



Apartment Block



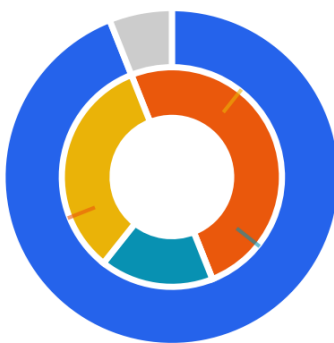
Region	south
Age Class	1984-1994
Net leased area [m²]	1667.8
Storey Height [m]	2.7
Storeys a.g.	4.0



Building Performance (KPIs)

KPI	Mean	95% CI	Unit	CV	n _{Sim}
Final heat energy demand - per year	159345.62	± 4191.56	kWh/a	0.18	90
Final heat energy demand - per m² net leased area and year	95.57	± 0.93	kWh/m²a	0.07	90
Carbon footprint (GWP) from heat energy - per year	39811.54	± 1047.24	kgCO ₂ eq,B6/a	0.18	90
Carbon footprint (GWP) from heat energy - per m² net leased area and year	23.88	± 0.23	kgCO ₂ eq,B6/m²a	0.07	90
Life Cycle Carbon footprint (GWP) - over 50 years	2449316.74	± 63483.22	kgCO ₂ eq,full/50a	0.17	90
Life Cycle Carbon footprint (GWP) - per m² net leased area and for 50 years	1468.88	± 12.52	kgCO ₂ eq,full/m²50a	0.06	90

ABC



- Operational (94.0%)
- Exterior walls (3.00%)
- Foundation (1.00%)
- Windows (2.00%)
- Roof (0.00%)

Building element	D [kgCO ₂ eq/50a]
Exterior walls	-1,164
Roof	-3,502
Foundation	1,398
Windows	-4,853

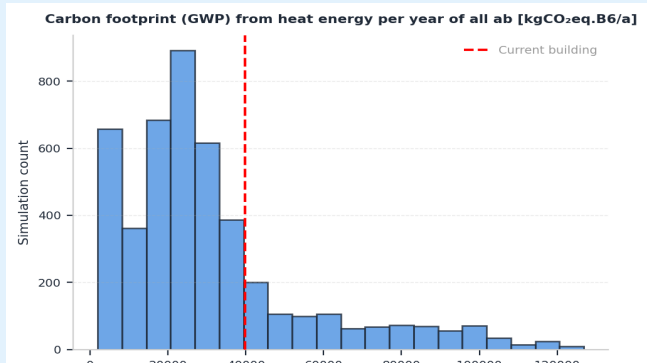
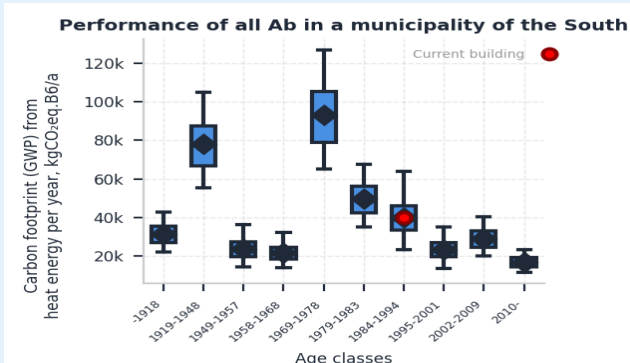
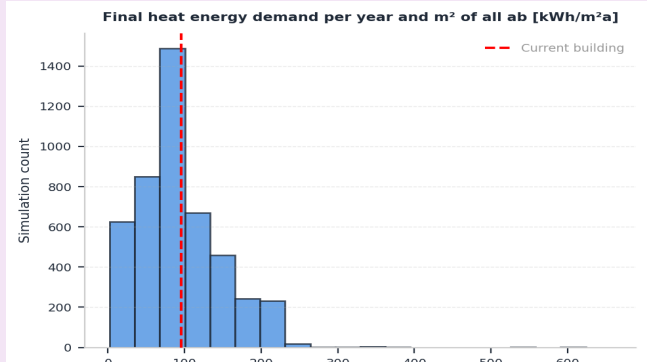
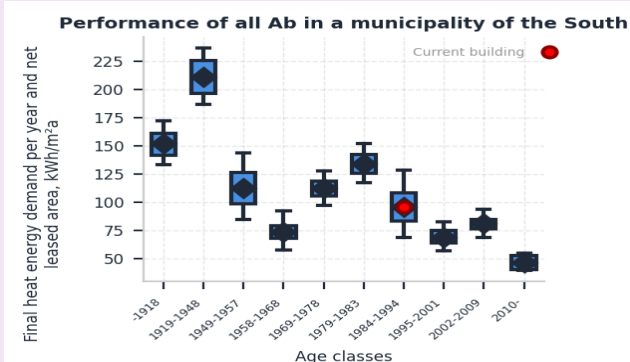
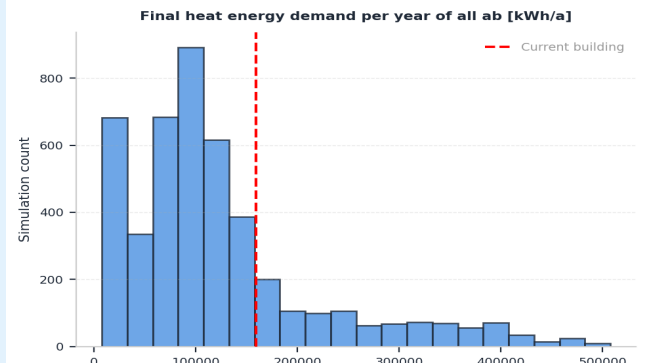
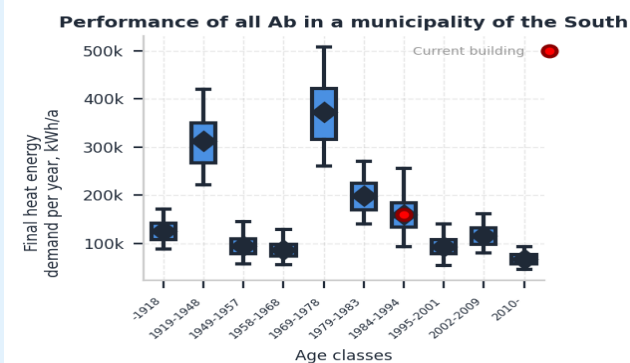


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Building Performance



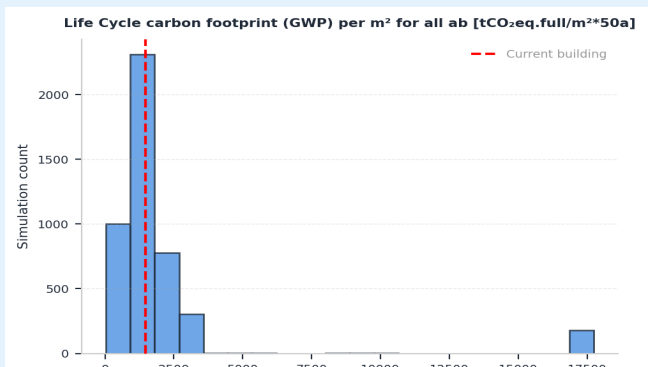
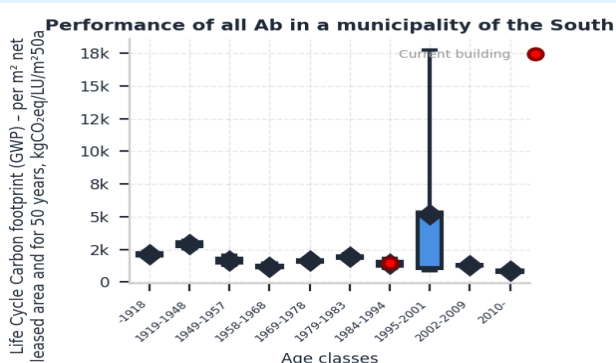
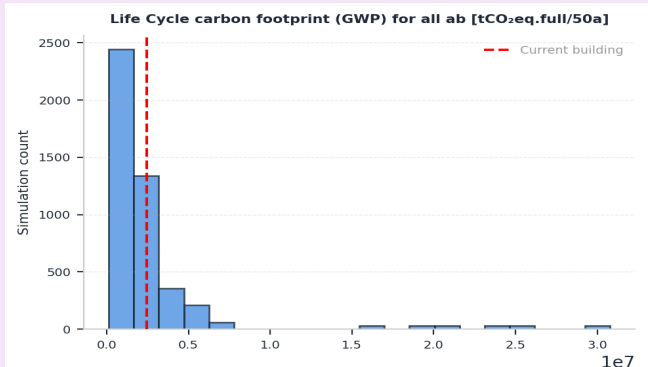
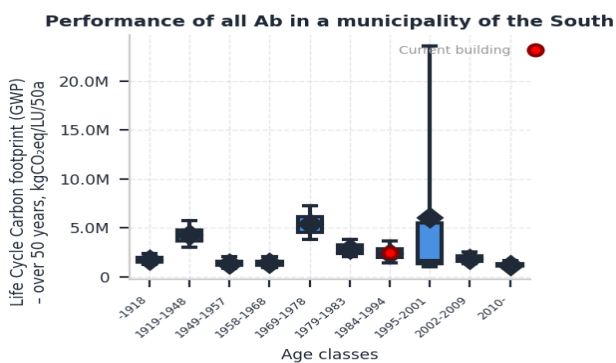
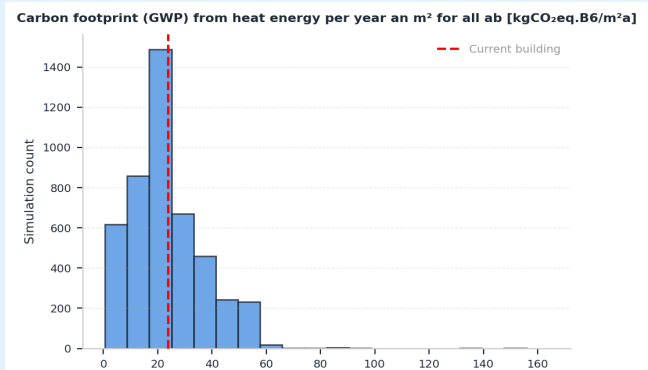
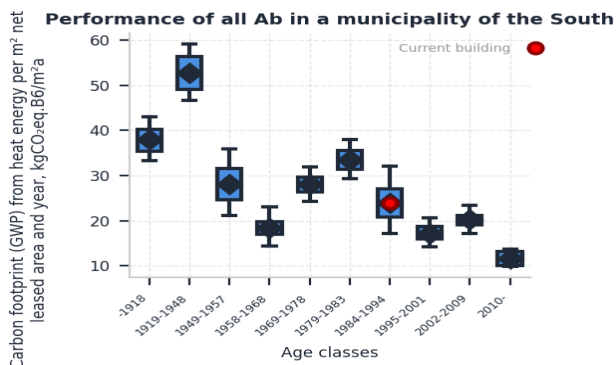


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Exterior Wall

Type: massive-double	U [W/m ² K]		
	Actual: 0.300	Min: 0.160	Max: 0.600

Layer	Material Name	t _i [m]	ρ _i [kg/m ³]	λ _i [W/mK]	c _i [J/kgK]	EPD ₁	EPD ₂
0	interior plaster	0.01	1400	0.7	850	10	-
1	perforated bricks	0.24	1400	0.6	850	3	-
2	styrofoam	0.08	30	0.035	1500	18	-
3	perforated bricks	0.24	1400	0.6	850	3	-
4	exterior plaster	0.015	1800	0.87	850	1	-

Interior Wall

U [W/m ² K]		
Actual: 2.420	Min: 0.140	Max: 0.300

Layer	Material Name	t _i [m]	ρ _i [kg/m ³]	λ _i [W/mK]	c _i [J/kgK]	EPD ₁	EPD ₂
0	lime plaster	0.01	1600	0.7	850	10	-
1	solid brick	0.15	1800	0.7	850	3	-
2	lime plaster	0.01	1600	0.7	850	18	-

Roof

Type: wooden	U [W/m ² K]		
	Actual: 0.180	Min: 0.160	Max: 0.500

Layer	Material Name	t _i [m]	ρ _i [kg/m ³]	λ _i [W/mK]	c _i [J/kgK]	EPD ₁	EPD ₂
0	gypsum plasterboard	0.013	900	0.21	1228	19	-
1	rafters	0.08	600	0.13	1500	17	-
2	moving air layer	0.06	1.184	0.0261	1.005	13	-
3	polyethylene underlay	0.005	900	0.35	2300	5	-
4	glass wool	0.09	120	0.04	840	6	-
5	roof tiles	0.02	1786	0.55	889	14	-



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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	4	-
2	reinforced concrete	0.153	2400	2.04	776	12	-

Floor

U [W/m²K]		
Actual: 2.420	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	15	-
2	reinforced concrete	0.2	2400	2.1	776	11	-

Window System

Glazing	EPD _{Gl}	Frame type	EPD _{Fr}	window wall share
1	16	pvc	7	0.20694

Heating System

Generator 1	EPD	Heating energy carrier	EPD
boiler_gas_medium_low_temperature	2	gas	8



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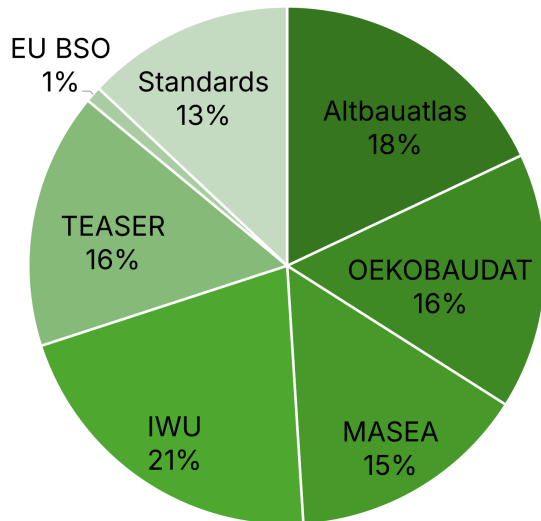


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EPD Summary Table

SPN	Full EPD ID	Material Title
1	004f3f4e-5bb8-4d9e-a104-6999a9e8ad5b	Gypsum lime plaster
2	230155d8-a5df-4b32-b6e9-46bdbcf526b3	Gas low temperature boiler 20-120 kW (upright unit)
3	30514538-fcb4-483b-b5d5-c108d2037536	Brick (unfilled)
4	50d421e2-3a7b-4659-92a4-f20d6a52fcf0	Mineral wool (facade insulation)
5	6869f7c1-1b2b-4f30-afc9-823a0104f1d9	Damp insulation PE
6	7091503e-34e5-44cd-9acb-7c2f16f6097f	Foam glass insulation material
7	73de9e80-8ed2-47d8-b5b6-854c84166f24	Window sash PVC-U
8	84aa7483-9824-49a9-a3e3-f9fb092ea7b7	Use - 1 kWh of final energy from gas calorific value (according to GEG)
9	86d919ee-8f30-4ca4-9b7e-717aecba6ac0	Cement screed
10	9a670d29-efb9-4fde-95ab-182a0b1e7280	Lime gypsum interior plaster
11	Synthetic_2	Concrete C30/37 with reinforcement steel
12	Synthetic_7	Ready-mix concrete C30/37 with reinforcement steel
13	Synthetic_8	Air layer
14	a6d60a75-7a4e-4dfc-87cc-fd40f68d279a	Roofing tiles (including accessories)
15	ac779922-219f-4730-9aef-a7da84d334c1	Mineral wool (floor insulation)
16	dcf38066-e336-46a7-b0a8-b2453dd2872d	Window glass, single
17	efa55966-4f29-4f15-bfec-8c08b3945923	Glued laminated timber
18	f2552bdf-c847-4ef8-9665-c37e8ef4d44d	Polystyrene foam filling (without binder)
19	f6878cee-a4bd-43da-a830-c64b975cb957	DRY SCREED PLASTERBOARD / Tool



This archetype represents :

- **0.11%** of all Apartment Blocks
- **0.97%** 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/