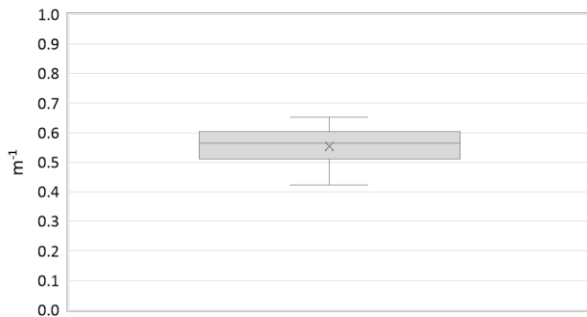


Region:		Tuscany					Archetype code: RES_APPBLOCK_ 1951-1960_D_TUS	
Building category:		Entire multi-family block						
Period of construction:		1951-1960						
Climatic zone:		D	Number of records:		44			
Description (the codes associated with walls and slabs refer to the structures described in UNI/TR 11552:2014): External walls: plaster (2 cm) - solid brick (38 cm) - plaster (2 cm) (cod. MLP01). Roof slabs: reinforced brick-concrete slab (20-22 cm) - uninsulated concrete screed (-)							Data sources: Visual inspection (39%) National database (15%) Standards (15%) Others (31%) #	
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
BUILDING GEOMETRY	Number of floors	$n_f$	-	3.36	0.47	3.00	3.00	4.00
	Gross height	$H_g$	m	11.30	1.55	10.20	10.20	13.50
	Footprint area	$A_{\text{footprint}}$	m²	316.04	128.56	220.30	279.40	397.30
	Heated gross floor area	$A_{H,g}$	m²	1019.55	509.91	607.88	899.67	1216.61
	Heated net floor area	$A_{H,n}$	m²	881.66	451.35	521.27	768.23	1039.40
	Heated gross volume	$V_{H,g}$	m³	3428.87	1727.63	2058.49	3058.88	4111.42
	Heated net volume	$V_{H,n}$	m³	2622.68	1364.75	1563.82	2304.68	3118.20
	Compactness ratio	$A_{\text{env}}/V_{H,g}$	m⁻¹	0.55	0.06	0.51	0.56	0.60
	WWR – North orientation	$WWR_N$	-	0.10	0.07	0.03	0.11	0.16
	WWR – South orientation	$WWR_S$	-	0.12	0.07	0.06	0.14	0.17
	WWR – East orientation	$WWR_E$	-	0.12	0.07	0.06	0.13	0.18
	WWR – West orientation	$WWR_W$	-	0.13	0.07	0.06	0.13	0.18
	Window to useful floor area ratio	$A_{wi}/A_{\text{use}}$	-	0.16	0.03	0.14	0.16	0.17
ENVELOPE	Roof type	Reinforced brick-concrete slab: 100%.						
	U-value of the roof	$U_{f,up}$	W/(m²·K)	1.70	0.39	1.50	1.50	2.20
	External walls type	Solid Brick masonry: 61%; Hollow brick masonry: 21%; Masonry with local stones: 18%						
	U-value of the wall	$U_{wl}$	W/(m²·K)	1.31	0.19	1.34	1.34	1.34
	Slab on ground floor type	Reinforced brick-concrete slab: 70%; Ventilated crawl space: 30%.						
	U-value of the floor	$U_{f,lfw}$	W/(m²·K)	1.41	0.14	1.30	1.30	1.58
	Windows type	Unknown: 100%						
	U-value of the windows	$U_W$	W/(m²·K)	-	-	-	-	-
GAINS and VENTILATION	Shading system type	Roller blinds: 100%.						
	Occupancy density *	$O_c$	person/m²	UNI EN 16798-1 - Table A.19				
	Lighting power density	$W_L$	W/m²	UNI EN 16798-1 - A.8.3				
	Equipment power density *	$W_A$	W/m²	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	Autonomous: 70%; Centralized: 23%; Unknown: 7%.						
	Heating generator	Boiler (unknown type): 91%; Unknown: 7%; Condensing boiler: 2%.						
	Daily operating time of the heating system *	$t_H$	h	12.00	0.00	12.00	12.00	12.00
	Energy carrier	Natural gas: 100%.						
	Heating emission sub-system	Unknown: 100%						
	Cooling system type	Unknown: 55%; Absent: 25%; Air-cooled chiller: 20%.						
	Daily operating time of the cooling system	$t_C$	h	12.00	0.00	12.00	12.00	12.00
	Cooling emission sub-system	Multisplit: 100%.						
	DHW system type	Autonomous, coupled with heating: 70%; Autonomous, detached from heating: 23%. Unknown: 7%.						
DHW generator	Natural gas boiler: 73%; Unknown: 20%; Electric boiler: 7%.							
# Measured data (13%), Local database (8%), Other (6%), Standards (4%).								
* These values are derived from UNI EN ISO Standards								

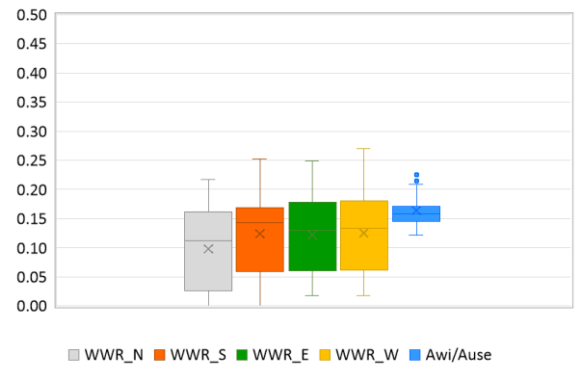
Region:	Tuscany	Archetype code: RES_APPBLOCK_ 1951-1960_D_TUS
Building category:	Entire multi-family block	
Period of construction:	1951-1960	
Climatic zone:	D	
Number of records:		44

### Numerical variables – GEOMETRY

**COMPACTNESS RATIO**

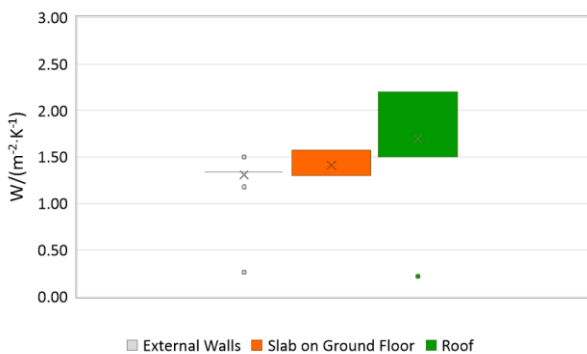


**WINDOWS TO WALL RATIO**



### Numerical variables – ENVELOPE

**OPAQUE BUILDING COMPONENTS U-VALUE**

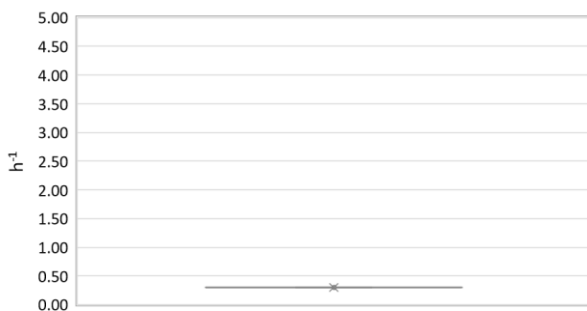


**WINDOWS U-VALUE**

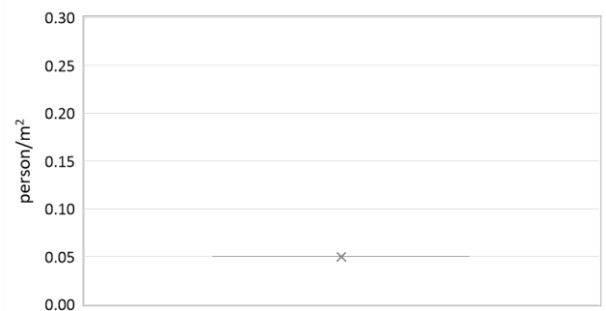


### Numerical variables – GAINS, VENTILATION and SYSTEMS USAGE

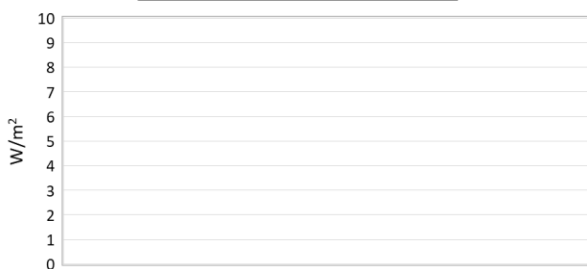
**AIR EXCHANGE RATE**



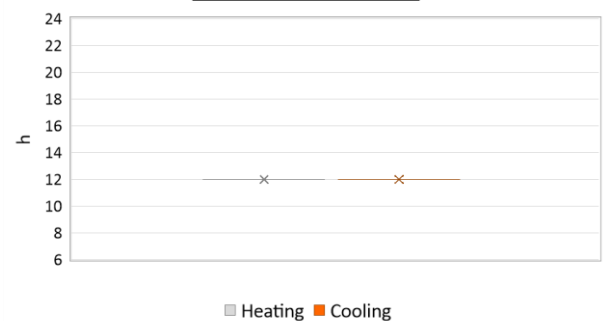
**OCCUPANCY DENSITY**



**INTERNAL GAINS POWER DENSITY**

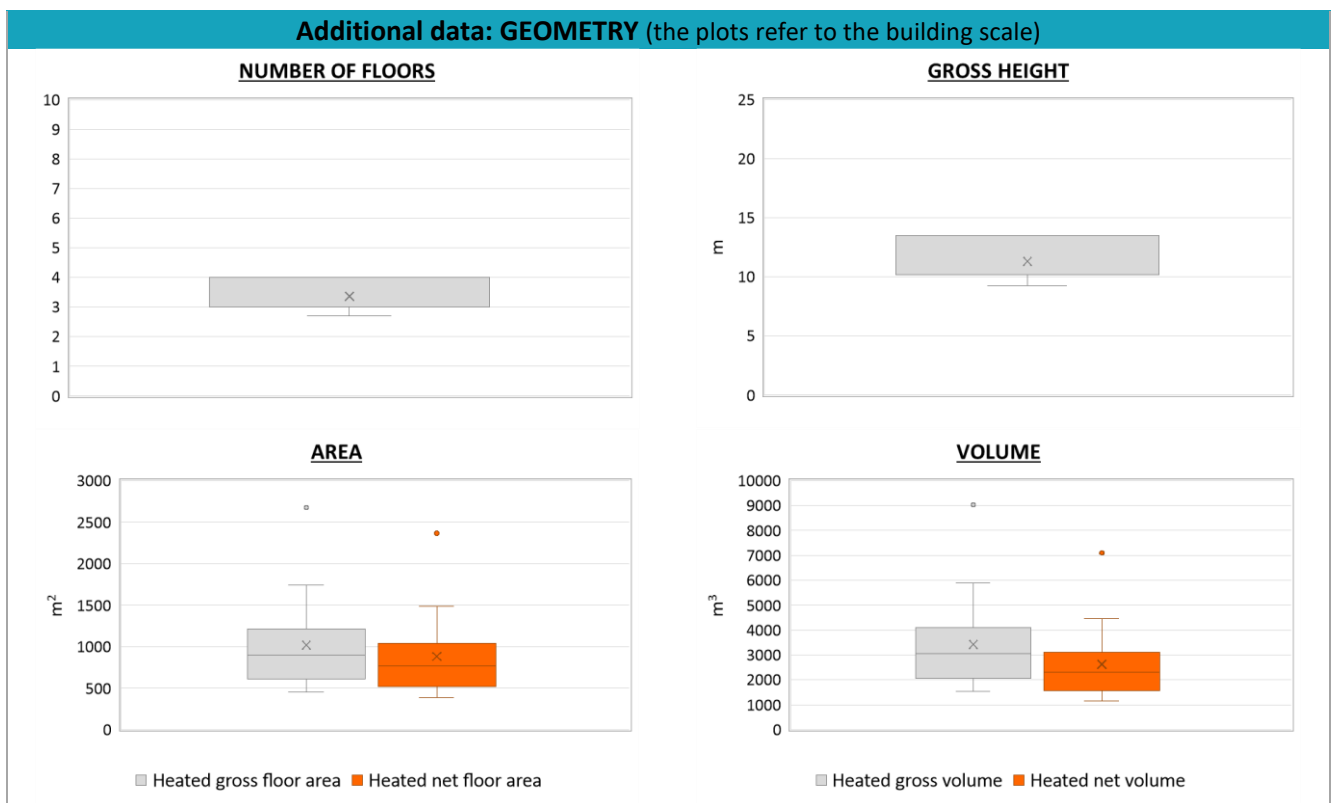


**DAILY OPERATING TIME**



Region:	Tuscany	Archetype code: RES_APPBLOCK_ 1951-1960_D_TUS
Building category:	Entire multi-family block	
Period of construction:	1951-1960	
Climatic zone:	D	
Number of records:		44

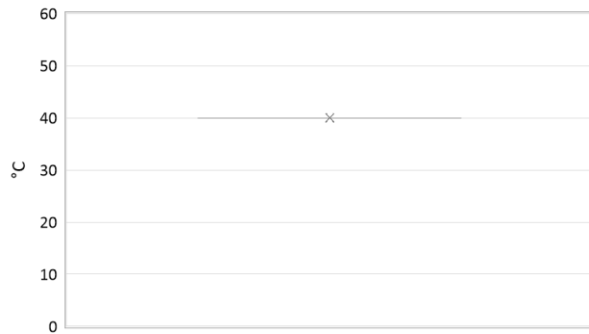
ADDITIONAL DATA								
	Data	Symbol	Unit of measure	Mean value	Standard deviation	Q1 (first quartile)	Median value	Q3 (third quartile)
GEOMETRY: apartments	Inter-storey height	$H_n$	m	-	-	-	-	-
	Heated gross floor area	$A_{H,g}$	m <sup>2</sup>	-	-	-	-	-
	Heated net floor area	$A_{H,n}$	m <sup>2</sup>	-	-	-	-	-
	Heated gross volume	$V_{H,g}$	m <sup>3</sup>	-	-	-	-	-
	Heated net volume	$V_{H,n}$	m <sup>3</sup>	-	-	-	-	-
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	-	-	-	-	-
	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	$\theta_w$	°C	40.00	0.00	40.00	40.00	40.00
	DHW system power *	$P_{W,gen}$	kW	-	-	-	-	-
* These values refer to the apartment scale								



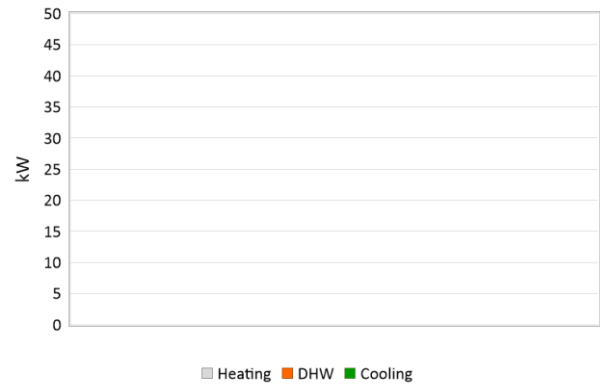
Region:	Tuscany	Archetype code: RES_APPBLOCK_ 1951-1960_D_TUS
Building category:	Entire multi-family block	
Period of construction:	1951-1960	
Climatic zone:	D	
Number of records:		44

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

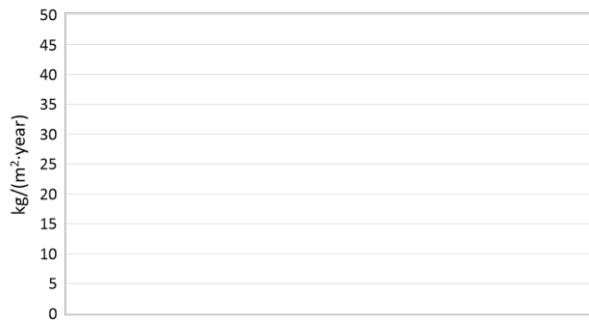
**DHW SUPPLY TEMPERATURE**



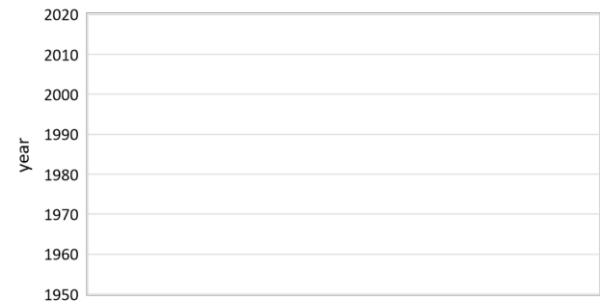
**SYSTEM POWER**



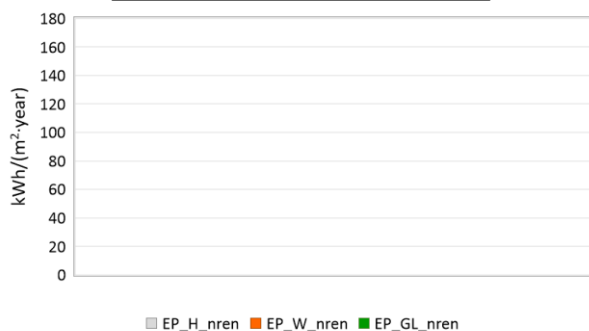
**CO<sub>2</sub> EMISSION**



**HEATING SYSTEM INSTALLATION YEAR**



**NON-RENEWABLE PRIMARY ENERGY USE**



**RENEWABLE PRIMARY ENERGY USE**

