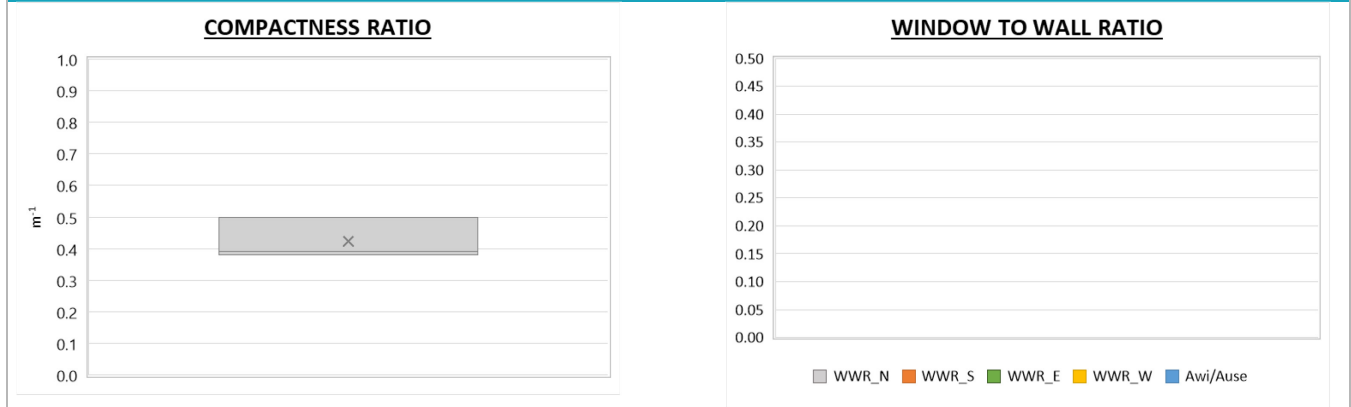


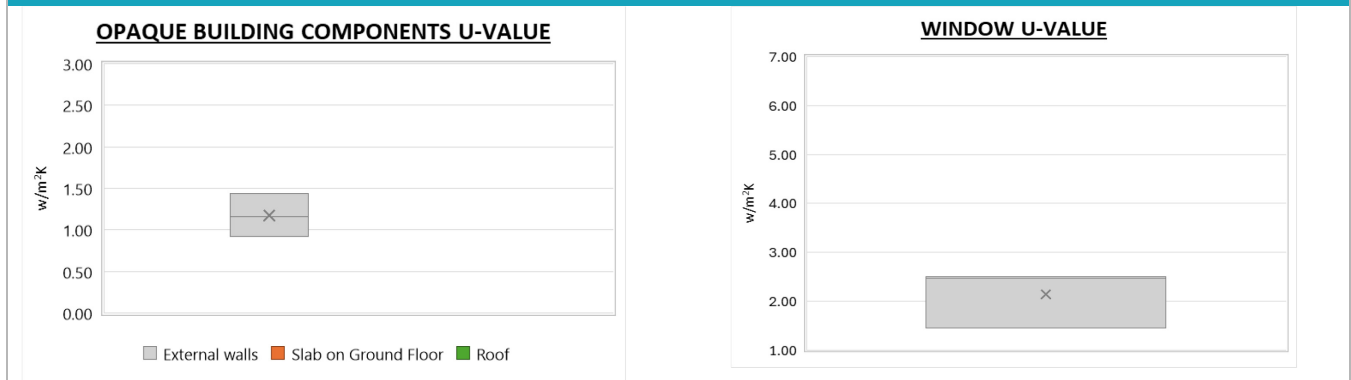
Region:	Lombardy						Archetype code: RES_APPBLOCK_1901-1920_E_LOM	
Building category:	Residential buildings – Apartments (in multifamily blocks)							
Period of construction:	1901-1920							
Climatic zone:	E	Number of records:				36		
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: Solid Brick masonry (50 cm) (cod. MLP02) Roof slabs: Masonry with lists of bricks and concrete (6 cm + 24 cm) (cod. SOL03)							Data sources: CURIT database (31%) Municipal database (25%) CENED database (APE) (13%) Others (31%) #	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	$n_f$	-	3.86	0.96	3.00	4.00	4.00
	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>	0.42	0.07	0.38	0.39	0.50
	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	Wood structure and planking with tiles: 49%; Reinforced brick-concrete slab low insulation: 33%; Reinforced brick-concrete slab medium insulation: 15%; Prefabricated Insulation panels: 3%						
	U-value of the roof	$U_{fi,up}$	W/(m <sup>2</sup> ·K)	-	-	-	-	-
	External walls type	Solid Brick masonry: 100%						
	U-value of the wall	$U_{wl}$	W/(m <sup>2</sup> ·K)	1.18	0.26	0.92	1.16	1.44
	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	-						
	U-value of the windows	$U_W$	W/(m <sup>2</sup> ·K)	2.14	0.60	1.45	2.47	2.51
Shading system type	Shutter: 97%; Roller blinds: 3%							
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	Autonomous: 89%; Centralized: 11%						
	Heating generator	Traditional boiler: 83%; Condensing boiler: 17%						
	Daily operating time of the heating system *	$t_H$	h	14.00	0.00	14.00	14.00	14.00
	Energy carrier	Natural gas: 80%; Electricity: 20%						
	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: 89%; Autonomous - detached from heating: 11%						
	DHW generator	Natural gas boiler: 82%; Electric boiler: 18%						
# Visual inspection (13%), Expert Assumption (8%), Local database (6%), Standards (4%)								
* These values were not available in the considered sources, and are thus derived from UNI EN Standards								

Region:	Lombardy	Archetype code: RES_APPBLOCK_1901- 1920_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1901-1920	
Climatic zone:	E	
Number of records:		36

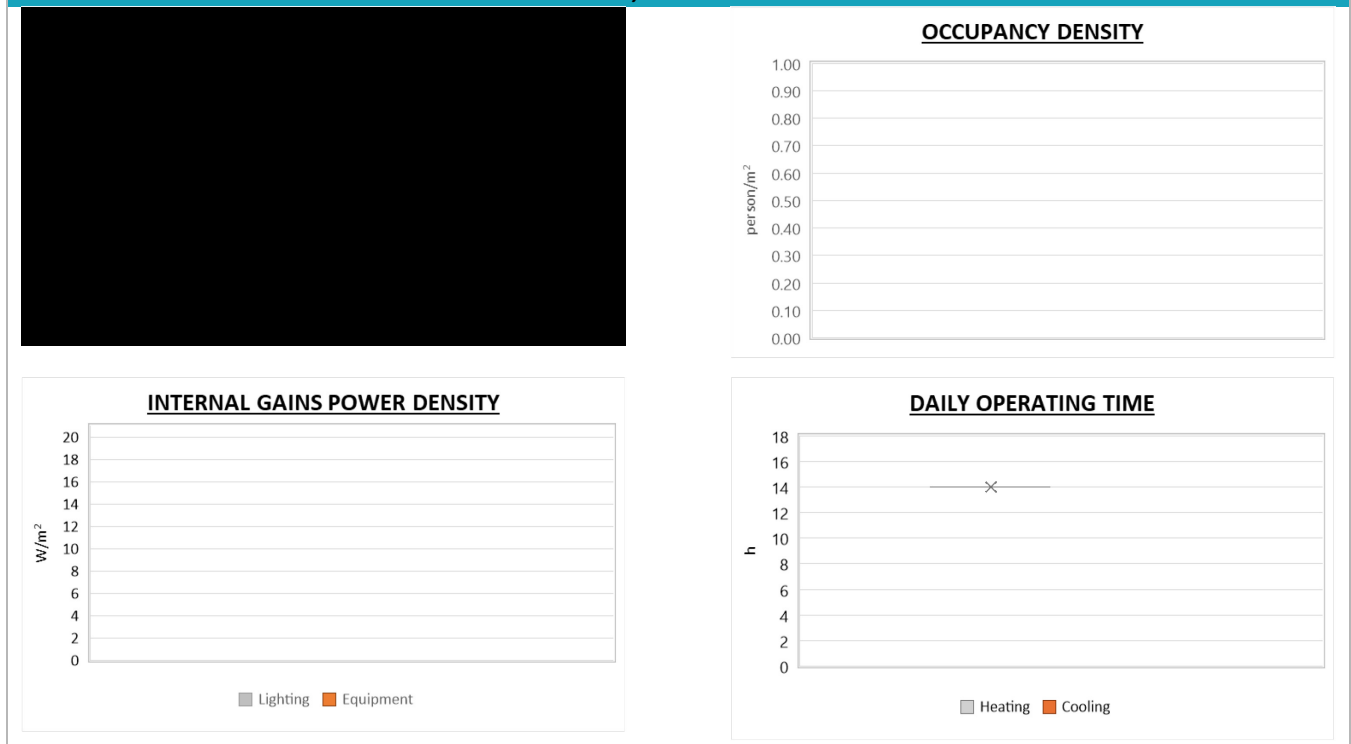
### Numerical variables – GEOMETRY



### 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_1901- 1920_E_LOM
Building category:	Residential buildings – Apartments (in multifamily blocks)	
Period of construction:	1901-1920	
Climatic zone:	E	
Number of records:		36

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>	169.30	29.69	135.19	183.30	189.40
	Heated gross volume	$V_{H;g}$	m <sup>3</sup>	738.30	142.13	583.70	767.90	863.30
	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	48.83	13.45	33.30	56.60	56.60
	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	13.17	1.15	12.50	12.50	14.50
	Temperature of DHW	$\vartheta_W$	°C	40.00	0.00	40.00	40.00	40.00
	DHW system power *	$P_{W;gen}$	kW	48.83	13.45	33.30	56.60	56.60

\* 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_1901- 1920_E_LOM
<b>Building category:</b>	Residential buildings – Apartments (in multifamily blocks)	
<b>Period of construction:</b>	1901-1920	
<b>Climatic zone:</b>	E	
<b>Number of records:</b>		36

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

