



Apartment Block



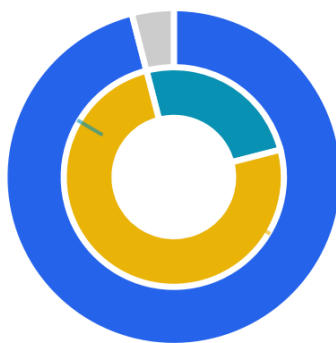
Region	south
Age Class	1995-2001
Net leased area [m²]	1507.0
Storey Height [m]	2.7
Storeys a.g.	3.0



Building Performance (KPIs)

KPI	Mean	95% CI	Unit	CV	n _{Sim}
Final heat energy demand - per year	101531.28	± 2823.60	kWh/a	0.19	90
Final heat energy demand - per m² net leased area and year	67.39	± 0.89	kWh/m²a	0.09	90
Carbon footprint (GWP) from heat energy - per year	25366.98	± 705.46	kgCO ₂ eq,B6/a	0.19	90
Carbon footprint (GWP) from heat energy - per m² net leased area and year	16.84	± 0.22	kgCO ₂ eq,B6/m²a	0.09	90
Life Cycle Carbon footprint (GWP) - over 50 years	1482781.05	± 39980.80	kgCO ₂ eq,full/50a	0.18	90
Life Cycle Carbon footprint (GWP) - per m² net leased area and for 50 years	984.17	± 11.17	kgCO ₂ eq,full/m²50a	0.08	90

ABC



- Operational (96.0%)
- Foundation (1.00%)
- Exterior walls (0.00%)
- Windows (3.00%)
- Roof (0.00%)

Building element	D [kgCO ₂ eq/50a]
Exterior walls	-38.9
Roof	0.0
Foundation	1,339
Windows	-4,131

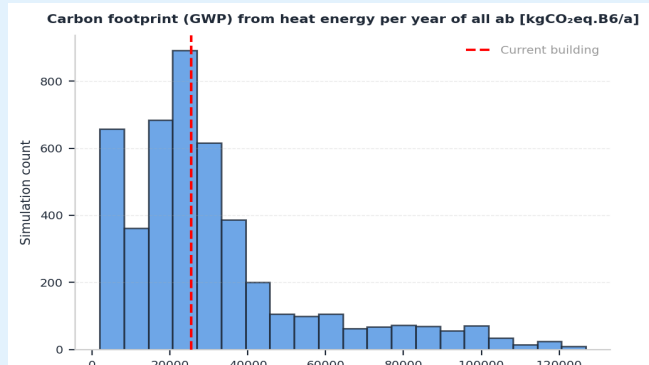
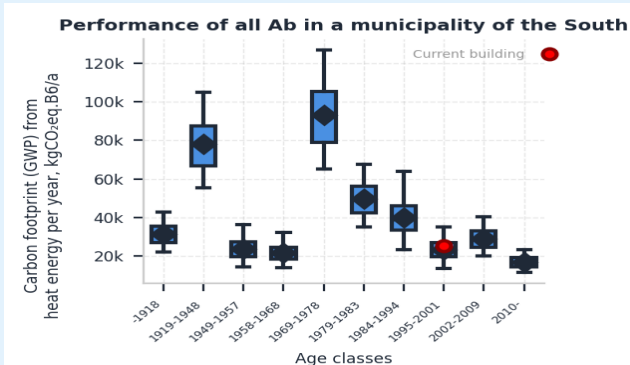
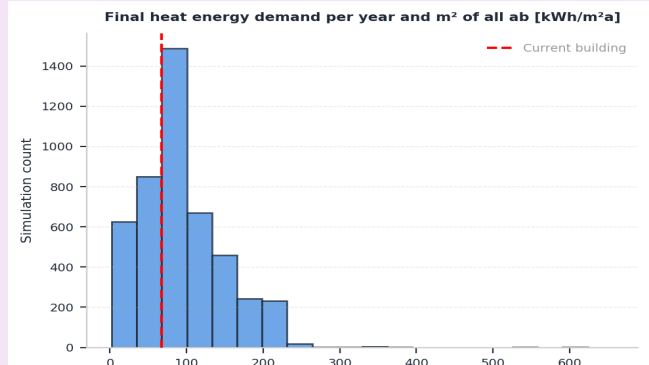
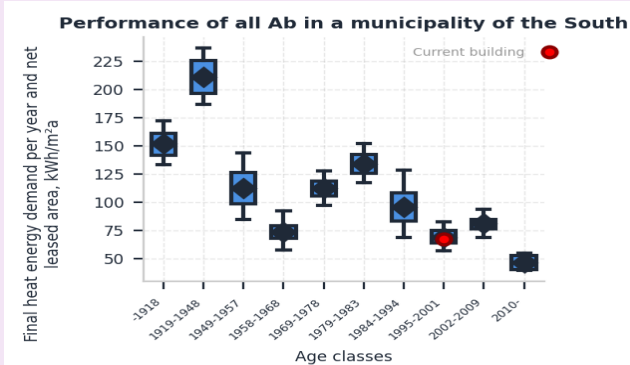
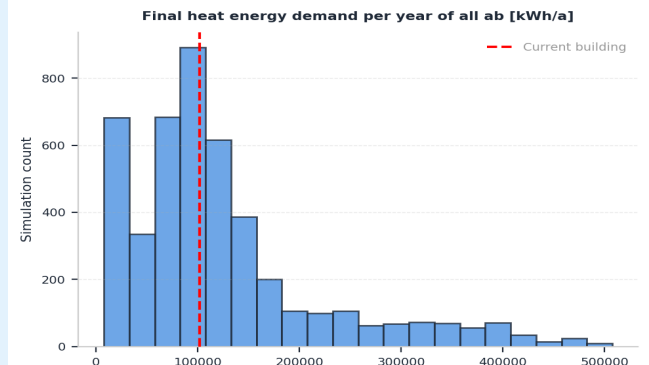
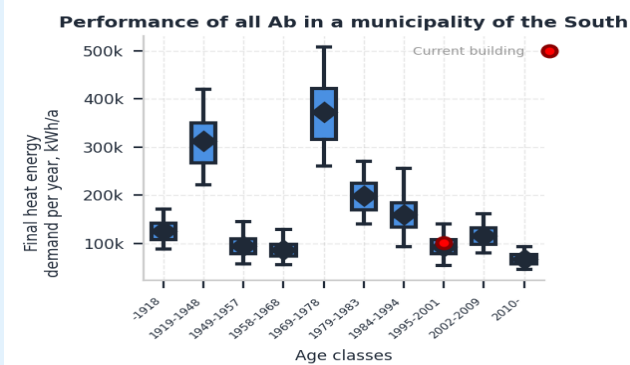


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Building Performance



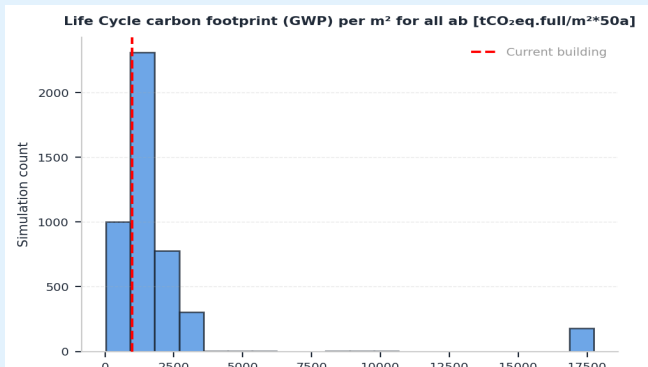
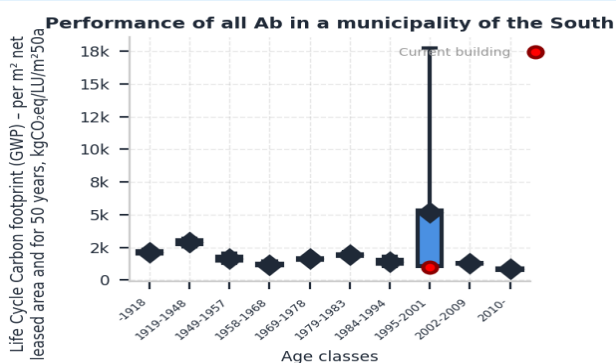
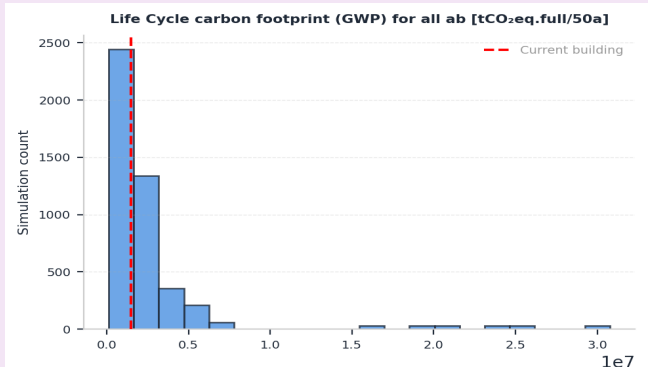
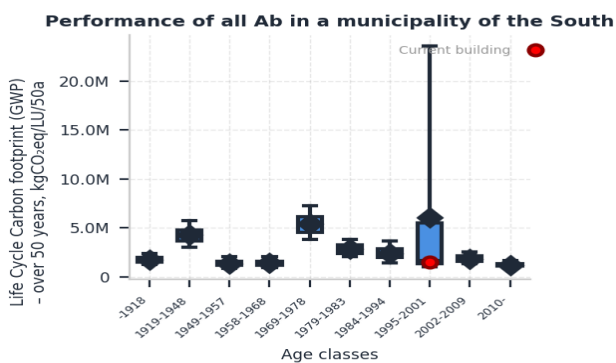
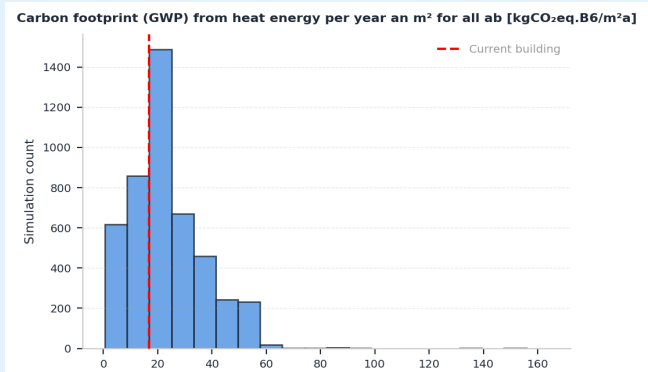
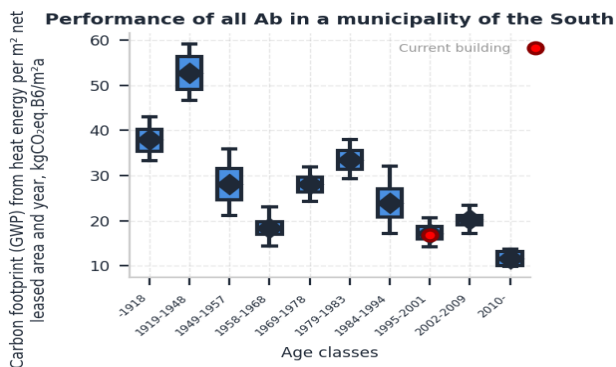


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Exterior Wall

Type: lightweight-timbered	U [W/m²K]		
	Actual: 0.270	Min: 0.140	Max: 0.400

Layer	Material Name	t _i [m]	ρ _i [kg/m³]	λ _i [W/mK]	c _i [J/kgK]	EPD ₁	EPD ₂
0	plaster board	0.013	900	0.21	1384	2	-
1	wooden beams	0.115	600	0.14	1500	14	-
2	mineral wool	0.1	60	0.04	850	5	-
3	chipboard	0.016	700	0.14	1700	3	-
4	exterior plaster	0.015	1800	0.87	850	1	-

Interior Wall

U [W/m²K]		
Actual: 0.650	Min: 0.140	Max: 0.300

Layer	Material Name	t _i [m]	ρ _i [kg/m³]	λ _i [W/mK]	c _i [J/kgK]	EPD ₁	EPD ₂
0	lime plaster	0.1	1600	0.7	850	2	-
1	hardwood	0.15	650	0.14	1500	14	-
2	lime plaster	0.1	1600	0.7	850	5	-

Roof

Type: wooden	U [W/m²K]		
	Actual: 0.160	Min: 0.140	Max: 0.400

Layer	Material Name	t _i [m]	ρ _i [kg/m³]	λ _i [W/mK]	c _i [J/kgK]	EPD ₁	EPD ₂
0	plank revetment	0.02	600	0.13	1500	8	-
1	rafters	0.08	600	0.13	1500	19	-
2	moving air layer	0.06	1.184	0.0261	1.005	12	-
3	mineral wool	0.12	350	0.04	850	16	-
4	roof battens	0.024	600	0.13	1500	18	-
5	bituminized felt	0.002	1100	5	1000	4	-



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Foundation

Type: massive	U [W/m²K]		
	Actual: 0.640	Min: 0.160	Max: 0.600

Layer	Material Name	t_i [m]	ρ_i [kg/m³]	λ_i [W/mK]	c_i [J/kgK]	EPD ₁	EPD ₂
0	cement screed	0.04	2000	1.4	1000	9	-
1	mineral wool	0.05	60	0.04	850	5	-
2	reinforced concrete	0.153	2400	2.04	776	11	-

Floor

U [W/m²K]		
Actual: 0.650	Min: 0.140	Max: 0.300

Layer	Material Name	t_i [m]	ρ_i [kg/m³]	λ_i [W/mK]	c_i [J/kgK]	EPD ₁	EPD ₂
0	cement screed	0.04	1950	1.4	1000	9	-
1	mineral wool	0.04	60	0.035	850	13	-
2	reinforced concrete	0.2	2400	2.1	776	10	-

Window System

Glazing	EPD _{Gl}	Frame type	EPD _{Fr}	window wall share
2	17	pvc	6	0.19497

Heating System

Generator 1	EPD	Heating energy carrier	EPD
boiler_gas_medium_condensing	15	gas	7



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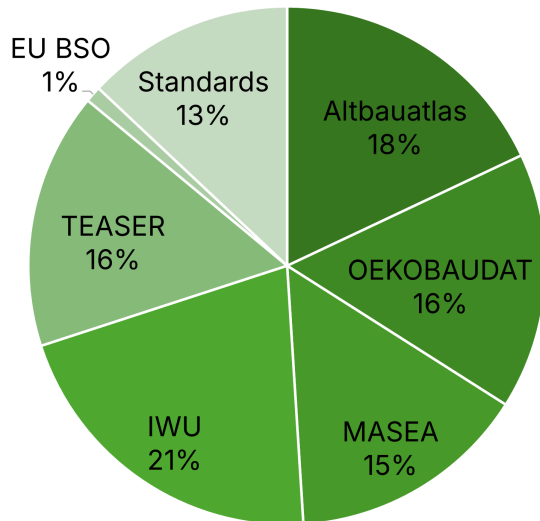


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EPD Summary Table

SPN	Full EPD ID	Material Title
1	004f3f4e-5bb8-4d9e-a104-6999a9e8ad5b	Gypsum lime plaster
2	0773f90c-78ef-4727-a966-3b005c1a1469	PLASTERBOARD / Tool
3	0f2f2410-d9e2-4e0f-837a-987cb3186d81	Chipboard (generic)
4	27ccffb8-02ec-466d-b925-f6db91d4ef71	Bitumen sheets G 200 S4
5	50d421e2-3a7b-4659-92a4-f20d6a52fcf0	Mineral wool (facade insulation)
6	73de9e80-8ed2-47d8-b5b6-854c84166f24	Window sash PVC-U
7	84aa7483-9824-49a9-a3e3-f9fb092ea7b7	Use - 1 kWh of final energy from gas calorific value (according to GEG)
8	86138863-3c1c-4345-9ae9-03ba28a5f9a7	Laminated timber planks coniferous wood (generic)
9	86d919ee-8f30-4ca4-9b7e-717aecba6ac0	Cement screed
10	Synthetic_2	Concrete C30/37 with reinforcement steel
11	Synthetic_7	Ready-mix concrete C30/37 with reinforcement steel
12	Synthetic_8	Air layer
13	ac779922-219f-4730-9aef-a7da84d334c1	Mineral wool (floor insulation)
14	aeab0f39-5eab-422f-8c4b-822bb98aa63c	Laminated wood beam softwood (generic)
15	ce333ecb-6cad-441c-9dae-70966acf9333	Gas condensing boiler 20-120 kW (upright unit)
16	d3661bd8-0107-4081-987b-4bdd5cfcb68d	Mineral wool (pitched roof insulation)
17	dcf38066-e336-46a7-b0a8-b2453dd2872d	Window glass, single
18	e70d9027-5315-481c-92e2-7b7d8a02eaba	holzius ? solid wood slab elements
19	efa55966-4f29-4f15-bfec-8c08b3945923	Glued laminated timber



This archetype represents :

- **0.13%** of all Apartment Blocks
- **0.22%** of all Apartment Blocks of the specific region

Data source	Link
Altbauatlas	https://www.altbauatlas.de/index.php
OEKOBAUDAT	https://www.oekobaudat.de/en.html
IWU	https://datenbasis.iwu.de/ https://wohngebaeuedaten2016.iwu.de/
MASEA	https://www.masea-ensan.de/
TEASER	https://ebc-tools.eonerc.rwth-aachen.de/en/teaser
EU BSO	https://building-stock-observatory.energy.ec.europa.eu/database/