	U_{wl}	W/(m ² ·K)	1.14	0.41	0.88	1.18	1.43
	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	Double glazing, PVC frame: 38%; Double glazing, aluminum frame, no thermal break: 25%; Double glazing, wooden frame: 13%; Double glazing, aluminum frame with thermal break: 13%; Single glazing, wooden frame: 11%						
	U-value of the windows	U_W	W/(m ² ·K)	2.65	1.03	1.68	2.78	3.23
GAINS and VENTILATION	Shading system type	Roller blinds: 100%						
	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%						
THERMAL SYSTEMS	Air exchange rate *	n	h ⁻¹	0.30	0.00	0.30	0.30	0.30
	Heating system type	Centralized: 93%; Autonomous: 7%						
	Heating generator	Traditional Boiler: 81%; Condensing Boiler: 14%; Heat exchanger of district heating: 5%						
	Daily operating time of the heating system *	t_H	h	14.00	0.00	14.00	14.00	14.00
	Energy carrier	Natural Gas: 61%; Gas Oil: 34%; District heating: 5%						
	Heating emission sub-system	Radiators: 99%; Radiant Panels: 1%						
	Cooling system type	Air-cooled chiller: 100%						
	Daily operating time of the cooling system *	t_C	h	-	-	-	-	-
	Cooling emission sub-system	Multisplit: 100%						
	DHW system type	Autonomous, detached from heating: 74%; Centralized, coupled with heating: 16%; Autonomous, coupled with heating: 8%; District heating: 2%						
	DHW generator	Natural gas boiler: 75%; Electric boiler: 25%						
	# CENED database (ACE) (14%), Local database (9%), Standards (4%), Expert Assumption (3%) * These values were not available in the considered sources, and are thus derived from UNI EN Standards							

Region:	Lombardy	Archetype code: RES_APPBLOCK_1946- 1960_E_LOM
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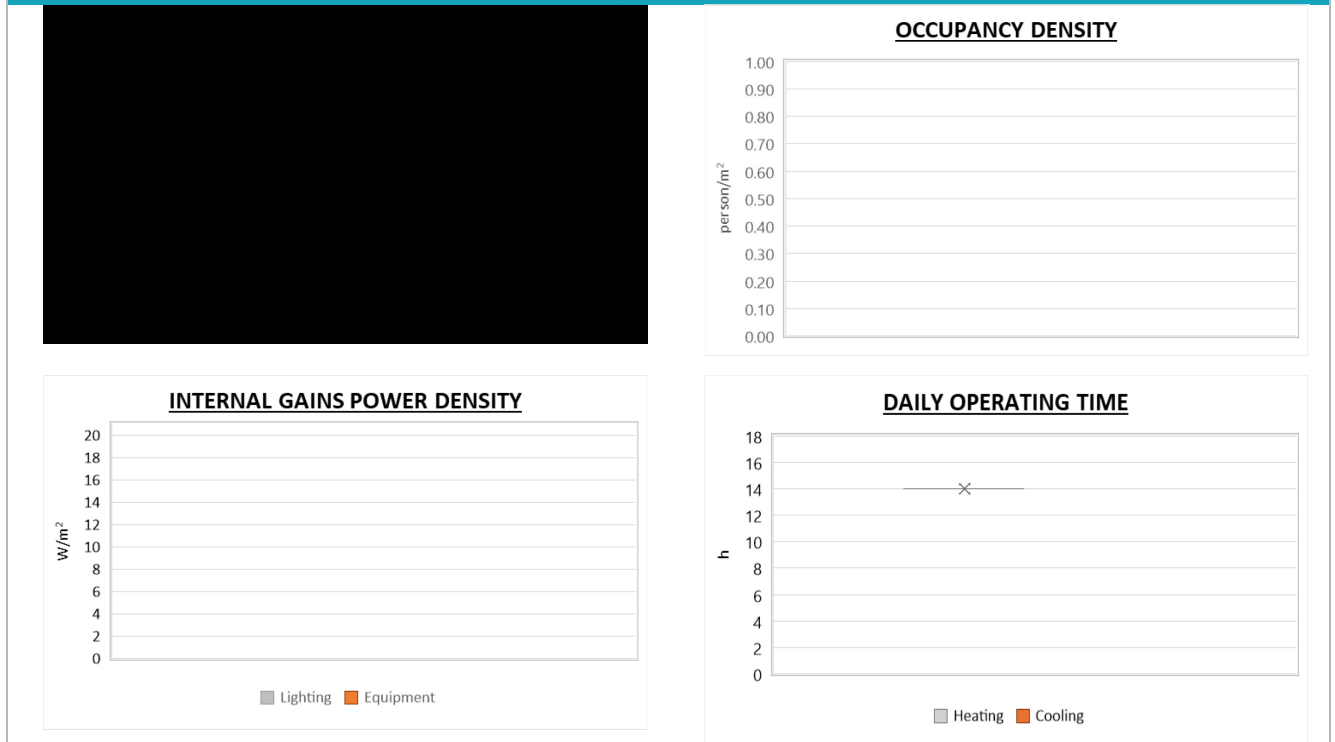
Numerical variables – GEOMETRY



Numerical variables – ENVELOPE



Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

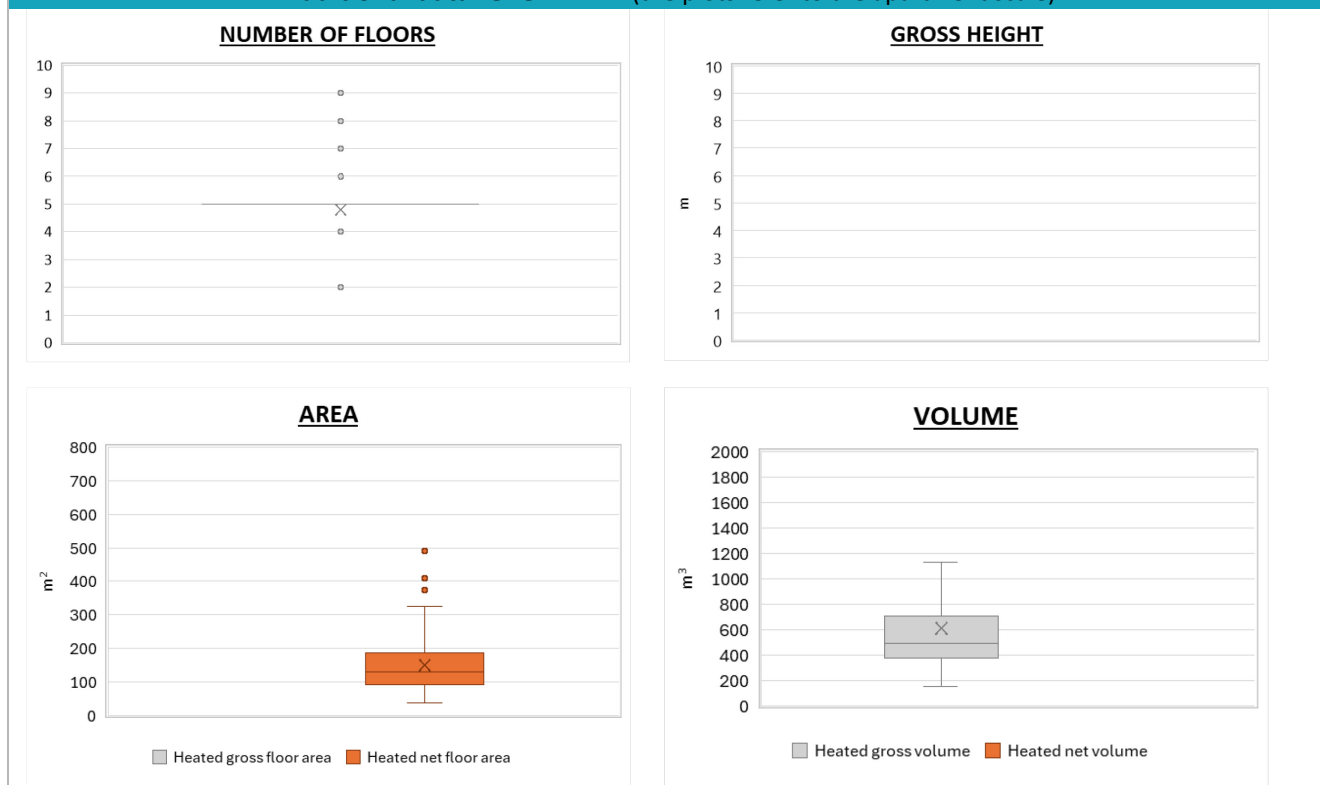


Region:	Lombardy			Archetype code: RES_APPBLOCK_1946- 1960_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)			
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Climatic zone:	E	Number of records:	123	

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	151.31	80.33	91.89	132.79	187.58
	Heated gross volume	$V_{H;g}$	m ³	627.37	346.50	380.42	551.27	842.16
	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	99.20	167.92	24.00	29.90	99.60
	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	7.15	16.75	3.42	4.10	6.80
	Temperature of DHW	ϑ_W	°C	40.00	0.00	40.00	40.00	40.00
	DHW system power *	$P_{W;gen}$	kW	35.65	64.74	11.45	25.50	31.20

* These values refer to the apartment scale

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



Region:	Lombardy	Archetype code: RES_APPBLOCK_1946- 1960_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1946-1960	
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Additional data: other numerical variables that are not included in the archetype

