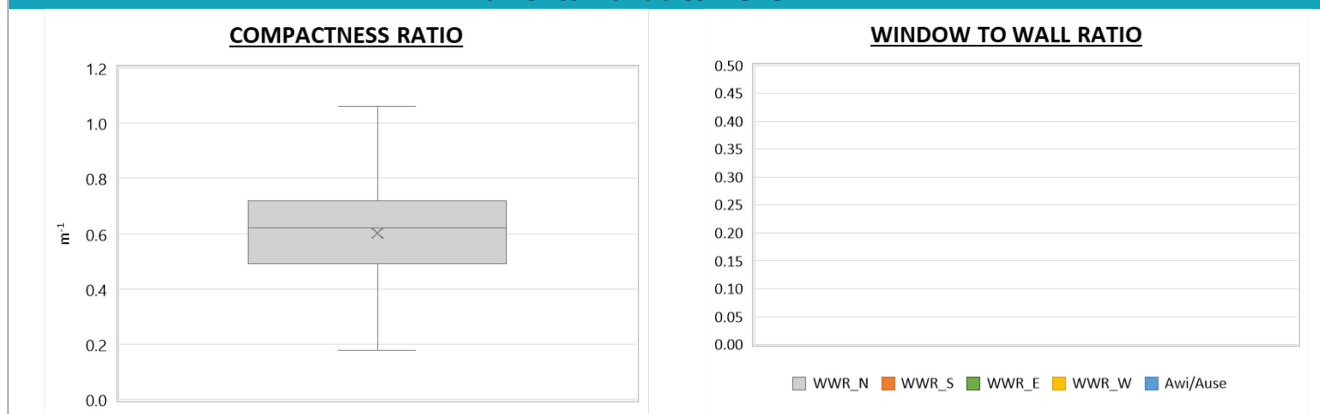


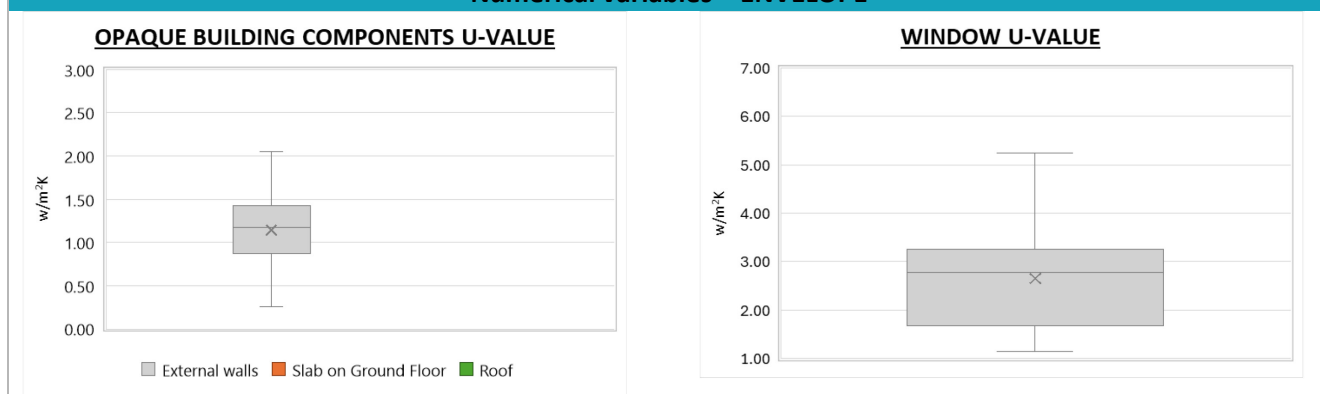
Region:	Lombardy						Archetype code: RES_APPBLOCK_1946-1960_E_LOM	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1946-1960							
Climatic zone:	E	Number of records:				123		
Description (the codes associated with walls and slabs refer to 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%) <sup>#</sup>	
	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 <sup>2</sup>	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	-	-	-	-	-
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	-	-	-	-	-
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m <sup>-1</sup>	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	$A_{wi}/A_{\text{use}}$	-	-	-	-	-	-
ENVELOPE	Roof type	Prefabricated panels: 50%; Reinforced brick-concrete slab: 50%						
	U-value of the roof	$U_{fi,up}$	W/(m <sup>2</sup> ·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 <sup>2</sup> ·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 <sup>2</sup> ·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 <sup>2</sup> ·K)	2.65	1.03	1.68	2.78	3.23
	Shading system type	Roller blinds: 100%						
GAINS and VENTILATION	Occupancy density *	$O_c$	person/m <sup>2</sup>	UNI EN 16798-1 - Table A.19				
	Lighting power density *	$W_L$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3				
	Equipment power density *	$W_A$	W/m <sup>2</sup>	UNI EN 16798-1 - A.8.3				
	Type of ventilation	Natural: 100%						
	Air exchange rate *	$n$	h <sup>-1</sup>	0.30	0.00	0.30	0.30	0.30
THERMAL SYSTEMS	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								

<b>Region:</b>	Lombardy	<b>Archetype code:</b> RES_APPBLOCK_1946- 1960_E_LOM
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<b>Period of construction:</b>	1946-1960	
<b>Climatic zone:</b>	E	
<b>Number of records:</b>		123

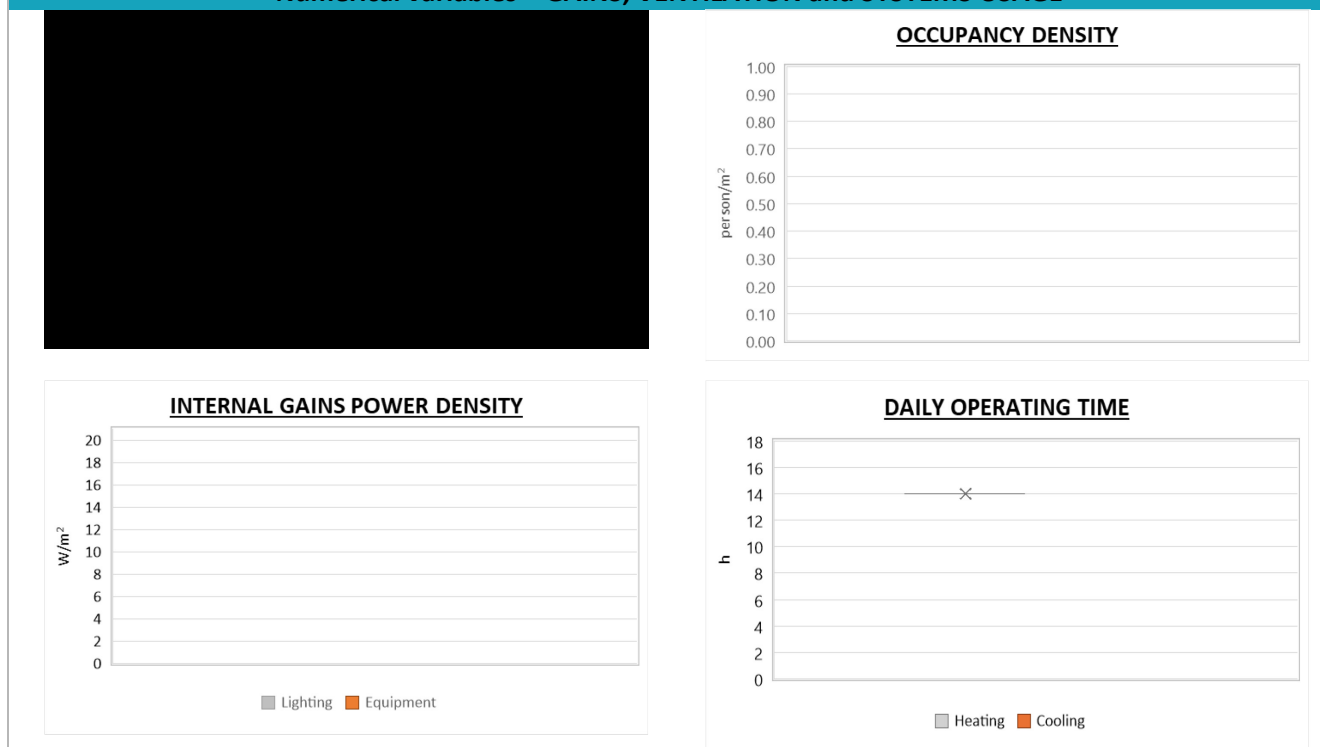
### Numerical variables – GEOMETRY



### Numerical variables – ENVELOPE



### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE



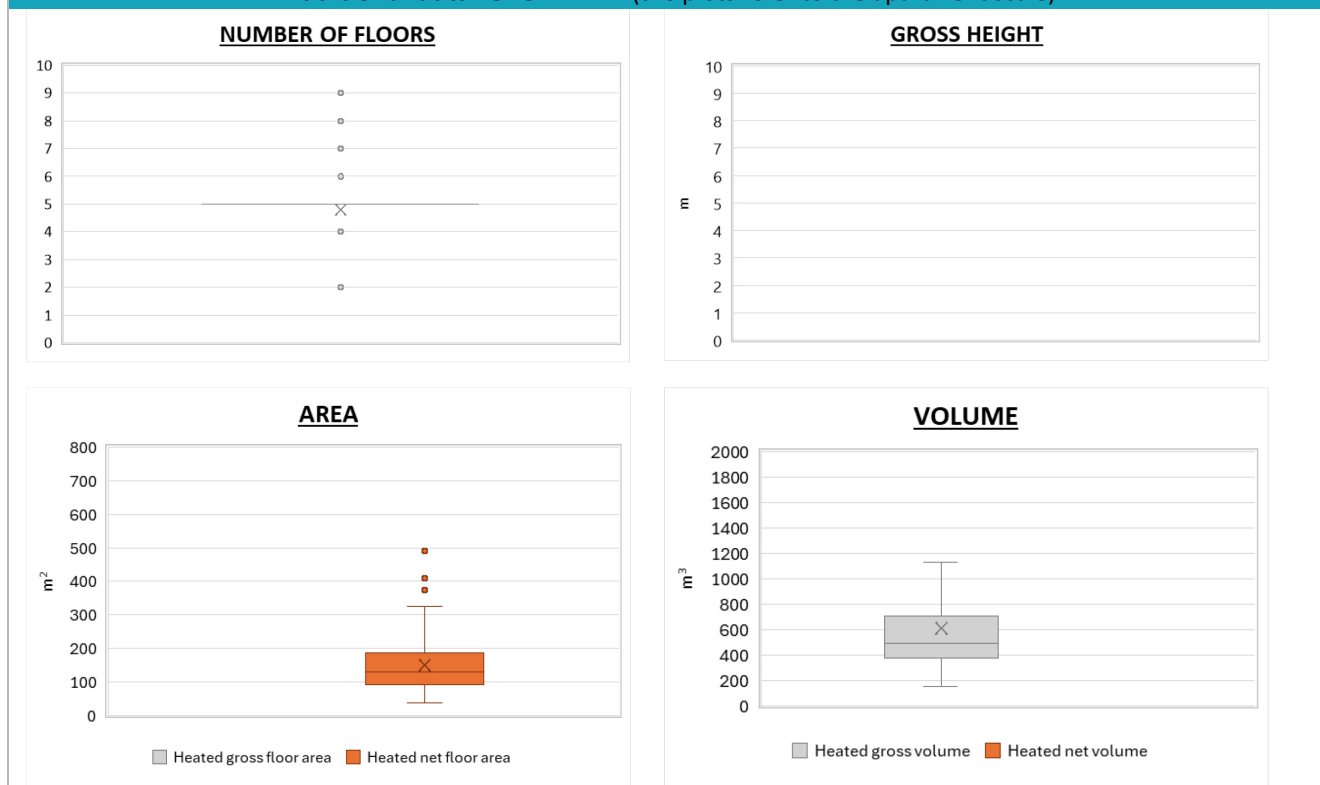
The data can be used for analysis, modeling, and research purposes, as long as it remains unaltered in its original form. Users are free to publish results based on the data, provided they credit the original source.

Region:	Lombardy	Archetype code: RES_APPBLOCK_1946- 1960_E_LOM
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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 <sup>2</sup>	-	-	-	-	-
	Heated net floor area	$A_{H;n}$	m <sup>2</sup>	151.31	80.33	91.89	132.79	187.58
	Heated gross volume	$V_{H;g}$	m <sup>3</sup>	627.37	346.50	380.42	551.27	842.16
	Heated net volume	$V_{H;n}$	m <sup>3</sup>	-	-	-	-	-
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	$\vartheta_W$	°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)



<b>Region:</b>	Lombardy	<b>Archetype code:</b> RES_APPBLOCK_1946- 1960_E_LOM
<b>Building category:</b>	Residential buildings – Apartments (in multifamily blocks)	
<b>Period of construction:</b>	1946-1960	
<b>Climatic zone:</b>	E	
<b>Number of records:</b>		123

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

