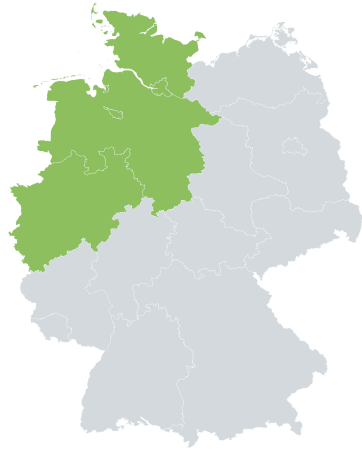




Apartment Block



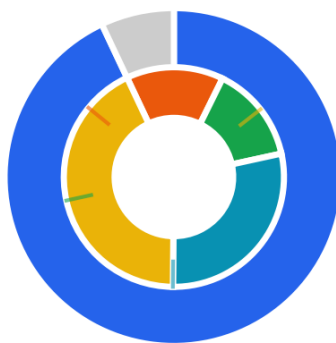
Region	north
Age Class	1995-2001
Net leased area [m²]	1536.9
Storey Height [m]	2.7
Storeys a.g.	3.0



Building Performance (KPIs)

KPI	Mean	95% CI	Unit	CV	n _{Sim}
Final heat energy demand - per year	104928.06	± 2921.36	kWh/a	0.19	90
Final heat energy demand - per m² net leased area and year	68.29	± 0.91	kWh/m²a	0.09	90
Carbon footprint (GWP) from heat energy - per year	26215.64	± 729.88	kgCO ₂ eq,B6/a	0.19	90
Carbon footprint (GWP) from heat energy - per m² net leased area and year	17.06	± 0.23	kgCO ₂ eq,B6/m²a	0.09	90
Life Cycle Carbon footprint (GWP) - over 50 years	1692098.55	± 45531.22	kgCO ₂ eq,full/50a	0.18	90
Life Cycle Carbon footprint (GWP) - per m² net leased area and for 50 years	1101.23	± 12.24	kgCO ₂ eq,full/m²50a	0.07	90

ABC

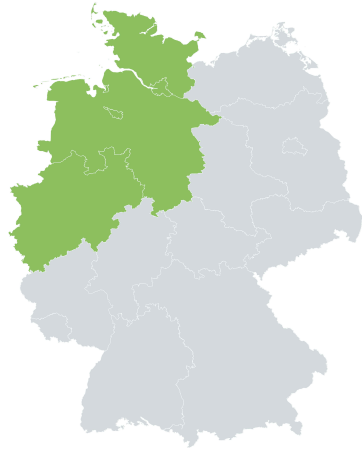


- Operational (93.0%)
- Exterior walls (1.00%)
- Roof (1.00%)
- Foundation (2.00%)
- Windows (3.00%)

Building element	D [kgCO ₂ eq/50a]
Exterior walls	5,253
Roof	-6,558
Foundation	-1,107
Windows	-4,213



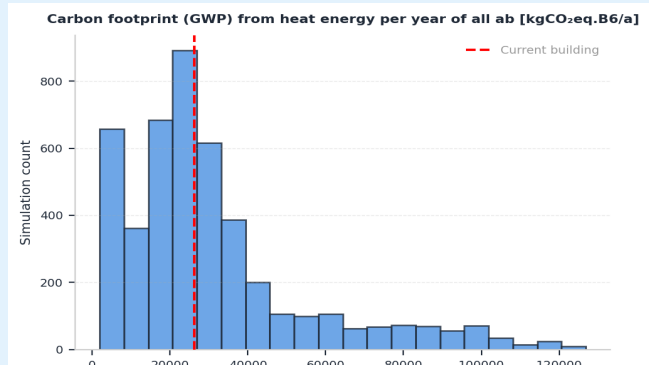
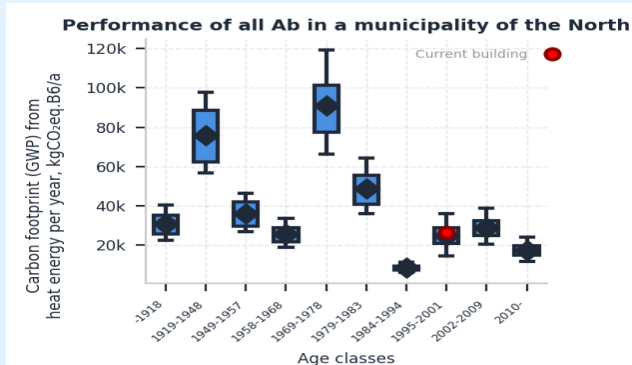
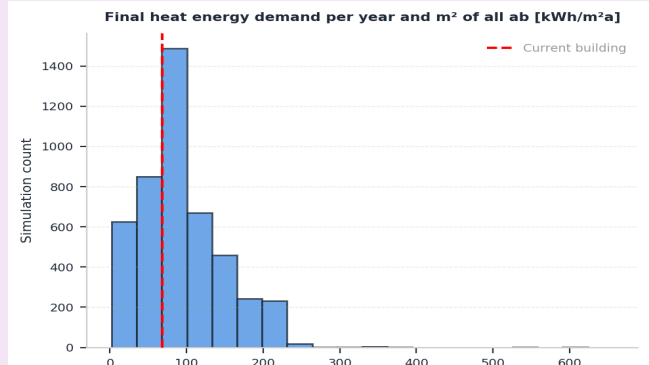
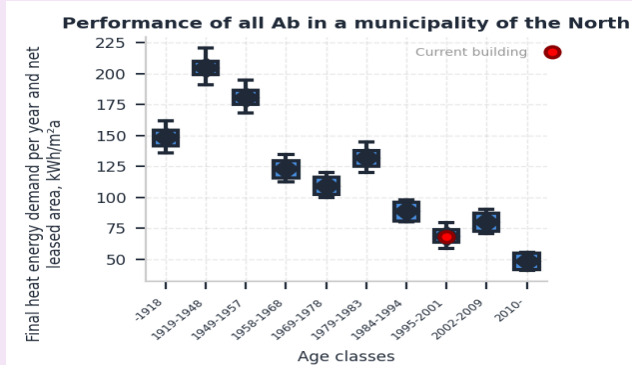
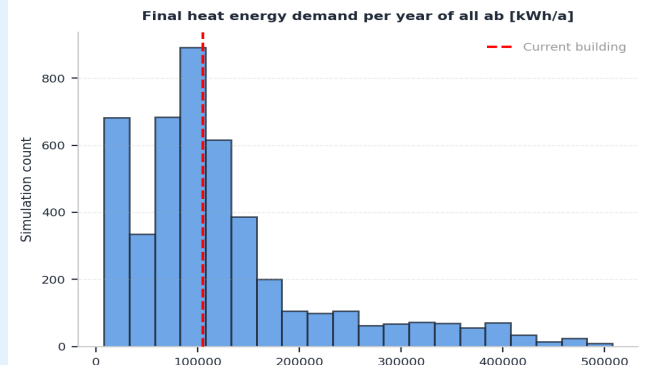
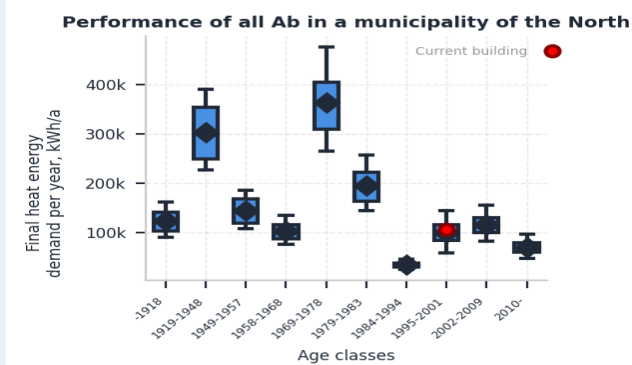
Apartment Block



Region	north
Age Class	1995-2001
Net leased area [m²]	1536.9
Storey Height [m]	2.7
Storeys a.g.	3.0

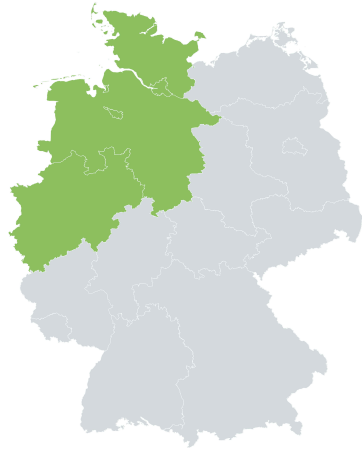


Building Performance





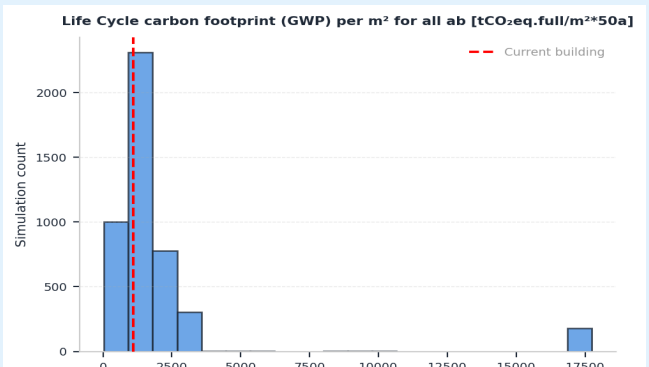
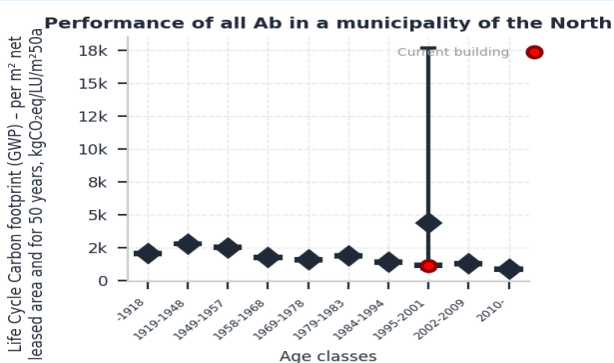
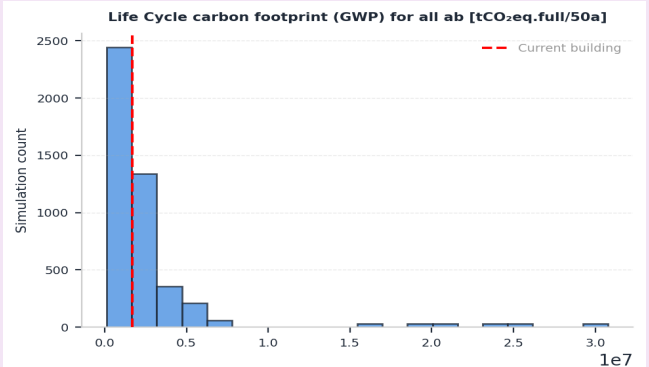
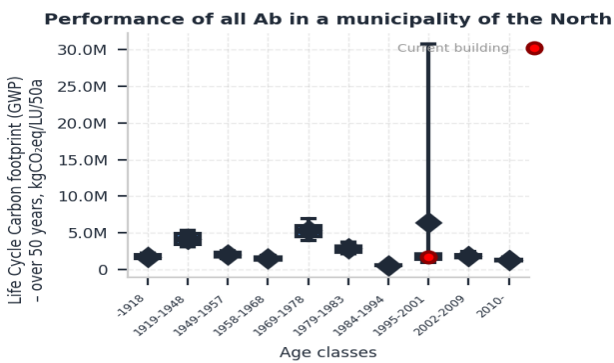
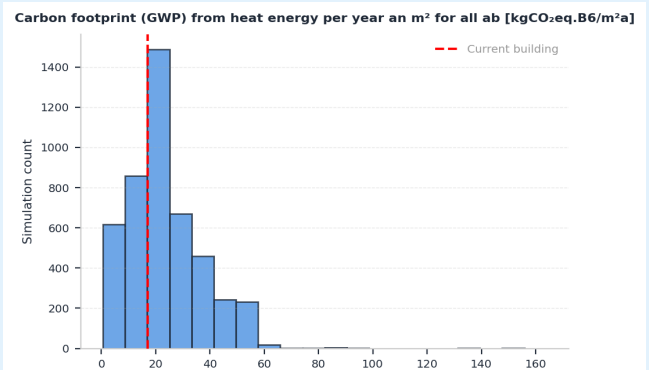
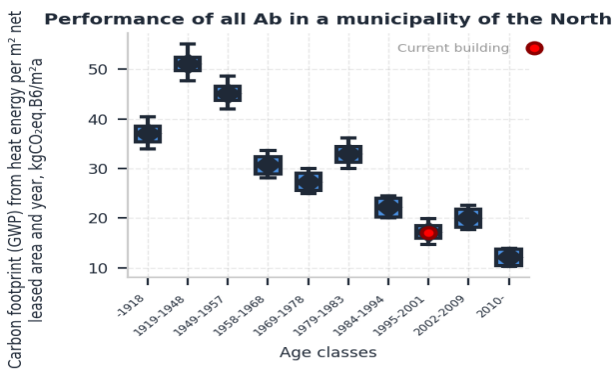
Apartment Block



Region	north
Age Class	1995-2001
Net leased area [m²]	1536.9
Storey Height [m]	2.7
Storeys a.g.	3.0

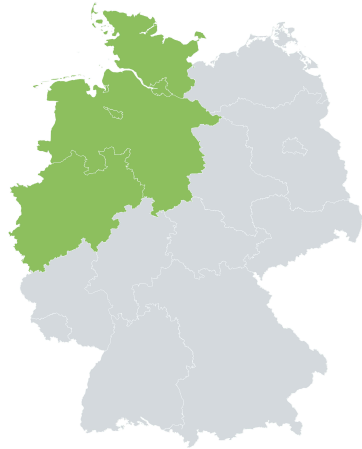


Building Performance





Apartment Block



Region	north
Age Class	1995-2001
Net leased area [m²]	1536.9
Storey Height [m]	2.7
Storeys a.g.	3.0



Exterior Wall

Type: massive-monolithic	U [W/m²K]		
	Actual: 0.340	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	interior plaster	0.01	1400	0.7	850	7	-
1	Aerated concrete	0.24	1100	0.87	1050	9	-
2	mineral wool	0.1	60	0.04	850	3	-
3	exterior plaster	0.015	1800	0.87	850	1	-

Interior Wall

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	lime plaster	0.01	1600	0.7	850	7	-
1	solid brick	0.15	1800	0.7	850	9	-
2	lime plaster	0.01	1600	0.7	850	3	-

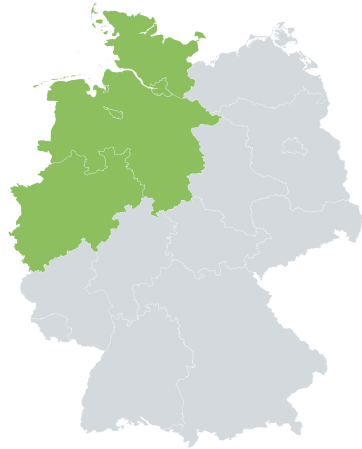
Roof

Type: wooden	U [W/m²K]		
	Actual: 0.130	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	gypsum plasterboard	0.013	900	0.21	1228	15	-
1	rafters	0.08	600	0.13	1500	14	-
2	moving air layer	0.06	1.184	0.0261	1.005	10	-
3	polystyrene	0.15	40	0.035	1380	2	-
4	roof tiles	0.02	1786	0.55	889	11	-



Apartment Block



Region	north
Age Class	1995-2001
Net leased area [m²]	1536.9
Storey Height [m]	2.7
Storeys a.g.	3.0



Foundation

Type: massive	U [W/m²K]		
	Actual: 0.430	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	floating cement screed	0.04	2000	1.4	1000	16	-
1	polystyrene	0.07	40	0.035	1380	2	-
2	reinforced concrete	0.16	2400	2.1	776	8	-

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	6	-
1	mineral wool	0.04	60	0.04	850	3	-
2	reinforced concrete	0.2	2400	2.1	779	8	-

Window System

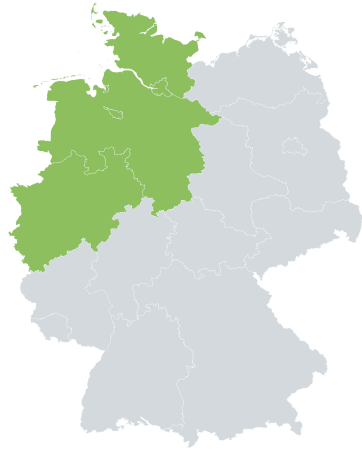
Glazing	EPD _{Gl}	Frame type	EPD _{Fr}	window wall share
2	13	pvc	4	0.19497

Heating System

Generator 1	EPD	Heating energy carrier	EPD
boiler_gas_medium_condensing	12	gas	5



Apartment Block

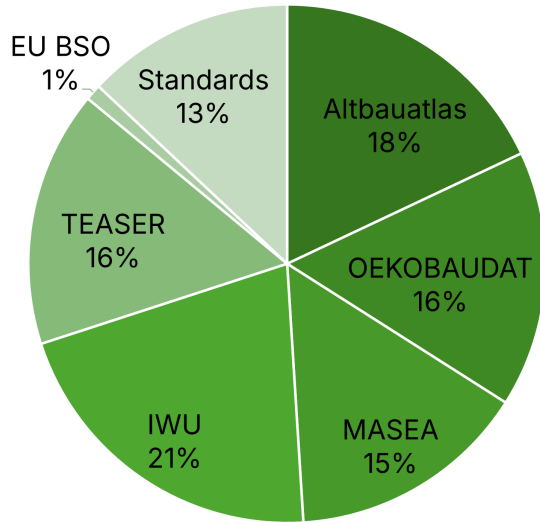


Region	north
Age Class	1995-2001
Net leased area [m²]	1536.9
Storey Height [m]	2.7
Storeys a.g.	3.0



EPD Summary Table

SPN	Full EPD ID	Material Title
1	004f3f4e-5bb8-4d9e-a104-6999a9e8ad5b	Gypsum lime plaster
2	4e83c488-bb36-40b0-bfd4-b2aa7f1c0f04	Expanded Polystyrene (EPS) Foam Insulation (density 30 kg/m³)
3	50d421e2-3a7b-4659-92a4-f20d6a52fcf0	Mineral wool (facade insulation)
4	73de9e80-8ed2-47d8-b5b6-854c84166f24	Window sash PVC-U
5	84aa7483-9824-49a9-a3e3-f9fb092ea7b7	Use - 1 kWh of final energy from gas calorific value (according to GEG)
6	86d919ee-8f30-4ca4-9b7e-717aecba6ac0	Cement screed
7	9a670d29-efb9-4fde-95ab-182a0b1e7280	Lime gypsum interior plaster
8	Synthetic_2	Concrete C30/37 with reinforcement steel
9	Synthetic_6	Autoclaved aerated concrete elements with reinforcement steel
10	Synthetic_8	Air layer
11	a6d60a75-7a4e-4dfc-87cc-fd40f68d279a	Roofing tiles (including accessories)
12	ce333ecb-6cad-441c-9dae-70966acf9333	Gas condensing boiler 20-120 kW (upright unit)
13	dcf38066-e336-46a7-b0a8-b2453dd2872d	Window glass, single
14	efa55966-4f29-4f15-bfec-8c08b3945923	Glued laminated timber
15	f6878cee-a4bd-43da-a830-c64b975cb957	DRY SCREED PLASTERBOARD / Tool
16	fe371be5-c72f-4203-8569-a085ef375ba4	CALCIUM SULPHATE FLOWING SCREED AND CONVENTIONAL CALCIUM SULPHATE SCREED



This archetype represents :

- **2.36%** of all Apartment Blocks
- **5.07%** 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/