



# // STATUS UND PROGNOSE: SO BAUT DEUTSCHLAND – SO WOHNTE DEUTSCHLAND

Der Chancen-Check für den Wohnungsbau

// Bauforschungsbericht Nr. 86

**ARGE//eV**  
Arbeitsgemeinschaft  
für zeitgemäßes Bauen e.V.

### 3.2 Current construction capacities and overall economic development

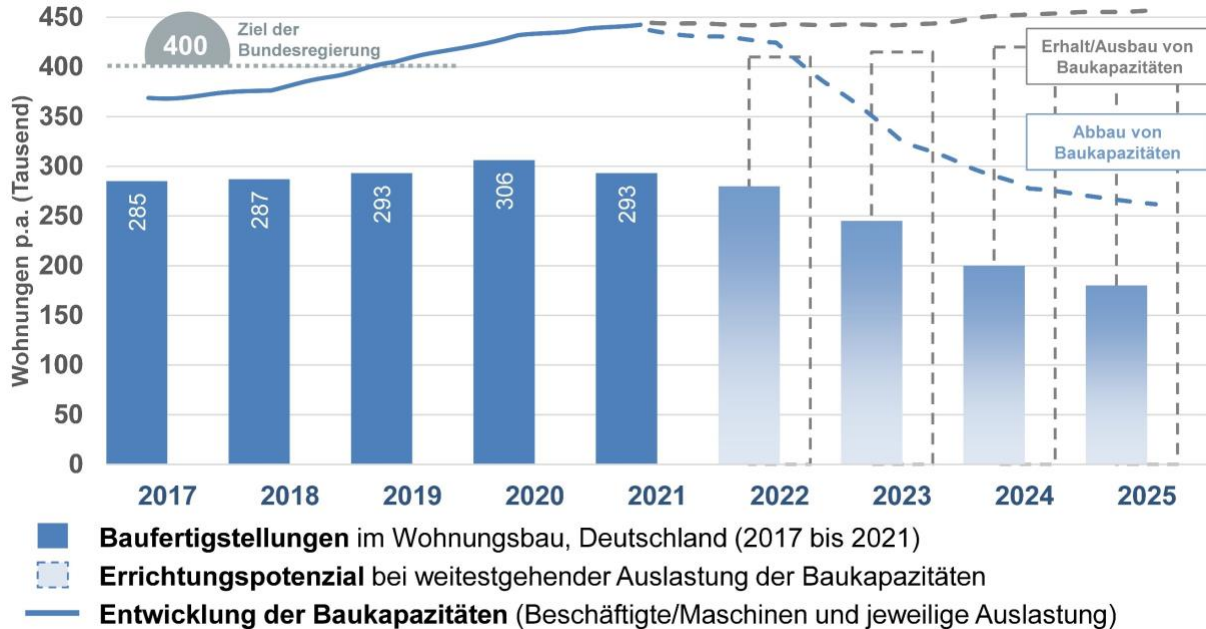


Figure 28: Development of housing completions and the corresponding construction capacities in Germany (2017 to 2021) as well as possible development scenarios for the construction potential in residential construction until 2025 (Scenario 1 based on the assumption of continuous maintenance and expansion of construction capacities and Scenario 2 based on the assumption of a reduction in construction capacities)  
Source: Federal Statistical Office, BBSR, DIW, ifo Institute, BAU Industrie, ZDB, own calculation

Figure 28 shows the development of construction completions in residential construction in Germany, starting with 2017. At the same time, the development of construction capacities is shown, as they have developed with an increase in residential construction activity and the current peak in residential construction with the construction of 306,000 residential units in 2020. With a capacity utilisation of approx. 95 % for employees and machine use, there is currently a realistic potential for the construction of approx. 400,000 residential units per year, provided that the necessary building permits, land and construction readiness as well as the other necessary framework conditions such as financing security and approval for the start of construction are available.

Assuming a realistic and affordable utilisation of the current capacities of the building trade and construction industry, it can be assumed that 400,000 housing units could currently be built in Germany per year if the other framework conditions were right.

In the event of a further decline in housing construction completions, however, a reduction and meltdown of the necessary capacities must also be expected, so that by 2025 the necessary construction capacities in Germany would only be sufficient for the construction of approx. 275,000 housing units - with a further long-term downward trend.



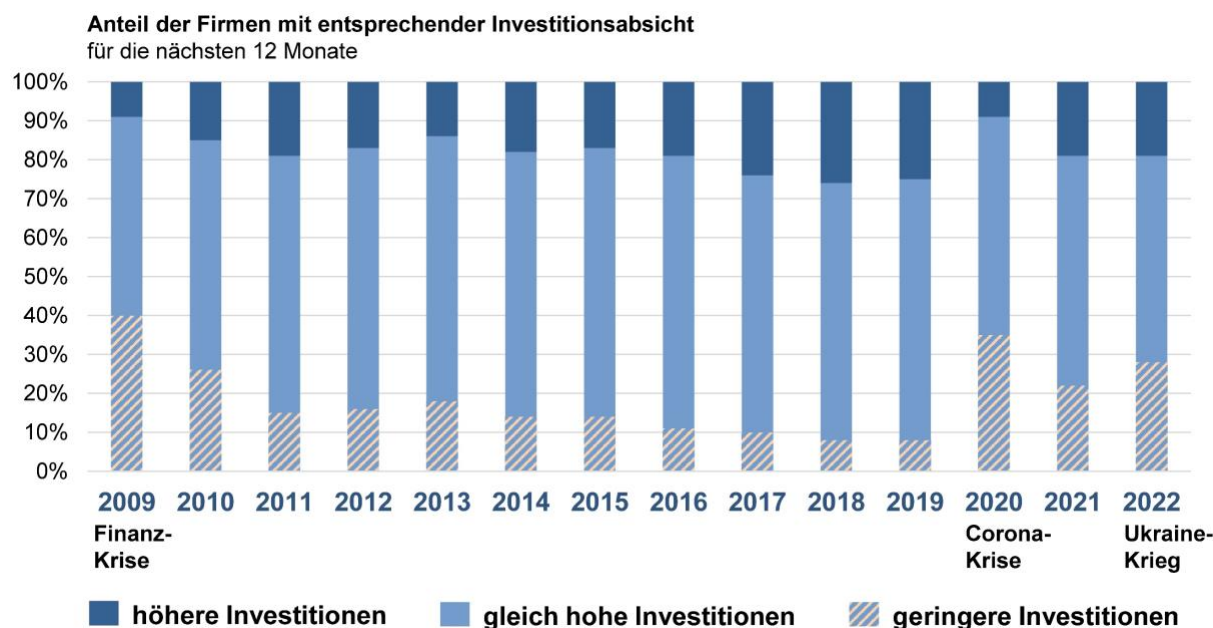


Figure 29: Development of investment intentions of construction companies in Germany (2009 to 2022), share of companies with corresponding investment intentions for the next 12 months (allocation categories: higher, same or lower investments)

Source: ifo Institute, DIHK, BAU Industrie, own presentation

The scenario of dwindling construction capacities is also supported by current surveys of construction companies regarding their investment intentions. From their results, a significant investment behaviour of the companies can be depicted for the last few years (see Figure 29).

In the years 2016 to 2019, the share of companies expecting lower investments was still around 10% - with a downward trend - but with the onset of the Corona crisis in 2020, this share jumped to around 35%. In 2021, the willingness to invest recovered somewhat, only to drop again significantly in 2022 - with the uncertainties, prospects and expected consequences of the Ukraine war (approx. 30 % of companies in 2022 with the intention of lower investments for the next 12 months).

Following the facts described above, the developments forecast for Germany by the Kiel Institute for the World Economy<sup>1</sup> for 2023 and 2024 already reflect negative developments, especially for construction investments and residential construction. In the current year alone, a significant year-on-year decline of 4.1 % is expected for construction investments and 6.1 % for residential construction. Thus, under the current framework conditions, a strong decline in housing completions is to be expected in 2023.

The current survey results of the ifo Institute<sup>2</sup> also speak for a high probability of occurrence of this predicted downward development in the construction sector and in residential construction, according to which an increasing share of residential construction companies report a lack of orders, among other things as a result of increased cancellations in recent months (approx. 15 % of the companies report cancelled orders for February 2023). In addition, an increasingly high proportion of firms complain about fundamental financing difficulties. While this share was generally well below 2 % between 2012 and 2021, it is currently around 8 %. These circumstances, but above all the rising wave of cancellations, have also resulted in the expectation indicator for future business in residential construction dropping to a historic low of minus 65.6 points.

<sup>1</sup> IfW Kiel - Economic report 03/2023

<sup>2</sup> Ifo Institute- Business Survey 02/2023

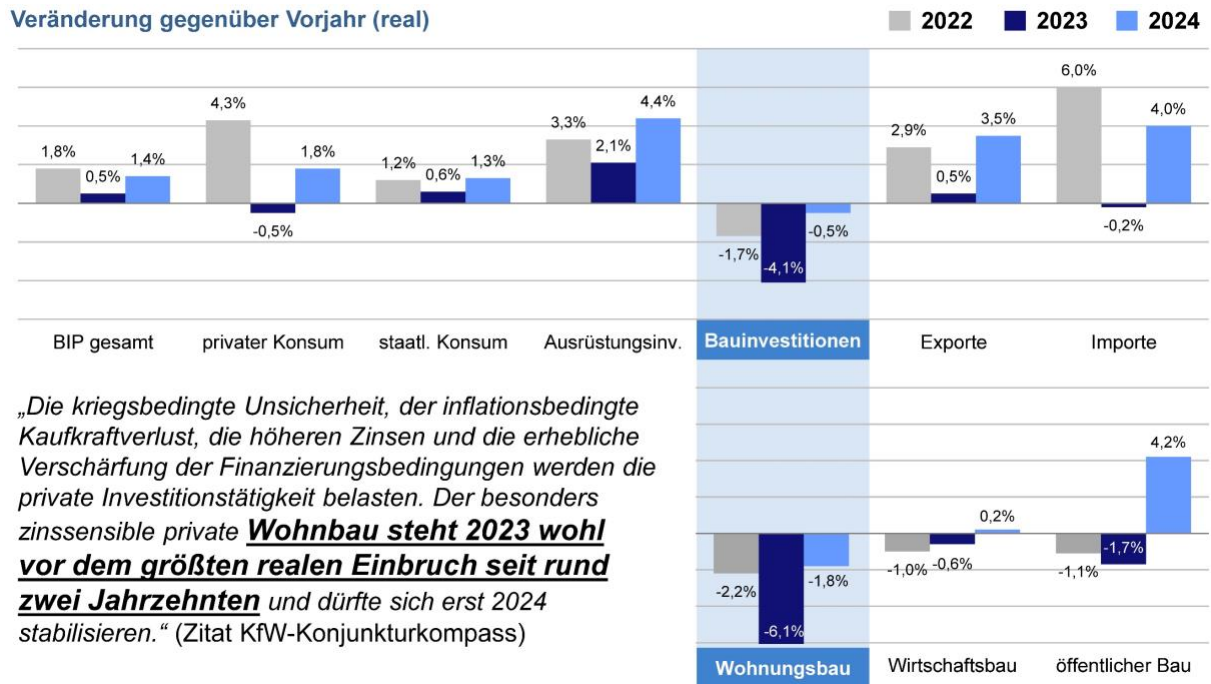


Figure 30: Overall economic development in Germany - changes compared to the previous year (real); developments in construction investments and residential construction are highlighted in colour, period: 2022, forecast 2023 and 2024

Source: IfW Kiel, KfW, BBS, own presentation

These survey results obviously do not bode well for housing construction, the preservation of building capacities and the related political goal of building 400,000 dwellings per year (including 100,000 social housing units) in Germany.

### 3.3 Housing at the tipping point or: Preventing the Seneca effect

Complex systems develop over the very long term, but the collapse usually occurs quickly and at short notice. The collapse of these systems often begins suddenly and unexpectedly, proceeds rapidly, and the result is often catastrophic. On a larger scale, this was the case with the collapse of entire state systems as well as, for example, with the financial crisis in 2008.

The scientist Ugo Bardi, Professor of Physical Chemistry at the University of Florence, calls this phenomenon the "Seneca effect".<sup>3</sup> The "Seneca effect" is named after the Roman philosopher Lucius Annaeus Seneca (1 to 65 AD), who was the first to understand that a collapse of systems obeys different rules than their structure. He described it in his work "De Brevitate Vitae" ("On the Brevity of Life") with the words: *"It is not that we have too little time, but that we waste too much of it."*

The Seneca effect describes the fact that the collapse of a system often happens faster than its construction. This is true for many systems, such as economic and financial systems, ecosystems and even the housing system. When a system has become unstable and has reached a critical level, it can collapse quickly, even if the system has taken a long time to build.

The Seneca effect has far-reaching implications for many areas of human life. It makes it clear that we should not rely on our success and progress, but that we must constantly strive to keep our systems stable and improve them to avoid collapse.

In modern science, the Seneca effect is often applied to complex systems, such as the global economy or the Earth's climate system. It shows that successful stability and sustainability of systems are crucial to ensure a future worth living for us and future generations. This premise applies in full also and in particular to housing with all its implications for the stability of the economy and society.

The main strategic goal must be to keep housing construction flowing, otherwise a drastic reduction in capacity is to be expected in the short term and thus, in the long term, a no longer existing potential to realise housing construction in the current or an actually necessary higher number of units.

Figure 31 below illustrates this "Seneca effect" in retrospect over the last 30 years in connection with the development of the order backlog (boom, crisis: decline and stagnation, revival and boom) in the main construction trades and the temporally assigned employment index.<sup>4</sup> The reduction of employees, i.e. of construction capacities, is up to six times faster than the recovery of employees and the successive build-up of construction capacities.

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<sup>3</sup> [ Bardi 2017]

<sup>4</sup> [ZDB 2023]

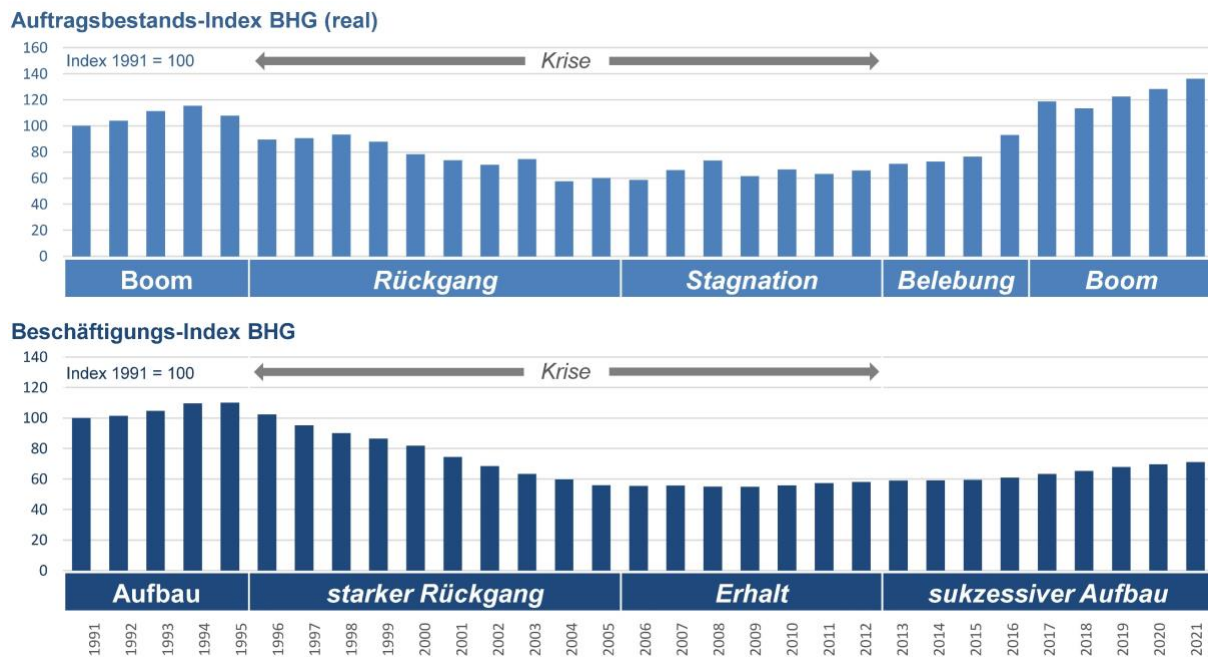


Figure 31: Comparison of the order backlog index in the construction industry (real) and the employment index in the construction industry between 1991 and 2021, assigning the economic cycle from the boom to the recession and the depression to the upswing and showing the corresponding effects on the employment figures  
Source: Federal Statistical Office, DIW, ZDB, BAU Industrie, own presentation

A bundle of measures is necessary: The German Institute for Economic Research<sup>5</sup> urges - if only to increase energy-efficient building refurbishment, which can and must be applied to the entire housing sector - that a master plan is necessary. This includes the establishment of long-term subsidy programmes (on a completely different scale than hitherto), which support demand but also compensate for the inefficiency, also in terms of utilisation costs. In addition, investments must be made in the expansion of planning, construction, production and installation capacities. In this regard, a long-term employment initiative (including a targeted approach to women) is necessary, as well as additional recruitment of skilled workers, including from abroad. Broken down to the insufficient building land reserves, the municipalities must designate building land quickly and effectively; moreover, redensification in inner-city areas must be made considerably easier. The framework conditions must be streamlined, regulatory law must focus on affordable housing and further tightening must be avoided.

**Without such a master plan, housing construction will pass the "tipping point" at the next opportunity and this complex system will collapse in a very short time with all its long-term acquired achievements to a rump system or a multitude of small subsystems with low capacities. Adequate coverage of housing needs in Germany, especially in the affordable housing segment, will then no longer be possible in the long term.**

<sup>5</sup> [DIW 2023]

## 4 Possible Practice

### 4.1 Current housing construction: standards and costs

Particularly in growth regions and conurbations, the market has become increasingly tense in recent years, as the demand for living space can no longer be adequately met by the existing supply of newly built and existing flats. This market situation, in combination with sometimes dynamically rising construction prices, increasing normative requirements for the construction and the building, scarce building land as well as sharply rising financing and ancillary acquisition costs, is causing a significant increase in the costs for the construction of residential real estate. As a result, it is becoming increasingly difficult, especially in these regions, to build cost-effectively and thus to create affordable housing at all.

On the basis of the cost ranges listed in Figure 32 and the different design qualities listed, comparative cost considerations can be made for new residential buildings in relation to growth regions or conurbations in different design variants.

### Kostenbetrachtung

#### Wachstumsregionen/Ballungsgebiete

Wohnungsneubau (Typengebäude<sup>MFH</sup>)  
Grundlage: Auswertung fertiggestellter und abgerechneter Bauvorhaben  
Kostenstand: 4. Quartal 2022 (Bruttokosten)



Kostenbereiche und verschiedene Ausführungsqualitäten						
Besondere Gründung	Gering	14/ <b>29</b> /39	Dachbegrünung	gesamte Dachfläche	38/ <b>55</b> /73	
	Mittel	50/ <b>75</b> /89		Außenwände	100 % mit Verblender	91/ <b>113</b> /132
	Hoch	115/ <b>173</b> /223			Baustellenlogistik	Anspruchsvoll
Keller	Neben- und Abstellräume	130/ <b>192</b> /251	Energetischer Standard			GEG 2023
	Stellplätze	Garage		46/ <b>68</b> /89		EffH 55
		Parkpalette		68/ <b>95</b> /112	EffH 40	171/ <b>294</b> /424
Tiefgarage		292/ <b>490</b> /698	Außenanlagen	Gering	45/ <b>62</b> /75	
Aufzugsanlage	Aufzugstyp 1 5 - 6 Haltest.	70/ <b>93</b> /113		Mittel	120/ <b>150</b> /189	
	Barrierefreies Bauen	barrierereduziert		15/ <b>62</b> /105	Hoch	247/ <b>277</b> /316
		barrierefrei	135/ <b>199</b> /265			
barrierefrei (R)		276/ <b>348</b> /439				

Hinweis: Bei einzelnen Bauvorhaben können weitere projektspezifische Kosten z.B. durch städtebauliche Auflagen oder nutzerspezifische Erfordernisse anfallen. Außerdem ist zu berücksichtigen, dass in Einzelfällen ggf. auch kostenintensive Abrissarbeiten oder Altlastenbeseitigungen vor dem eigentlichen Baubeginn erforderlich sind.

Figure 32: Cost analysis in relation to growth regions or conurbations for the type building<sup>MFH</sup>; differentiated according to cost areas and various construction qualities, cost status: 4th quarter 2022, figures in euros per square metre of living space, incl. VAT (gross costs)

Source: Controlling and data archive ARGE eV as well as surveys on behalf of the public sector in cooperation with the housing industry.

In Figure 33, typical or characteristic cost areas and construction qualities with their respective cost parameters are highlighted in colour (yellow) for comparison with current construction activity in growth regions or conurbations, which currently also correspond as far as possible to the median of the prime costs for residential construction in German (large) cities (see results and explanations in Chapter 2.3).



## Kostenbetrachtung Wachstumsregionen/Ballungsgebiete

Wohnungsneubau (Typengebäude<sup>MFH</sup>)  
Grundlage: Auswertung fertiggestellter und abgerechneter Bauvorhaben  
Kostenstand: 4. Quartal 2022 (Bruttokosten)



Kostenbereiche und verschiedene Ausführungsqualitäten						
<b>Besondere Gründung</b>	Gering	14/ <b>29</b> /39	<b>Dachbegrünung</b>	gesamte Dachfläche	38/ <b>55</b> /73	
	Mittel	50/ <b>75</b> /89		<b>Außenwände</b>	100 % mit Verblender	91/ <b>113</b> /132
	Hoch	115/ <b>173</b> /223			<b>Baustellen- logistik</b>	Anspruchsvoll
<b>Keller</b>	Neben- und Abstellräume	130/ <b>192</b> /251	<b>Energetischer Standard</b>			GEG 2023
	<b>Stellplätze</b>	Garage		46/ <b>68</b> /89		EffH 55
		Parkpalette		68/ <b>95</b> /112	EffH 40	171/ <b>294</b> /424
Tiefgarage	292/ <b>490</b> /698	<b>Außenanlagen</b>	Gering	45/ <b>62</b> /75		
<b>Aufzugsanlage</b>	Aufzugstyp 1 5 - 6 Haltest.		70/ <b>93</b> /113	Mittel	120/ <b>150</b> /189	
	<b>Barrierefreies Bauen</b>		barrierereduziert	15/ <b>62</b> /105	Hoch	247/ <b>277</b> /316
barrierefrei		135/ <b>199</b> /265				
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Hinweis: Bei einzelnen Bauvorhaben können weitere projektspezifische Kosten z.B. durch städtebauliche Auflagen oder nutzerspezifische Erfordernisse anfallen. Außerdem ist zu berücksichtigen, dass in Einzelfällen ggf. auch kostenintensive Abrissarbeiten oder Altlastenbeseitigungen vor dem eigentlichen Baubeginn erforderlich sind.

Figure 33: Cost analysis in relation to growth regions or conurbations for the extended variant of the type building<sup>MFH</sup>; differentiated according to cost areas and various construction qualities, cost status: 4th quarter 2022, figures in euros per square metre of living space, incl. VAT (gross costs)  
Source: Controlling and data archive ARGE eV as well as surveys on behalf of the public sector in cooperation with the housing industry.

Among other things, increased quality requirements for energy efficiency and barrier-free construction, requirements for parking spaces and inner-city construction with its increased logistical requirements have increasingly affected construction in recent years. For example, an inner-city type building<sup>MFH</sup> in the standard of an efficiency house 55 now has construction costs without land of 4,191 €/m<sup>2</sup> living space. This cost parameter can be understood from the cost summary in Figure 34.

Based on these results in conjunction with the currently conducted cost surveys in residential construction, IB.SH<sup>6</sup> used a long-term dynamic investment calculation to investigate the effects of this on "affordable construction and housing" in new buildings and what subsidies and financing are necessary for the economic construction of this inner-city type building with the proven construction and land costs of around 5,000 €/m<sup>2</sup> living space under the conditions prevailing today.

In this context, various exemplary financing models and cold rents were considered and compared to determine the average annual return and cash flow in the 1st year (see Figure 35).

<sup>6</sup> IB.SH - Investitionsbank Schleswig-Holstein, 03/2023



## Kostenbetrachtung Wachstumsregionen/Ballungsgebiete

Wohnungsneubau (Typengebäude<sup>MFH</sup>)  
Grundlage: Auswertung fertiggestellter und abgerechneter Bauvorhaben  
Kostenstand: 4. Quartal 2022 (Bruttokosten)

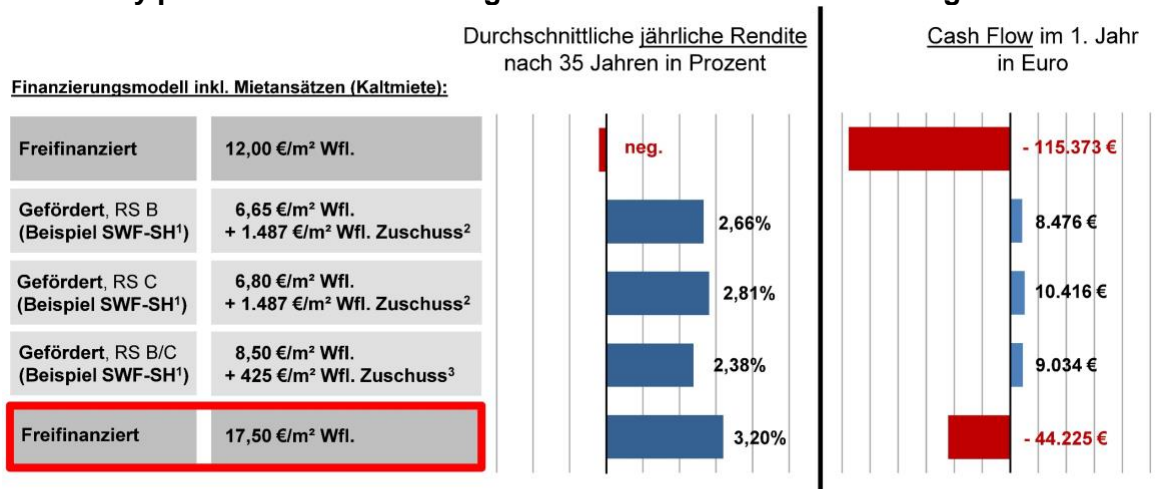


	Kostenwerte
<b>Grundkosten</b> (Kostengruppen 300 und 400) Wohnungsneubau im Standard „Effizienzhaus 55“ inkl. Küchen und in den Außenanlagen integrierten Kellerersatzräumen	<b>2.436 €/m<sup>2</sup> Wfl.</b>
<b>Kellergeschoss</b> Abzüglich der Kosten für die in der Grundvariante vorgesehenen Kellerersatzräume	<b>+ 192 €/m<sup>2</sup> Wfl.</b> <b>- 45 €/m<sup>2</sup> Wfl.</b>
<b>Tiefgarage</b> Abzüglich der Kosten für eine kombinierte Ausführung von Keller und Tiefgarage	<b>+ 490 €/m<sup>2</sup> Wfl.</b> <b>- 68 €/m<sup>2</sup> Wfl.</b>
<b>Aufzugsanlage</b>	<b>+ 93 €/m<sup>2</sup> Wfl.</b>
<b>Barrierereduzierte Ausführung</b>	<b>+ 62 €/m<sup>2</sup> Wfl.</b>
<b>Anspruchsvolle Baustellenlogistik</b>	<b>+ 212 €/m<sup>2</sup> Wfl.</b>
<b>Außenanlagen</b>	<b>+ 150 €/m<sup>2</sup> Wfl.</b>
<b>Baunebenkosten</b> inkl. Finanzierung	<b>+ 669 €/m<sup>2</sup> Wfl.</b>
<b>Gesamtkosten</b> (ohne grundstücksbezogene Kosten)	<b>4.191 €/m<sup>2</sup> Wfl.</b>
<b>Grundstücksbezogene Kosten</b> (inkl. vorbereitende Maßnahmen)	<b>+ 1.001 €/m<sup>2</sup> Wfl.</b>

Hinweis: In einigen Regionen insbesondere in TOP-Standorten liegen die Gesamtkosten aufgrund der teilweise sehr angespannten Marktlage noch deutlich über dem dargestellten Kostenniveau

Figure 34: Cost summary in relation to growth regions or conurbations for the extended variant of the type building<sup>MFH</sup>, cost status: 4th quarter 2022, figures in euros per square metre of living space, incl. VAT (gross costs) Source: Controlling and data archive ARGE eV as well as surveys on behalf of the public sector in cooperation with the housing industry.

### Necessary promotion and financing of affordable and social housing



<sup>1</sup> SWF-SH = Soziale Wohnraumförderung des Landes Schleswig-Holstein (0,87 % effektiver Zinssatz über 48 Jahre)

<sup>2</sup> Exemplarische Berechnung einer angenommenen Fördervariante im Rahmen der SWF-SH, 1. Förderweg

<sup>3</sup> Exemplarische Berechnung einer angenommenen Fördervariante im Rahmen der SWF-SH, 2. Förderweg

Hinweis: Ermittlung der Rendite und des Cash Flow durch die Investitionsbank Schleswig-Holstein (IB.SH); Marktansätze (Stand: 03/2023) unter anderem mit 4,00% Zins (33J.), 1,50% Tilgung

Figure 35: Presentation of the results based on a long-term dynamic investment calculation to determine return and cash flow in connection with certain exemplary financing models and cold rents at investment costs of 5,000 €/m<sup>2</sup> floor space in residential construction.

Source: IB.SH - Investitionsbank Schleswig-Holstein, own presentation

Even affordable housing, which is now at a level of cold rents between 8.5 and 12.5 € per m<sup>2</sup> of living space per month, can only be realised in exceptional cases and under optimal conditions without funding or subsidisation.

Figure 35 shows the subsidy requirement necessary to achieve certain cold rents at today's cost level.

Housing construction must be economically viable for private, public and cooperative investors. The additional funding requirements resulting from the short-term sharp rise in market interest rates via subsidies cannot be covered by the Länder without federal funding. Yield-oriented investors will nevertheless tend to engage in the freely financed sector or in the construction of owner-occupied flats if the rental and purchase prices necessary for yields beyond 3 % can be achieved on the market.

All in all, the federal compensation funds are an important component of the housing promotion of the Länder. If they were to be discontinued, social housing construction would be severely impaired. A permanent earmarking of the funds and co-financing by the Länder must be ensured. The federal funds must be available in the long term in order to guarantee new housing strategies in the long term.

Without sufficient funding, neither the expansion of social housing nor the establishment of "affordable housing" in new construction will succeed. The above example (Figure 35) shows that even against the background of today's "normal" cost and interest level, it is still possible to realise social housing economically, taking into account current funding conditions.

In this context, social housing has recently come more and more to the fore on the market, as privately financed projects are increasingly being cancelled or - and this is evidenced by the current funding practice<sup>7</sup> - refinanced to an ever greater extent on funding variants of social housing promotion.

### **Housing promotion as "suitable practice":**

However, the above exemplary, dynamic financing calculation<sup>8</sup> shows one thing above all:

**Even under the current circumstances, financing within the framework of social housing promotion is still very much possible, and above all: urgently required.** <sup>9</sup>

<sup>7</sup> Cf. e.g. IB.SH Housing market monitoring

<sup>8</sup> Basis of the currently established financing options of the Social Housing Promotion of the State of Schleswig-Holstein; IB.SH - Investitionsbank Schleswig-Holstein/Ministry of the Interior, Municipalities, Housing and Sport of the State of Schleswig-Holstein/Arbeitsgemeinschaft für zeitgemäßes Bauen e.V.; Kiel, as of 15.04.2023

<sup>9</sup> [DESTATIS 2023]: "3.1 million households with a rent burden of 40 % or more ... Around 1.5 million tenant households had a rent burden of 50 % or more in 2022. Around 1.6 million other tenant households spent between 40% and 50% of their household income on gross cold rent. Overall, 16 % of all households living as renters had a rent burden of more than 40 %.

One-person households were particularly burdened, with an average rent burden ratio of just under one third (32.7 %) of their income. Households with two persons, on the other hand, had to budget less than a quarter (22.8 %) of their income for rent. ... Rent burden and rent per square metre in big cities above average".

## 4.2 Possible Practice - Realised Housing Construction before the Crisis

Building before the crisis was easier and at least calculable in the medium term. For one thing, the prices of materials and building materials, and thus also the costs of construction work in building construction, were far less volatile and also at a much lower level; for another, market interest rates were many times lower than they are today, and the federal government's new construction subsidies via KfW, especially for the Efficient House 55, were extremely attractive due to high subsidy amounts.

During this period, a large number of residential construction projects were built, with a clear peak in 2020, when 306,376 residential units<sup>10</sup> were completed in Germany. Since this peak, the completion figures have been declining at an increasing rate.<sup>11</sup>

The following projects represent construction projects planned and already completed during this period under the general conditions of the time, which stand out, for example, due to efficient planning and construction processes as well as good execution with reasonable or appropriate standards and which can generally be assigned to the market segment of affordable housing.

Depending on the number and type of project-specific features as well as additional cost drivers, among others in relation to municipal requirements or conditions that had to be implemented in the construction projects, the construction (work) costs for the respective projects also differed, sometimes significantly.

### Bezahlbarer Wohnungsbau – gebaute Beispiele

Am Rand der historischen Altstadt von Altenburg entstanden drei Gebäude mit barrierefreien Wohnungen für alle Generationen. Der Neubau reiht sich zeitgemäß in die vorhandene Bebauung des Straßenzuges ein.

Fertigstellung:	Dez. 2019
WE:	32
Wfl.:	2.644 m <sup>2</sup>
KG 300+400:	2.053 €/m <sup>2</sup> Wfl
KG 200-700:	4.078 €/m <sup>2</sup> Wfl
Energieeffizienz:	EnEV 2016
100 % frei finanziert	



Altenburg  
Puschkinstraße 12-14



Bauherr: **Städtische Wohnungsgesellschaft  
Altenburg mbH**  
Planer: **ABOA Architekten GmbH, Zwickau**



Bildquelle: Städtische Wohnungsgesellschaft Altenburg mbH

Figure 36: Affordable housing - built example; Altenburg, Puschkinstr. 12-14; completion Dec. 2019; 32 flats, 2,644 m<sup>2</sup> floor area; energy efficiency EnEV 2016; client: Städtische Wohnungsgesellschaft Altenburg mbH; planning: ABOA Architekten GmbH, Zwickau; Image source: Städtische Wohnungsbaugesellschaft Altenburg mbH

<sup>10</sup> Federal Statistical Office; press release no. 250 of 27 May 2021, Housing completions for 2020

<sup>11</sup> Cf. [DESTATIS 2022a] and the developments and forecasts of the associations shown in Figure 11.



Bezahlbarer Wohnungsbau – gebaute Beispiele

Hildesheim  
Stralsunder Str. 40

Das vorhandene bebauete Grundstück sollte mit einfachen Mitteln nachverdichtet werden, aber keinesfalls eine Stigmatisierung des Sozialen Wohnungsbaus implizieren.

Fertigstellung: **2022**  
 WE: **2 x 8**  
 Wfl.: **1.080 m<sup>2</sup>**  
 KG 300+400: **2.063 €/m<sup>2</sup>Wfl**  
 KG 200-700: **2.663 €/m<sup>2</sup>Wfl**  
 Energieeffizienz: **GEG 2020**

- 100 % gefördert mit Mitteln der Sozialen Wohnraumförderung
- Vollständig barrierefrei
- Modultartiges Konzept, sehr kompakte Kubatur
- Grundstück Eigentum gbg



Bauherr: **gbg Wohnungsbaugesellschaft Hildesheim AG**  
 GÜ: **Weber Massivhaus GmbH, Isernhagen**  
 Planer: **agsta Architekten und Ingenieure, Hannover**



Bildquelle: gbg Wohnungsbaugesellschaft Hildesheim AG; Weber Massivhaus GmbH

Figure 37: Affordable housing - built example; Hildesheim, Stralsunder Str. 40; completion 2022; 16 flats, 1,080 m<sup>2</sup> floor space; energy efficiency GEG 2020; client: gbg Wohnungsbaugesellschaft Hildesheim AG; GÜ Weber Massivhaus GmbH; planning: agsta Architekten, Hannover; Image source: gbg Wohnungsbaugesellschaft Hildesheim AG; Weber Massivhaus GmbH

Bezahlbarer Wohnungsbau – gebaute Beispiele

Hamburg-Schnelsen  
Barmbeker Str. 2

Die zwei besonders kompakt konzipierten Baukörper im Hamburger Stadtteil Schnelsen bieten Wohnraum für vordringlich Wohnungssuchende (Housing first). Die enge Baulücke erforderte aufwändige Baustellenlogistik.

Fertigstellung: **Dez. 2022**  
 WE: **24**  
 Wfl.: **897 m<sup>2</sup>**  
 KG 300+400: **3.779 €/m<sup>2</sup>Wfl**  
 KG 200-700: **4.872 €/m<sup>2</sup>Wfl**  
 Energieeffizienz: **EffH 55**

- 100 % geförderter Wohnraum für vordringlich Wohnungssuchende, IFB HH
- Vollständig barriere reduziert
- Grundstück Eigentum der Bauherren



Bauherr: **Benno u. Inge Behrens Stiftung**  
 Michelle & Axel Streckwall  
 Planer: **Behrens & Kauffmann KG GmbH & Co., Hamburg**



Bildquelle: Benno u. Inge Behrens Stiftung

Figure 38: Affordable housing - built example; Hamburg-Schnelsen. Barmbeker Str. 2; completion Dec. 2022; 24 flats, 897 m<sup>2</sup> floor area; energy efficiency EffH 55; client: Benno u. Inge Behrens Stiftung, Michelle & Axel Streckwall; planning: Behrens & Kauffmann KG GmbH & Co, Hamburg; Photo source: Benno and Inge Behrens Foundation

Status and forecast: How Germany builds - how Germany lives The opportunity check for housing construction

Bezahlbarer Wohnungsbau – gebaute Beispiele

Nachverdichtung durch Abriss und Ersatzbebauung wertet dieses bestehende Quartier im Norden Kiels auf. Zum Teil langjährige Mieter können im Quartier bleiben und trotzdem in neuen, barrierefreien Wohnraum umziehen.

Fertigstellung: **Okt. 2022**  
WE: **15**  
Wfl.: **865 m<sup>2</sup>**  
KG 300+400: **2.233 €/m<sup>2</sup>Wfl**  
KG 200-700: **3.209 €/m<sup>2</sup>Wfl**  
Energieeffizienz: **EffH 70**

- 5 WE gefördert mit Mitteln der Sozialen Wohnraumförderung
- 100 % barrierefrei
- Nachverdichtung und Ersatzbebauung eines Quartiers
- Grundstück Eigentum des Bauherren



Bauherr: **BGM Baugenossenschaft Mittelholstein eG, Kiel**  
Planer: **BSP Architekten, Kiel**



3 - Zimmerwohnung 73,55 m<sup>2</sup>



Bildquelle: BGM Baugenossenschaft Mittelholstein eG, BSP Architekten

Figure 39: Affordable housing - built example; Kiel-Friedrichsort, Fontanestr. 4; completion Oct. 2022; 15 flats, 865 m<sup>2</sup> floor area; energy efficiency EffH 70; client: BGM Baugenossenschaft Mittelholstein eG, Kiel; planning: BSP Architekten, Kiel;

Image source: BGM Baugenossenschaft Mittelholstein eG, BSP Architekten

Bezahlbarer Wohnungsbau – gebaute Beispiele

Ein in die Jahre gekommenes urbanes Zentrum erhält durch die Neuschaffung eines durchmischten Quartiers mit Senioren-Wohnen neben KiTa und Wohnen ein neues, zeitgemäßes Gesicht.

Fertigstellung 3. BA: **Okt. 2022**  
WE (2.+3. BA): **83**  
Wfl. (2.+3. BA): **5.498 m<sup>2</sup>**  
KG 300+400: **2.503 €/m<sup>2</sup>Wfl**  
KG 200-700: **3.405 €/m<sup>2</sup>Wfl**  
Energieeffizienz: **EffH 55**

- 35 WE gefördert mit Mittel der Sozialen Wohnraumförderung
- Übergreifende Begegnungs- und Aufenthaltsflächen
- Ersatzbebauung, Grundstück Eigentum Adlershorst eG



Bauherr: **Adlershorst Baugenossenschaft eG, Norderstedt**  
Planer: **Paloh Architekten, Hamburg**



Bildquelle: Adlershorst Baugenossenschaft eG, Paloh Architekten

Figure 40: Affordable housing - built example; Norderstedt, Alter Kirchweg; completion Oct. 2022; 83 units, 5,498 m<sup>2</sup> Wfl.; energy efficiency EffH 55; client: Adlershorst Baugenossenschaft eG, Norderstedt; planning: Paloh Architekten, Hamburg;

Image source: Adlershorst Baugenossenschaft eG, Paloh Architekten



**Bezahlbarer Wohnungsbau – gebaute Beispiele**

Durch Instandsetzung und Ergänzung um einen Neubau innerhalb der bestehenden Kubatur wurde die Revitalisierung einer alten Textilfabrik herbeigeführt und ermöglicht nun ein Nebeneinander von Wohnen und Arbeiten.

Fertigstellung: **2021**  
WE: **10**  
Wfl.: **986 m<sup>2</sup>**  
Praxisflächen: **730 m<sup>2</sup>**  
KG 300+400: **2.630 €/m<sup>2</sup>Wfl**  
KG 200-700: **3.630 €/m<sup>2</sup>Wfl**  
Energieeffizienz: **EffH 85**

- 8 WE gefördert mit Mitteln der Sozialen Wohnraumförderung
- Barrierefrei
- Grundstückserwerb 2018



Bauherr: **IMMPRINZIP GmbH & Co KG, Ottweiler**  
Planer: **Rothweiler + Färber Architekten GmbH, Freiburg**



Trier  
Bobinethöfe



Bildquelle: IMMPRINZIP GmbH & Co. KG; Lukas Huneke

Figure 41: Affordable housing - built example; Trier, Bobinethöfe; completion 2021; 10 flats, 986 m<sup>2</sup> floor area; energy efficiency EffH 85; client: IMMPRINZIP GmbH & Co. KG, Ottweiler; planning: Rothweiler + Färber Architekten GmbH, Freiburg; Image source: IMMPRINZIP GmbH & Co KG; Lukas Huneke

**Bezahlbarer Wohnungsbau – gebaute Beispiele**

Profaniertes Kirchengebäude wurde vor dem Abbruch gerettet und hat durch den behutsamen Umgang mit der vorhandenen Bausubstanz eine würdevolle Nachnutzung mit besonderer Atmosphäre erfahren.

Fertigstellung: **2021**  
WE: **17**  
Wfl.: **1.482 m<sup>2</sup>**  
KG 300+400: **2.570 €/m<sup>2</sup>Wfl**  
KG 200-700: **3.300 €/m<sup>2</sup>Wfl**  
Energieeffizienz: **EffH 115**

- 100 % gefördert mit Mitteln der Sozialen Wohnraumförderung
- Barrierefrei
- Weitgehend vollständiger Erhalt der Bausubstanz
- Grundstückserwerb 2018



Bauherr: **IMMPRINZIP GmbH & Co. KG, Ottweiler**  
Planer: **Rothweiler + Färber Architekten GmbH, Freiburg**



Trier-Ehrang  
Ehem. Kirche Christi Himmelfahrt



Bildquelle: IMMPRINZIP GmbH & Co. KG; Albrecht Haag

Figure 42: Affordable housing - built example; Trier-Ehrang, former Church of the Ascension; completion 2021; 17 units, 1,482 m<sup>2</sup> living space; energy efficiency EffH 115; client: IMMPRINZIP GmbH & Co. KG, Ottweiler; planning: Rothweiler + Färber Architekten GmbH, Freiburg; Image source: IMMPRINZIP GmbH & Co KG; Albrecht Haag



### 4.3 Possible Practice - Affordable and Optimised Housing Up to Date

Against the background of the current framework conditions, it can be stated for residential construction that even when using intelligent, rational constructions and exploiting economies of scale (large-scale), as well as when applying an appropriate and feasible quality standard (both structurally, technically and functionally), building for less than €3,000 per square metre of living space (excluding land costs) is basically no longer feasible in practice (see also the survey results in Chapter 2.3).

Nevertheless, residential construction projects can still be realised at costs slightly above this cost mark if, for example, the principles of rationalisation measures<sup>12</sup> are observed and the possibilities and advantages of standardised construction<sup>13</sup> (typified and serial construction) are used. However, this also includes a discussion and consideration of contemporary comfort and quality requirements, which should be defined jointly if possible (see explanations on the "E" building type initiative in Chapter 2.1).

## Kostenbetrachtung Wachstumsregionen/Ballungsgebiete

Wohnungsneubau (Typengebäude MFH)  
Grundlage: Auswertung fertiggestellter und abgerechneter Bauvorhaben  
Kostenstand: 4. Quartal 2022 (Bruttokosten)



Standardvariante*	Kostenwerte
<b>Grundkosten</b> (Kostengruppen 300 und 400) Wohnungsneubau im Standard „GEG 2023“ inkl. Küchen und in den Außenanlagen integrierten Kellerersatzräumen	<b>2.298 €/m<sup>2</sup> Wfl.</b>
<b>Kellergeschoss</b> mit optimierten Funktions- und Verkehrsflächen	<b>+ 130 €/m<sup>2</sup> Wfl.</b>
Abzüglich der Kosten für die in der Grundvariante vorgesehenen Kellerersatzräume	<b>- 45 €/m<sup>2</sup> Wfl.</b>
ohne Ausführung einer <b>Tiefgarage</b>	<b>± 0 €/m<sup>2</sup> Wfl.</b>
<b>Aufzugsanlage</b>	<b>+ 93 €/m<sup>2</sup> Wfl.</b>
<b>Barrierereduzierte Ausführung</b>	<b>+ 62 €/m<sup>2</sup> Wfl.</b>
<b>Anspruchsvolle Baustellenlogistik</b> (unteres Kostenviertel)	<b>+ 166 €/m<sup>2</sup> Wfl.</b>
<b>Außenanlagen</b> mit geringen Erstellungsmaßnahmen	<b>+ 62 €/m<sup>2</sup> Wfl.</b>
<b>Baunebenkosten</b> inkl. Finanzierung	<b>+ 526 €/m<sup>2</sup> Wfl.</b>
<b>Gesamtkosten</b> (ohne grundstücksbezogene Kosten)	<b>3.292 €/m<sup>2</sup> Wfl.</b>

Hinweis: In einigen Regionen insbesondere in TOP-Standorten liegen die Gesamtkosten aufgrund der teilweise sehr angespannten Marktlage noch deutlich über dem dargestellten Kostenniveau

\*Standardvariante in einem erwartbaren und zeitgemäßen Qualitätsstandard im Bereich des bezahlbaren Wohnungsbaus in deutschen Wachstumsregionen bzw. Ballungsgebieten

Figure 43: Cost summary in relation to growth regions or conurbations for the standard variant of the type building<sup>MFH</sup> in an expectable and contemporary quality standard in the area of affordable housing, cost status: 4th quarter 2022, figures in euros per square metre of living space, incl. VAT (gross costs)

Source: Controlling and data archive ARGE eV as well as surveys on behalf of the public sector in cooperation with the housing industry.

That such projects are possible is exemplified by the following two building projects, which are currently being built with the help of funds from the social housing promotion programme. In these, modular floor plan design results in a multitude of possible combinations, which, despite high repetition rates, exhibit a great diversity of design. Embedded in intelligent and linear load-

<sup>12</sup> Cf. [BMRBS 1977]

<sup>13</sup> Cf. [DAfM 2020], [InWIS/IAB/ARGE 2022].

bearing structures, this results in particularly economical constructions that also create freedom for individual designs.

**Bezahlbarer Wohnungsbau – gebaute Beispiele**

Flensburg  
Freiland

Das Atriumhaus als gemeinschaftliches Bauprojekt entsteht neben zwei Reihenhauszeilen auf einer Konversionsfläche eines ehemaligen Bauhofes. Die gemischte Nutzung umfasst neben Wohnen auch studentische Wohngemeinschaften.

Baubeginn: **April 2022**  
WE: **44**  
Wfl.: **3.380 m<sup>2</sup>**  
KG 300+400: **2.430 €/m<sup>2</sup>Wfl**  
KG 200-700: **3.282 €/m<sup>2</sup>Wfl**  
Energieeffizienz: **EffH 55**  
2 WE mit 18 Wohnplätzen und 2 WE gefördert mit Mitteln der Sozialen Wohnraumförderung und der KfW



Bauherr: **Wohnprojekt Freiland Flensburg GbR, Flensburg**  
Planer: **Meyer Steffens Architekten und Stadtplaner BDA, Lübeck**



Bildquelle: Meyer Steffens Architekten und Stadtplaner BDA

Figure 44: Affordable housing - built example; Flensburg Freiland; start of construction 2022; 44 units, 3,380 m<sup>2</sup> Wfl.; energy efficiency EffH 55; client: Wohnprojekt Freiland Flensburg GbR, Flensburg; planning: Meyer Steffens Architekten und Stadtplaner BDA, Lübeck; Image source: Meyer Steffens Architekten und Stadtplaner BDA

**Bezahlbarer Wohnungsbau – gebaute Beispiele**

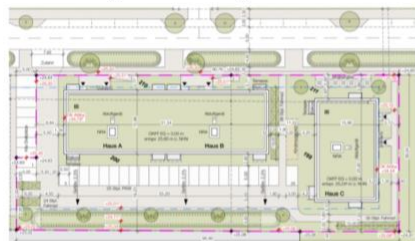
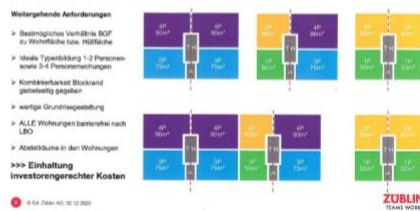
Schleswig-Holstein  
Typenhäuser

Für den Bereich Schleswig-Holstein hat die Ed. Züblin AG dreigeschossige Typenhäuser entwickelt. Vier Grundrissmodule lassen sich verschiedentlich zusammensetzen und so zu unterschiedlichen Gebäuden oder ganzen Gebäudezügen kombinieren.

Baubeginn: **2023**  
WE: **36**  
Wfl.: **2.890 m<sup>2</sup>**  
KG 300+400: **2.518 €/m<sup>2</sup>Wfl**  
KG 200-700: **3.001 €/m<sup>2</sup>Wfl**  
Energieeffizienz: **EffH 55**

- Alle Grundrissmodule sind nach den Wohnraumförderungsrichtlinien Schleswig-Holstein förderfähig.
- Alle Wohnung sind barrierefrei gestaltet.

**2. STAND PLANUNG - TYPEN**



Totalübernehmer: **Ed. Züblin AG, Projektmanagement, Direktion Nord**



Bildquelle: Ed. Züblin AG, Projektmanagement, Direktion Nord

Figure 45: Affordable housing - built example; Schleswig-Holstein; start of construction 2023; 12 flats, 960 m<sup>2</sup> floor area; energy standard EffH 55; planning: Ed. Züblin AG, Project Management, Directorate North; Image source: Ed. Züblin AG, Project Management, Directorate North

## 5 Outlook: What to do?

German housing construction is a complex system and at the same time the largest, interrelated investment sector - through new construction and existing measures on the approx. 43 million dwellings - of the entire national economic system.<sup>14</sup>

The resilience of the "housing system" is severely threatened by the current framework conditions and can no longer be depicted with the experience of "normal" economic cycles. The system is on the verge of a momentous tipping point.

The effects on the rental housing market - which dominates housing construction - are currently uniquely bad, due to the special overall economic situation, which has never existed in this form before:

Rising interest rates with a simultaneous increase in housing demand, falling demand especially in the owner-occupied sector and, in addition, strongly increased production and land prices and - following this - constantly increasing construction and investment costs.

Housing prices (sale of owner-occupied flats/existing houses) are moving significantly downwards due to these demand conditions, which are made more difficult by the financing, but rents are rising - and have been rising sharply since 2021.<sup>15</sup>

In summary, it can be stated that housing construction in Germany continues to face major, increasingly greater challenges under growingly difficult framework conditions. Especially in cities, where population density is high, overcrowding rates continue to increase and pressure on the housing market is growing, there is a danger that the housing market will be overstretched. At the same time, there is a risk that housing construction as a whole will collapse under the current conditions without further assistance. This would have a negative impact on the economy, on medium- and long-term capacity, and ultimately on the social fabric.

The "Seneca effect" must be prevented at all costs, especially the threat of a drastic reduction in existing building capacities. A look at the past shows that the reduction of capacities is six times faster than their (re)construction can take place. A change in production conditions as a system change does not work fast enough, is only partially effective and can only be thought of in the long term, if it is to make sense. In connection with the demographic development and the unsatisfactory organisation of active and targeted labour migration, there is an urgent danger of a systemic productivity collapse in the construction industry.

To avoid this collapse and to meet people's needs for adequate housing, it is essential to shape the framework conditions in such a way that investment in housing can continue. Investment in housing not only promotes economic development and job creation, but also contributes significantly to improving the quality of life and social cohesion in our society.

The most important steps to be taken include the creation of favourable framework conditions for housing construction, such as the - long-term - provision of financial incentives and the quickly effective reduction of bureaucratic obstacles. Of course, the environmental impact of housing construction must also be taken into account by supporting the construction and housing industry as well as the building materials industry in such a way that sustainable construction methods are possible and the use of renewable energies is supported in the

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<sup>14</sup> [DIW 2023]

<sup>15</sup> [IREBS 2023]



operation and construction phase. In this context, the focus must always be on a broadly based suitability for quantity, more than on individual lighthouse projects: "Suitable Practice" instead of "Best Practice", in order to avoid misallocations due to inefficient allocation of resources, also in view of the tight timeframes.

"Possible Practice": A look at the implementation of current new housing construction projects and realistic funding practices shows that affordable housing can still be financed and subsidised under the given framework conditions and current construction and investment costs using intelligent funding systems to ensure achievable cold rents of less than ten euros.

In order not to create undesirable price and cost distorting effects through public subsidies, the use of subsidies must be accompanied by appropriate, professionally competent and effective construction cost control (ensuring appropriate costs for the desired qualitative and functional standards) and regionally specific housing market monitoring systems (measurement, consolidation and informative processing of regional housing market structures and developments). Such systems exist, work successfully and could be installed everywhere.<sup>16</sup>

*"Continuity of construction must be worked towards through long-term programming, multi-year provision of public funds and continuous demand."*

Source: [BMSW 1972]

The current potential of the building trade and construction industry capacities in Germany is capable of building up to 400,000 - necessary dwellings per year - if the construction capacities (people and machines) are adequately utilised. However, if the impending tipping point is exceeded, the capacities will foreseeably drop to a construction potential of approx. 200,000 housing units per year - or even less.

The resilience of the complex system "German housing" must therefore be strengthened quickly in order to ensure lasting continuity in the execution, planning and implementation of residential buildings. Linear thought patterns and supposedly simple solutions are of little help in this context; rather, in addition to sensibly structured funding, a variety of measures are needed at all levels to maintain consistency in housing creation. This includes, among other things:

- Establishment of a special fund that is capable in the long term of providing subsidies amounting to approx. 15 billion € per year for the realisation of social housing alone. A needs-based subsidy for the middle market segments - "affordable housing" - must be created in parallel.
- Designation of sufficient building land, promotion of municipal urban-rural cooperation, e.g. with joint housing land pools with defined growth agreements (land development plans, including housing-related infrastructure).
- Facilitate land-efficient housing creation: conversion and change of use of non-residential buildings into housing; redensification of existing buildings; extension, addition of storeys and adaptation and substitution of existing housing.
- No further tightening of conditions and regulatory law for housing construction, instead:

<sup>16</sup> Cf. e.g. IB.SH Housing market monitoring

- Definition of sensible minimum standards for residential buildings as an orientation framework for the execution of the "Recognised Rules of Technology" for residential construction - e.g. impulse of the building type "E" in the professional public.
- Rapid acceleration of planning and approval procedures (digitalisation/ and even faster and more effective in the short term: process optimisation for official decision-making and approval procedures, conversion of processes and office coordination) in addition: streamlining of municipal requirements.
- Drastic expansion of training in the construction industry and of courses of study in architecture, civil engineering, urban planning, sustainable construction planning and building technology, etc.
- Establish a functional, guided system for active and targeted work integration.

*"To build more rationally, you have to apply many measures at the same time."*

Source: [BMSW 1972]

Overall, housing is a crucial factor for economic and social development and societal stability. To ensure that this sector is not subject to systemic failure and can meet the demand for housing, we must continue to invest in housing and find innovative solutions to the current challenges. This is the only way we can ensure a sustainable and liveable future for all.

*"That's why we need to keep building housing."<sup>17</sup>*

Lauritz Lauritzen (1910-1980)

Federal Minister for Housing and Urban Development from 1966-1972

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<sup>17</sup> Lauritz Lauritzen in: "DER SPIEGEL" 44/1968

## 6. glossary

### 6.1 Brief explanation of basic housing terms

The following explanations of important basic terms of housing construction have been excerpted from publications of the Federal Statistical Office<sup>18</sup>. These definitions are used in the present study, so that this uniform basis makes it possible to compare, for example, building and housing data.

According to the classification of structures, **buildings** are independently usable, roofed structures which are erected permanently and which can be entered by people and are suitable or intended to serve the protection of people, animals or property.

A **single building is** considered to be any free-standing building or, in the case of contiguous development - e.g. semi-detached and terraced houses - any building separated from other buildings by a fire wall extending from the roof to the basement. If there is no fire wall, the contiguous building units shall be deemed to be individual buildings if they have their own development system (own access and own staircase) and are usable by themselves.

**Residential buildings** are buildings at least half of which - measured by the share of living space in the usable space according to DIN 277 (as amended) - are used for residential purposes.

A **dwelling is** understood to be rooms which are closed off from the outside, intended for residential purposes, usually located together, and which enable the management of an own household. Dwellings have their own entrance directly from the outside, from a staircase or an anteroom. However, a dwelling may also include cellar or floor rooms (e.g. attics) which are outside the actual enclosure of the dwelling and which have been converted for residential purposes.

The number of **rooms** includes all living rooms, dining rooms, bedrooms and other separate rooms (e.g. habitable cellar and floor rooms) of at least 6m<sup>2</sup> in size as well as self-contained kitchens regardless of their size. Bathroom, toilet, hallway and utility rooms are generally not counted. A living room with a dining area, sleeping alcove or kitchenette is to be counted as one room. Accordingly, flats in which there is no structural separation of the individual living areas (e.g. so-called "loft flats") consist of only one room.

The **living space** (to be calculated according to the Ordinance on Living Space (Wohnflächenverordnung - WoFIV) of 25 November 2003 (BGBl. I p. 2346)) comprises the floor area of the rooms that belong exclusively to this flat, i.e. the areas for living rooms, bedrooms, kitchens and ancillary rooms (e.g. hallways, storage areas and bathroom) within the flat.

Buildings and parts of buildings that are withdrawn from use due to regulatory measures, damage or demolition or whose use is changed between residential and non-residential purposes (with and without construction measures) are recorded as disposals within the scope of the disposal statistics.

### 6.2 Explanation of the term housing need

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<sup>18</sup> e.g. [DESTATIS 2022].



The Pestel Institute determines the housing need annually at the level of districts and independent cities. Housing need is a normative quantity that is determined on the basis of defined need norms. For the quantitative housing need, the following need norms are considered classical:

- One dwelling should be available for each household (the concept of household is based on living together, not on economic independence; a shared flat is counted as one household, adult children living with parents are also considered as members of the parental household).
- To allow for relocations and modernisation, a target vacancy rate of three percent of the housing stock is set.
- In the case of housing departures, a departure of 0.1 per cent of the housing stock is assumed as replacement demand. This approach is higher than the values reported by the Federal Statistical Office (0.04 to 0.06 per cent) in the past 5 years. The approach takes into account that currently vacancies are obviously included in the statistics, which will probably never be occupied again.
  - In the past, subtenancies were considered an indicator of housing shortage and a reduction of subtenancies was shown as a category of need in needs assessments. Since the classic subtenancy has practically no significance today, but subtenancies occur predominantly in shared housing with a main tenant and one or more subtenants, this does not seem to make sense, since even the federal government propagates shared housing. However, the formation of shared flats today represents a considerable buffer to cushion housing shortages.
  - In various regions of Germany, second and leisure homes are of considerable importance, both in the existing stock and in new construction. This must be taken into account accordingly in the regional considerations. The last "collected" value on these variables is the data of the microcensus. For the period thereafter, the change can only be estimated on the basis of plausibility considerations.
  - In general, housing needs are based on defined needs and not on income.

The housing market constellation modelled by the Pestel Institute at the level of districts and independent cities signals a housing deficit, a balanced market or a housing surplus. The results of the 2011 census as well as the results of the 1987 census and building and housing census for western Germany and the results of the 1995 building and housing census for eastern Germany are used as important sources. For these years, data are available for all essential parameters down to the municipal level. The difference between the updated and the established number of inhabitants (population at the place of main residence) determined in the census was distributed over the period between the censuses or, for eastern Germany, from reunification onwards via migration.

A central parameter for assessing the housing market constellation is the comparison of (theoretical) household development with the housing stock (as per projection). Both the housing market situation in 1987 in West Germany (only one year after the first demolition discussion in West Germany), in 1995 in East Germany (after already significant departures, first vacancies) and in 2011 can be assumed to be largely balanced housing markets. The vacancy rate was 4.5% on average in Germany and well over 2% in most large cities. Only for Hamburg does a vacancy rate of only 1.6 % already indicate a slight housing shortage in 2011. Overall, it can be assumed that the household formation behaviour of the population was not affected by a housing shortage over the entire period from 1987 or 1995 to 2011 and that the

regional decline in the average number of adults per household was so desired by the population. This decline is extrapolated in the model in a slightly weakened form and a theoretical number of households is calculated on the basis of the extrapolated population at the place of primary residence. This household number is compared with the development of the housing stock. If the increase in the housing stock is greater than the calculated household development, the vacancy rate increases and vice versa. However, the model stops the vacancy decline at 1% of the housing stock. Since temporary vacancies (not necessarily unrented, but the dwelling is not used for residential purposes) practically always occur when people move and when the last household member moves out or dies, there is a lower limit of the reference date vacancy that cannot be undershot. Household formation slows down because the supply of housing is quantitatively insufficient. The formation of shared flats and children staying longer in their parents' households serve as buffers.

At the end of 2021, the calculations resulted in a total of 450,000 housing deficits nationwide and a total of 540,000 housing surpluses. The projection for the end of 2022 based on the demographic development until September 2022 and assuming construction activity on average for the years 2019 to 2021 calculates a good 700,000 missing dwellings with a simultaneous surplus of only 410,000 dwellings. At the end of 2022, there would thus be a shortage of more than twice the annual production of dwellings. In principle, the reduction of housing deficits can be realised not only through housing construction, but also through migration. In the mid-1990s, for example, most of the large cities in western Germany lost considerable population to migration to the surrounding areas, where the relative building activity is considerably higher. In the end, however, the deficits were reduced by building activity, but in the surrounding areas of the large cities. A reduction of the deficits without new construction only works in the case of migration to overhang areas - which is rather unlikely in view of the economic weakness in many overhang areas - or in the case of migration abroad, which is also not to be expected in view of the change of the baby boomers into retirement.

The core of this needs assessment is the quantitative supply of private households. Qualitative aspects are only included in this assessment of need through plausibility considerations. For example, around 10 percent of the housing stock in Germany is considered technically/economically unfit for refurbishment. Regionally, the order of magnitude can be estimated via the distribution among the building age classes and the building types and integrated into the nationwide demand calculation. Furthermore, last November, for example, the Federal Statistical Office published a press release on the overcrowding of dwellings (PM No. N 067). According to this, 8.6 million people in Germany lived in overcrowded flats in 2021. The groups that are particularly affected (single parents and people living in cities) are well known and targeted regional studies can highlight these aspects more strongly. In general, the higher the housing deficit, the greater the exclusion of groups that already have difficulties renting a flat in balanced housing markets.

### 6.3 Explanation of the term housing demand

Compared to the needs-oriented view of demand, housing demand brings the actual market events of realised purchase and rental contracts to the fore. Thus, demand is dependent on income and the price level of housing.

Influences on the demand side include, in particular, the development of earned income, the level and distribution of net income (state influence), the development of transfer income (state influence) and the relative prices of housing.

Influences on the supply side include depreciation modalities (state influence), possible subsidies such as investment grants (state influence), the interest rate situation in general as well as the granting of loans at special conditions (state influence), land transfer tax (state influence), tenancy law (state influence) as well as construction and property costs.

The various factors influencing the supply and demand for housing primarily show starting points for the state to achieve a certain level of supply for the population.

A new-build demand forecast can show the new construction expected on the basis of various parameters. Politically, such a forecast is only relevant if it can be compared with a "desired" state and thus signals the need for action. The "desired" state can refer to employment in the sector, to the additional sealed area or even to the number of completed dwellings (if necessary with differentiation according to dwelling sizes, building types and proportions of special fittings).

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