

DEVELOP-AND-HOLD-STUDY 2020
**NEW HOUSING CONSTRUCTION IN AN ERA OF LOW
INTEREST RATES AND SOCIAL URBAN DEVELOPMENT**

DECEMBER 2020



Dear Reader,



Lahcen Knapp
CEO Empira Gruppe

It is our pleasure to present you with the second Develop-and-Hold Study, which we have prepared in cooperation with bulwiengesa. What became apparent in the framework of the first analysis in 2019 has again been confirmed: develop-and-hold, developments for one's own portfolio therefore, is very clearly on the increase. At the same time the classical project development segment – with a sale following completion or in the planning phase as a forward deal – is declining in importance in the Top 7 cities.

Living space totalling 5.4 million square metres is being created in the analysed cities through to 2024 in the framework of current develop-and-hold projects. This corresponds to 1.1 million square metres per year. The theoretical market value of all the projects across the seven A-cities,

taking into account the residential location as well as the forecasts for rents and prices, has increased by seven per cent to 34.8 billion euros compared to the study year 2019.

There are various reasons for these developments. One is undoubtedly the general environment in the residential real estate sector: in larger German cities there is still immense surplus demand for apartments, which cannot be met by a long way with current levels of construction activity. A fundamental postponement of project developments has not been observed even during the coronavirus crisis. In addition, in times of volatile capital markets such as the situation we are seeing at present in the coronavirus pandemic, residential real estate in German A-cities is being sought more than ever before as a stable and long-term investment by security-oriented institutional investors such as pension funds and insurers. The yield compression with existing properties and the much greater potential for high yields with develop-and-hold projects have given this market segment an additional boost. Thus it comes as no surprise that virtually all the A-cities have a stable or even expanding planning pipeline for develop-and-hold residential projects. It is important to continually assess the residential real estate market so as to identify investment opportunities and draw conclusions on promising trends. Develop-and-hold is very clearly such a trend.

FOREWORD	5
A BRIEF DIGRESSION – THE STUDY, PROJECT DEVELOPMENTS AND COVID-19	8
CHAPTER 1	
The market for develop-and-hold residential projects in the seven A-cities	13
1.1 Overall market seven A-cities in comparison	13
1.2 Regional market portraits	21
1.2.1 Berlin	21
1.2.2 Düsseldorf	24
1.2.3 Frankfurt (Main)	26
1.2.4 Hamburg	29
1.2.5 Cologne	31
1.2.6 Munich	33
1.2.7 Stuttgart	36
CHAPTER 2 – FOCUS TOPIC	
The consequences of the coronavirus for local authority budgets – the renaissance of PPP?	39
CHAPTER 3 – INDUSTRY VIEWS ON THE FOCUS TOPIC	
Will the foreseeable problems for local authority budgets lead to more PPP?	41
3.1 Expert dialog – The real estate market and urban development following the coronavirus recession	42
GLOSSARY AND EXPLANATIONS	44

FOREWORD

With the current issue you are holding the second analysis of the develop-and-hold project development market by bulwiengesa on behalf of Empira. In the foreword to the first issue we explained the methodology, the differences between trading-development and develop-and-hold¹, and in particular also the difficulties that are sometimes associated with the latter. Above all it is now a great source of added value that bulwiengesa has been intensively analysing both the trading-development sector as well as develop-and-hold project developments in the seven A-cities since 2016, and that it has differentiated between the two segments. Ultimately these structures are now shifting in the project development market: the proportion of develop-and-hold projects is increasing, and this is a trend which had been observed before the Covid-19 pandemic. Classical project developments with a sale to end investors following completion, in the planning stage or even as a forward deal, are becoming less important in the seven A-cities.

The reasons for this are diverse: the availability of plots of land in the A-cities analysed here plays a role, as does greater capital liquidity and availability, and associated with this the search for interesting investments by capital investors. In addition, the current framework conditions for project developers on the financing side are changing, with new forms of financing increasingly playing a role with these products.

From the stance of some capital investors project developments can be seen as value-add products, with correspondingly higher yield expectations. Investors are increasingly joining project developments at an earlier stage, with the effect that a forward deal can mean the assumption of a complete project. The current Covid-19 crisis can significantly accelerate this trend.

At the same time, however, private actors have to contend with strong political opposition, and especially in the A-cities which have been hit by rising rents. In contrast are the classical public property owners such as municipal and state-owned housing companies. These are receiving significant support at political and also societal level, and they also profit from building regulation requirements under which publicly-subsidised housing construction is being expressly stipulated for residential project developments.

¹ See glossary for details

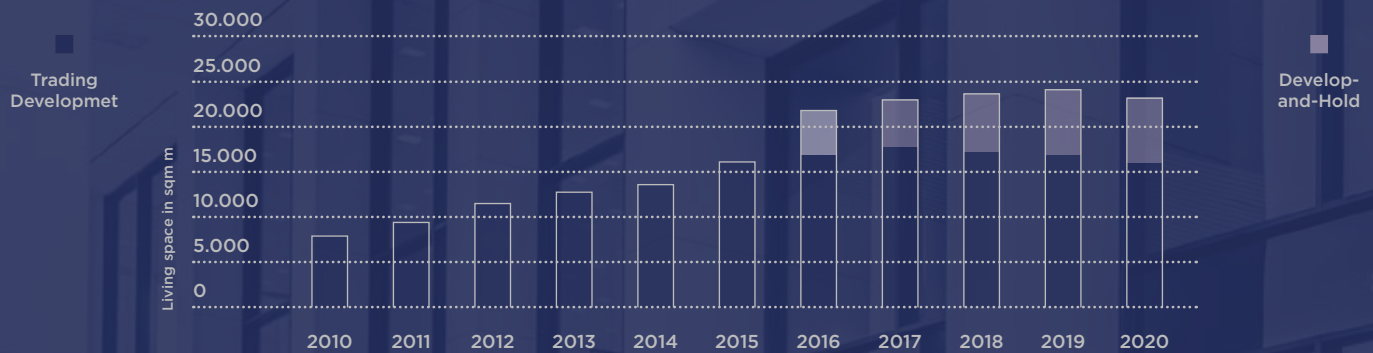
For this reason, in the second issue of the Develop-and-Hold Study we are focusing on precisely this area of conflict: public vs. private actors.

This study has in principle also had to “battle” with the current Covid-19 crisis. Some of the analysed data originates from the pre-coronavirus period. In particular this concerns the projects under construction and in planning which were recorded in detail at the beginning of 2020. The Develop-and-Hold Study by Empira also analyses the theoretical market values in the segment. These were calculated in the model and take into account the location and the residential quality of the projects, and this time also the expected impact of the Covid-19 crisis on the rent and price developments in the A-cities. In this respect it should be noted that the German A-cities all have a permanently high need for new housing coupled with levels of construction activity that are too low. The danger of a permanent or significant downturn in rents and prices is negligible, therefore – at least for the time being.

The second issue of the Develop-and-Hold Study by Empira can show developments on the market for residential projects which were already clearly visible before the Covid-19 pandemic and which are worthy of more in-depth consideration, therefore. For only so can effects related to Covid-19 be correctly identified. These will undoubtedly be among the subject matter of the planned third issue of this study, with a brief digression in this issue providing initial qualitative statements on this.

At the beginning of this study we would once again like to present in brief the most important trend in the segment for residential project developments – as the starting point from the bulwiengesa Project Developer Study 2020 so to speak: the numbers of residential project developments in the seven A-cities are declining, namely noticeably so in the case of trading-developments, the classical project developments therefore, whereas the develop-and-hold project area is on the increase.

Residential project volume for each study year* in all 7 A-cities



Source: bulwiengesa Project Developer Study 2020, including completed projects

*Accumulated here the living space per study year in the projects which were completed three years before the study year or are being completed up to four years after the study year. Note: The figures on the investor-development market were still only indicative for 2016, for this reason they have been highlighted in colour.

The Develop-and-Hold Study by Empira will now analyse this growing develop-and-hold market share in more detail – supplemented to include the topic of housing units and market values. As a reminder, here once again are the most important common features of and differences between the Develop-and-Hold Study by Empira and the bulwiengesa Project Developer Study 2020:

Common features²

- The analysis focuses on the seven A-cities (with clear demarcation by municipalities).
- Projects are allocated as trading-development or investor-development pursuant to the methodology of the Project Developer Study.
- The cut-off date for collection of the data processed here is 31.12.2019.
- Projects with a minimum of 1,000 square metres of living space are recorded.

Differences³

- The Develop-and-Hold Study by Empira exclusively analyses projects under construction and in planning (excl. completed projects).
- The Develop-and-Hold Study by Empira exclusively works with the residential segment and uses the residential units (in part estimated) for analysis and ranking and/or the theoretical market value (bulwiengesa Project Developer Study: only living space in square metres).

² See glossary for details

³ See glossary for details

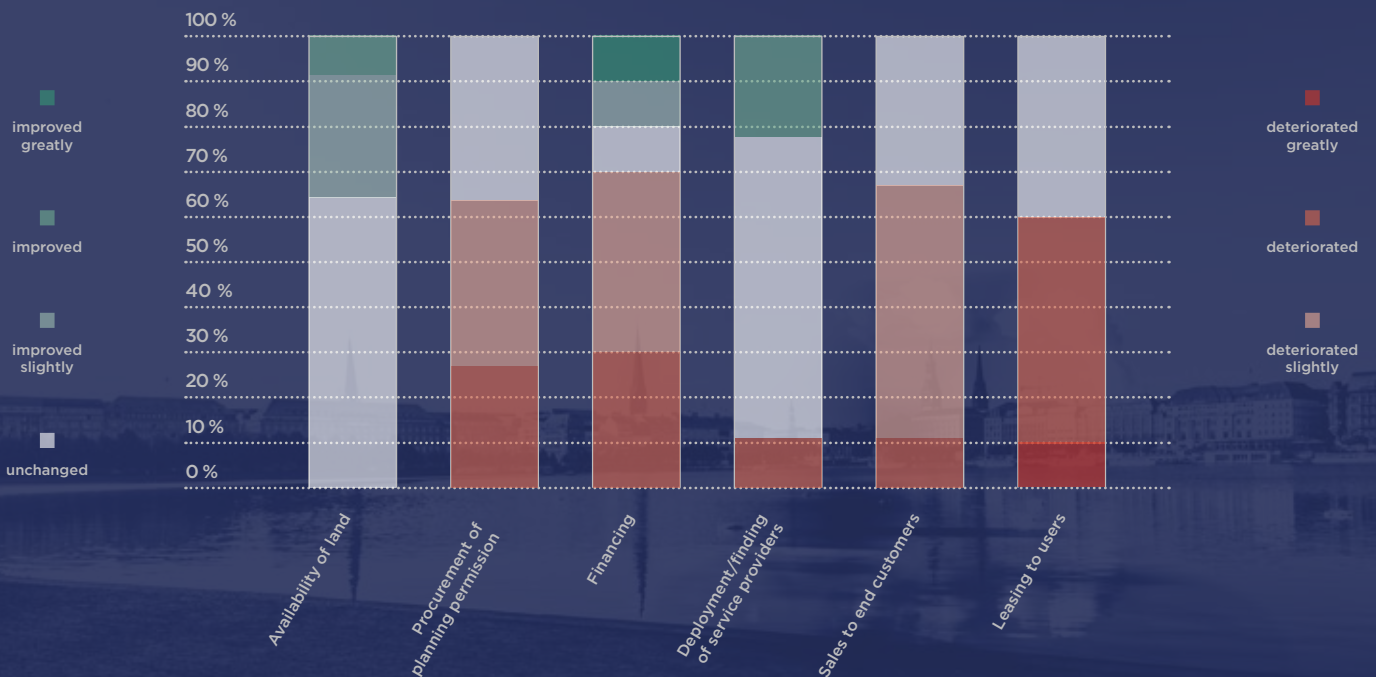
A BRIEF DIGRESSION – THE STUDY, PROJECT DEVELOPMENTS AND COVID-19

The data basis for this study on the projects originates from the first quarter of 2020, shortly before the start of the current crisis. Before using this data for the study we tested it with regard to its validity despite the Covid-19 crisis.

The study analyses project developments which are being completed between 2020 and 2024. In this respect the analysis only takes into account “more secure” projects: the land has to be owned by the respective actor, and it has to be highly probable that the project will be implemented. This in itself ensures that the possible changes as a result of the Covid-19 pandemic on the current project market are “absorbed” quite well.

Nevertheless, the framework conditions for project developments have already changed – and will continue to change. In the case of projects under construction there were clear bottlenecks with regard to supply chains and the availability of personnel during the first lockdown in the spring of 2020. It was possible to resolve these problems quickly, however. The initial difficulties with project planning (e.g. bottlenecks at the planning authority offices) did not lead to any extreme postponements either. In the meantime project planning faces some new challenges. A survey of project developers at the beginning of July shows where these actors expect to see deteriorations in the framework conditions: in leasing, in part also in sales to end customers, as well as in the procurement of planning permission and in financing.

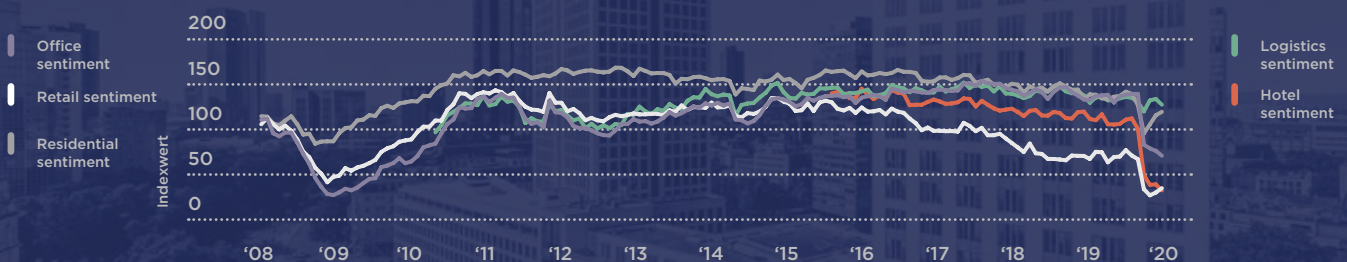
Change in the situation as a result of the Covid-19 crisis



Source: Snap poll bulwiengesa June 2020; n = 11; survey of participants in the exchange of data for Project Developer Study 2020.

As project developers of all kinds in terms of segment activity participated in this survey, it has to be remembered that the individual segments are affected differently. This is also seen in the bulwiengesa AG Hypo Real Estate Sentiment Index.

Real estate sentiment by segments through to July 2020



Source: bulwiengesa AG Hypo Immobilienklima, as of July 2020

What are the possible outlooks for the individual segments?

Office segment

Large numbers of companies were forced to jump in at the deep end and embrace the home office world as a result of Covid-19 – and thus also had to make massive advances with their digitalisation processes. And it would appear that many of the measures which are currently being treated as emergency measures could be retained. The extent to which this will have an impact on demand for office areas is currently the subject of considerable controversy and discussion. There can be no question, however, that at present end investors and financiers have become noticeably more cautious with regard to office properties. Non-core projects and assets which are not “Covid-proof”, and which in the worst possible scenario still seem opportunistic with regard to the leasing situation, will have difficulties with outside financing and a sale to end investors. Here we are already seeing the postponement of projects. On the other hand, it is to be expected that the greater demands placed on equipment and fit-out, infrastructure, location and the environs as a result of the pandemic will also lead to greater interest in suitable areas for new construction. Thus project developments can also be at a considerable advantage. Incidentally, the projects currently under construction are definitely not affected by an additional default risk at present.

Logistics and corporate real estate

The winner of the present Covid-19 crisis, if it is possible to speak of winners, is the logistics segment as a sub-segment. Contributory factors to this have been the resurgence of warehousing in the wake of the pandemic and the fresh growth in online trading. In the case of corporate real estate (and in this respect business parks, for instance) it is necessary to look more closely, for in the past this sector has benefitted in particular from economic growth, start-ups and digitalisation. Project developers are encountering high demand on the part of investors and suitable end users, as well as other excellent project conditions.

Retail segment

Making statements on the retail segment is particularly difficult at present. One has to consider very carefully which sub-segment is under consideration. The Covid-19 crisis has accelerated the transformation that has been ongoing in the retail trade for a long time already. Upcoming rent reductions, the disappearance of tenants, even greater reorientation to online shopping, as well as the pandemic-related reservation on the part of Germans to consumer spending are causing considerable problems for many sub-segments in the retail sector. At the same time the local shopping and

food sectors are continuing to develop well in the pandemic. The interest of users and investors remains high. And in contrast to the hotel segment, which has also been seriously affected, the expectations for the retail segment have been on the increase again for two months now.

Hotel segment

In the past twelve years the tourism industry has been one of the sectors to post the strongest growth in Germany. The project developments have reacted accordingly: for ten years now between 1.5 and 2.0 million square metres of hotel project area (net area) have been developed each year in the seven A-cities by the classical project developers alone. If one also includes the projects completed entirely by the operator companies, the annual volume is a net area of 2.0 to 3.5 million square metres. This market growth has been halted for the time being by the Covid-19 crisis. As far as end investors are concerned the hotel segment is currently not an alternative. Operators will first have to weather the crisis. This can change in the future, but project developers will have to keep a close eye on the potential users of these properties, as well as on the local market situation. A decline in the number of projects is inevitable. Project developers specialising in hotels reacted quickly with intensive operator screening and have been considering which other segments they can move into in the future.

Residential segment

There is always a need for housing. And the German A-cities have to contend with an immense need for living space. Residential real estate is generally only crisis-proof, however, when the macroeconomic framework is right. This is why in the first weeks of the pandemic the sentiment in the residential segment declined just as strongly as it did in the office and retail segments. Since April this trend has been reversed entirely, expectations are improving again. For security-oriented investors such as pension funds and insurers the sustainable stability of residential real estate gained in significance this year in view of the massive losses on the stock exchanges. In this respect, changes in demand are to be expected in line with the economic situation. Positive effects (growing significance of the family and home, highly favourable financing conditions, more moderate land prices in the A-cities) are just as possible as negative effects (downturn in demand and higher price sensitivity on the part of end users). In addition, there are developments not dependent on Covid-19 which have long influenced the residential segment above all (e.g. rent caps, reform or residential property legislation and the planned expansion of compulsory purchase options for local authorities). Naturally there will be differences in the sub-segments, and project developers

will react accordingly. In this respect, with high demand, insufficient supply and the resulting stable rents the A-cities continue to be very interesting markets; there has been no fundamental postponement of project developments in these cities.

Trading-development or develop-and-hold, public or private actors?

Even before the Covid-19 crisis there was a fundamentally clear trend towards the develop-and-hold investment strategy, in particular in the residential segment. In addition, it was observed that classical project and property developers in the A-cities were increasingly switching to the urban hinterland. Above all this was a reaction to high land prices in inner-city areas and a subsequent price-driven migration of people out of cities to the immediate environs.

The current crisis could affect this trend. The interest of institutional investors, and also wealthy private investors, in residential investments in core locations – and thus above all in the German A-cities – can return the focus to classical project development with a subsequent sale to institutional or private investors. At the same time the question naturally arises as to how the current high level of prices can be maintained in the medium to long term, what will happen to rents under weaker economic framework conditions, and what impact will a corresponding change in the distribution yield have on the activity of institutional investors?

Investors with a strong positioning in the develop-and-hold segment see themselves at an advantage here. For they participate in the intensive value creation activities within the complete value creation chain in the field of residential project developments. Examples here are Vonovia, Deutsche Wohnen and Empira Gruppe. Vonovia as a classical residential portfolio owner has had the project developer BUWOG in its corporate portfolio since 2018, and since mid-2020 also the project developer Bien-Ries, which is primarily active in the Frankfurt area. The competitor Deutsche Wohnen is taking the same approach, and in 2020 it secured access to project developments which generate value creation by taking over 13 construction projects from the Munich-based project developer ISARIA and all the employees involved in these projects.

The funds of Empira Gruppe have been investing in and realising new construction projects since 2017 so as to keep these in their portfolios for end investors in the long term. In this respect Empira Gruppe covers the entire value creation chain. Thus investors can participate in project developments in the framework of joint ventures, for example, or invest in the financing of project developments through mezzanine and whole-loan funds.

CHAPTER 1

The market for develop-and-hold residential projects in the seven A-cities

1.2 Total market of the A-cities in comparison

The construction activity of all the actors is not sufficient to meet the demand in the seven A-cities

At present approx. 5.4 million square metres of residential living space are being developed as develop-and-hold projects, as projects for companies' own portfolios therefore (completion 2020 to 2024). This corresponds to more than 1.1 million square metres per year. This total value has remained stable in a year-on-year comparison. If the trading-development project areas are also taken into consideration (ca. 2.1 million sqm p.a.⁴), then each year a total area of 3.2 million square metres of living space is being created in the seven A-cities. This amounts to 42,700 housing units per year⁵.

In contrast to this, in its apartments requirements prognosis for 2020 bulwiengesa calculates an annual need for ca. 56,200 housing units in the seven A-cities⁶. As with the first Develop-and-Hold Study by Empira it is once again true that in terms of quantity demand is still not being met. In qualitative terms it is also to be assumed that there is even greater demand in some sub-segments. In particular this concerns the mid and upper rent and price segments.

Classical project developments are clearly on the decline in the meantime

This remains alarming, in particular as the residential project volume with classical trading-development projects has been stagnating in the seven A-cities for three years now – and this time it has actually declined significantly (-8.5%)⁷. In this respect it is important to note,

however, that this trend only applies to the seven A-cities clearly demarcated by municipalities. This development cannot be equated with a nationwide trend. The classical residential project developers remain true to the German residential market, they are just much less active with residential projects directly in one of the A-cities, but have shifted to the immediate hinterland of the large housing markets above all. This has been confirmed by findings from other analyses⁸.

Push and pull factors in the develop-and-hold segment keep the volume stable

The actors with develop-and-hold projects, the housing associations, are also facing restrictions with their own residential construction projects: the low availability of areas and consequently high prices for building land form the largest problem in this respect. However, some of these companies are benefitting from the proportions of price-capped or subsidised housing construction with project developments that are required as a consequence of planning approval legislation. From a political stance activities on the part of holders of residential portfolios are also more “socially-acceptable” and meet with less resistance among the local population. This is at least true if they are public, church or social actors. The private companies in the develop-and-hold market, in contrast, and in particular some of the larger actors, are repeatedly being confronted with resistance in terms of their societal acceptance. All in all, however, the residential project volume in the develop-and-hold market remains stable at 24,000 square metres of additional living space in this study year (+0.4%).

⁴ Source: bulwiengesa Project Developer Study 2020

⁵ Here: calculated as 75 sqm per housing unit

⁶ Source: Apartments requirements prognosis bulwiengesa AG, spring 2020, here replacement/additional requirements annual average across all 7 A-cities 2020 to 2024

⁷ Source: bulwiengesa Project Developer Study 2020

⁸ See, for example, the study “Wohnen im BER-Umfeld”, prepared 2020, bulwiengesa AG

Housing – Volumes in the study year 2020*, per strategy and A-city

	LIVING SPACE ABSOLUTE					
	Actual figure 2020*		Change 2019* - 2020*			Share for development type
Berlin	in sqm		absolute			
Develop-and-Hold	2.101,000	<div><div></div></div>	260,000	<div><div></div></div>	<div><div></div></div>	39%
Trading Development	3.256,000	<div><div></div></div>	-167,000	<div><div></div></div>	<div><div></div></div>	61%
	5.357,000	<div><div></div></div>	93,000	<div><div></div></div>	<div><div></div></div>	
Düsseldorf						
Develop-and-Hold	339,000	<div><div></div></div>	-13,000	<div><div></div></div>	<div><div></div></div>	24%
Trading Development	1.057,000	<div><div></div></div>	-122,000	<div><div></div></div>	<div><div></div></div>	76%
	1.396,000	<div><div></div></div>	-135,000	<div><div></div></div>	<div><div></div></div>	
Frankfurt						
Develop-and-Hold	655,000	<div><div></div></div>	72,000	<div><div></div></div>	<div><div></div></div>	35%
Trading Development	1.214,000	<div><div></div></div>	-133,000	<div><div></div></div>	<div><div></div></div>	65%
	1.869,000	<div><div></div></div>	-61,000	<div><div></div></div>	<div><div></div></div>	
Hamburg						
Develop-and-Hold	740,000	<div><div></div></div>	30,000	<div><div></div></div>	<div><div></div></div>	29%
Trading Development	1.798,000	<div><div></div></div>	-95,000	<div><div></div></div>	<div><div></div></div>	71%
	2.538,000	<div><div></div></div>	-65,000	<div><div></div></div>	<div><div></div></div>	
Cologne						
Develop-and-Hold	305,000	<div><div></div></div>	-175,000	<div><div></div></div>	<div><div></div></div>	26%
Trading Development	872,000	<div><div></div></div>	-66,000	<div><div></div></div>	<div><div></div></div>	74%
	1.177,000	<div><div></div></div>	-241,000	<div><div></div></div>	<div><div></div></div>	
Munich						
Develop-and-Hold	1.091,000	<div><div></div></div>	-127,000	<div><div></div></div>	<div><div></div></div>	37%
Trading Development	1.822,000	<div><div></div></div>	-242,000	<div><div></div></div>	<div><div></div></div>	63%
	2.913,000	<div><div></div></div>	-369,000	<div><div></div></div>	<div><div></div></div>	
Stuttgart						
Develop-and-Hold	193,000	<div><div></div></div>	-23,000	<div><div></div></div>	<div><div></div></div>	43%
Trading Development	260,000	<div><div></div></div>	-47,000	<div><div></div></div>	<div><div></div></div>	57%
	453,000	<div><div></div></div>	-70,000	<div><div></div></div>	<div><div></div></div>	
Total						
Develop-and-Hold	5.424,000	<div><div></div></div>	24,000	<div><div></div></div>	<div><div></div></div>	35%
Trading Development	10.280,000	<div><div></div></div>	-871,000	<div><div></div></div>	<div><div></div></div>	65%
	15.704,000	<div><div></div></div>	-847,000	<div><div></div></div>	<div><div></div></div>	

Source: bulwiengesa Project Developer Study 2020

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Berlin dominates the ranking in terms of absolute volume, Frankfurt in terms of relative volume

The structural differences between the A-cities have changed little since the first Develop-and-Hold Study by Empira: as a result of its size Berlin remains the market with the largest volume of develop-and-hold living space in absolute terms. In second place is Munich, well ahead of Hamburg. In the German capital

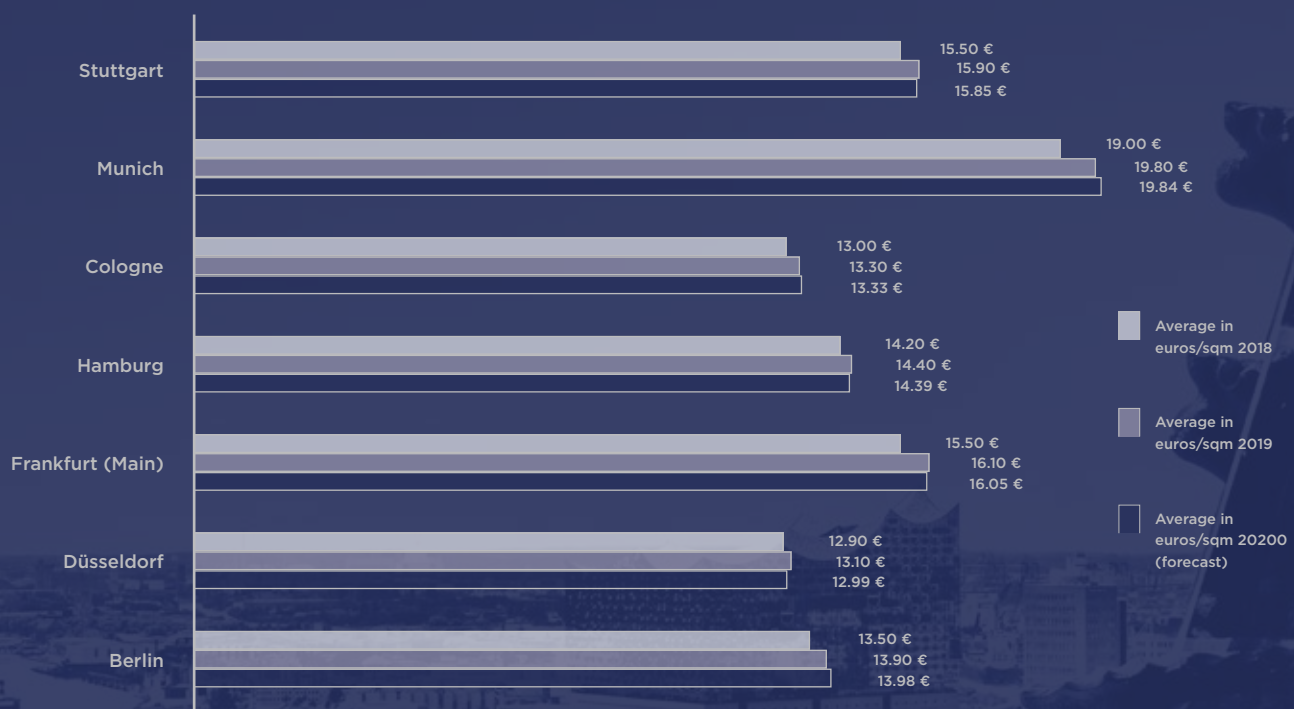
the develop-and-hold volume has increased noticeably over the study year 2019. The develop-and-hold residential project areas have also increased in Frankfurt and also slightly in Hamburg. The number of develop-and-hold projects in the other cities is decreasing or stagnating. If the living space is expressed as a ratio of the number of residents, large volumes of living space are being developed in Frankfurt and Munich with a develop-and-hold strategy.

The theoretical market value of all projects across all A-cities has grown by 7%

For the Develop-and-Hold Study by Empira the projects are not considered purely in terms of the number of square metres. They are also analysed with respect to their residential location, given an underlying rent and price prognosis – and are thus given a theoretical market value⁹. The total theoretical market value of the develop-and-hold projects in the seven A-cities evaluated in this manner is 34.8 billion euros, which is seven per cent more than in the study year 2019.

The theoretical market value is influenced by a changing project volume, the residential location of projects, and associated with this the levels for rents and the forecast development of rents. In particular the sharp increase in the underlying rents and prices from 2018 to 2019 in all A-cities has meant an increase in the total market value of all projects in the A-cities. This increase has been particularly large in Munich and Frankfurt, which are already expensive markets, with Berlin also seeing very high growth rates.

Market value calculation of develop-and-hold projects by Empira – average rents new residential construction 2018 to 2020



Source: bulwiengesa RIWIS

The pandemic-driven framework conditions have been considered

The theoretical market value of the projects is calculated on the basis of the forecasts for rents and prices. These already take into account the pandemic situation¹⁰. For some cities a short-

term stagnation or a slight decrease in rents has been estimated for 2020 and 2021. bulwiengesa assumes that rents will rise again from 2023 onwards at the latest. Thus a generally positive development of rents is expected for virtually all the A-cities between 2019 and 2024, with further growth in rents in the subsequent years.

⁹ See glossary for details

¹⁰ Source here: bulwiengesa RIWIS; forecast at beginning of May 2020

































The situation is different with the purchase prices. Even before the Covid-19 crisis bulwiengesa assumed that the prices in some of the A-cities would be stable or decline in the coming years. At that time the expected increase in interest rates in the medium to long term (purchase prices are much more sensitive to interest rates) and affordability, which had reached the upper limit, were the main reasons for this expectation in the upper price segment above all. This prognosis is currently still valid; the intensity of the price declines is becoming greater, however, and is expected to take effect earlier in the coming one to two years. Ultimately, it also has to be stated in this context that all prognoses of this nature are especially uncertain in the current circumstances.

The market structures change if rents and multipliers are taken into account

As a result of the high market rents and prices Munich has significantly higher levels than the

other A-cities when it comes to the theoretical market value per square metre. Berlin is at virtually the same level as Munich with regard to the total theoretical market value in the meantime. Rising rents and clear growth in project areas have seen the develop-and-hold market in the German capital attain particularly strong growth in monetary terms. Growth in the total theoretical market value was also posted by Düsseldorf, Frankfurt and Hamburg. In this case it has to be remembered that not only the framework data (rents, prices, prognoses), but also the volume and quality of projects themselves can change. Changes in the residential location (which affect the levels of rents and prices) reflect this, amongst other things. Thus, for example, the average residential location quality in Berlin has scarcely changed, in Munich and Stuttgart, in contrast, it has declined slightly.

Develop-and-hold housing – Market values study year 2020* per city

	MARKET VALUE					AVERAGE RESIDENTIAL LOCATION		NUMBER OF HOUSING UNITS			
	Actual figure 2020*		Change 2019* - 2020*			Actual figure 2020*		Actual figure 2020*		Change 2019* - 2020*	
	absolute in EUR m		in %	in absolute terms (max. = EUR 2,200 m)	EUR per sqm	2020	2019			in %	in absolute terms (max. = 3,300)
Berlin	10,610		22%		5,200	4.52	4.53	28,732		13%	
Düsseldorf	1,840		5%		5,800	5.42	5.13	4,784		-1%	
Frankfurt	4,130		18%		6,600	5.13	5.14	9,403		2%	
Hamburg	4,700		13%		6,300	4.81	4.67	10,249		1%	
Cologne	1,290		-26%		4,400	4.37	4.33	4,479		-25%	
Munich	11,200		-3%		10,800	5.00	5.22	14,906		-3%	
Stuttgart	1,000		7%		5,400	4.18	4.35	2,575		2%	
Total	34,760		7%		6,600	4.77	4.77	75,129		2%	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location

Planning pipeline growing in the develop-and-hold segment

Using the construction schedules it is possible to differentiate between the analysed projects and allocate them to the categories "under construction" or "in planning". Changes to the project volumes in the planning phase offer a

certain glimpse into the future. Virtually all the A-cities display a stable or growing planning pipeline for develop-and-hold residential projects from 2019 to 2020. The corresponding planning volumes in Berlin and Hamburg have seen the largest growth. In view of the general downturn in overall residential project areas in the cities (including classical project deve-

loper areas therefore) this is noteworthy. One explanation could be that develop-and-hold projects in part meet with better framework conditions: companies which are predominantly active in the develop-and-hold segment profit in the project development market from

greater creditworthiness, their long-standing relationships to their principal banks, and thus from better interest rate conditions with external financing. In the current situation with the Covid-19 crisis this trend could be amplified, therefore.

Develop-and-hold housing – Housing units by development status study year 2020* per city

ACTUAL FIGURE 2020*			CHANGE 2019* - 2020*		
	Number of housing units		Share	Number of housing units	
Berlin	28,730			3,290	
under construction	10,880		38%	1,520	
Planning concrete	17,850		62%	1,770	
Düsseldorf	4,780			-40	
under construction	1,030		22%	150	
Planning concrete	3,750		78%	-190	
Frankfurt	9,410			190	
under construction	3,570		38%	-220	
Planning concrete	5,840		62%	400	
Hamburg	10,250			90	
under construction	3,680		36%	-1,750	
Planning concrete	6,570		64%	1,840	
Cologne	4,480			-1,480	
under construction	2,460		55%	-2,010	
Planning concrete	2,020		45%	530	
Munich	14,910			-460	
under construction	7,830		53%	-850	
Planning concrete	7,080		47%	390	
Stuttgart	2,570			-310	
under construction	610		24%	-630	
Planning concrete	1,960		76%	320	
Gesamt	75,130			1,280	
under construction	30,060		40%	-3,790	
Planning concrete	45,070		60%	5,070	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Private actors on the advance





































A detailed examination of the actors is especially important in the develop-and-hold residential segment. For this segment is made up of both private and public actors. Among the public sector actors are, for example, municipal and state-owned housing associations. They account for 51.5 per cent of the apartments presented here. Actors with a clear church or other social background as well as classical housing cooperatives account for an additional

share of 17.9 per cent. In contrast to these are the classical private actors. Their share of the apartments analysed here is 30.6 per cent.

The share held by private actors has increased by 3.7 per cent since the previous Develop-and-Hold Study by Empira, while the proportion accounted for by public actors, cooperatives and other bodies has declined accordingly. It may be clearly seen, therefore, that private actors are gaining in significance in the develop-and-hold segment. Their increasing importance is

particularly impressive if one considers that with the growth in the principle of awarding public land on the basis of the concept quality, the cities have been able to exert ever-greater influence on the regulation of the market.

Develop-and-hold housing – Housing units by development status study year 2020* per type of actor

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	3,610		-680	
Planning concrete	2,800		400	
	6,410		-290	
Church				
under construction	1,000		150	
Planning concrete	490		180	
	1,490		330	
Public				
under construction	16,100		-2,550	
Planning concrete	22,560		1,480	
	38,660		-1,070	
Private				
under construction	7,530		700	
Planning concrete	15,470		2,430	
	23,000		3,140	
Other				
under construction	1,820		-1,350	
Planning concrete	3,750		570	
	5,570		-770	
Total				
under construction	30,060		-3,730	
Planning concrete	45,070		5,070	
	75,130		1,330	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year. Some of the companies ("Others") were not classified for methodological reasons. See glossary for details..

Each city has its own actor structure

The significance of the actors varies greatly at city level. Thus, for example, in Düsseldorf, Stuttgart, Cologne and Hamburg cooperatives make a much larger contribution to the project volume in the develop-and-hold market, while they are of less importance in Munich, Frankfurt and Berlin. Stuttgart, Munich, Frankfurt, Berlin and also Cologne are also heavily dominated

by the public actors. Düsseldorf is shaped to a very large degree by private actors, while Hamburg has a visibly balanced actor structure. These structures are extremely stable, even if the shares can shift noticeably with smaller markets such as Stuttgart, Cologne and Düsseldorf. It is interesting to examine the reasons for these structures. We have done this in the respective city portraits.

Develop-and-hold housing – Housing units by actor groups study year 2020* in the seven A-cities



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

The private actors are also making gains in the ranking

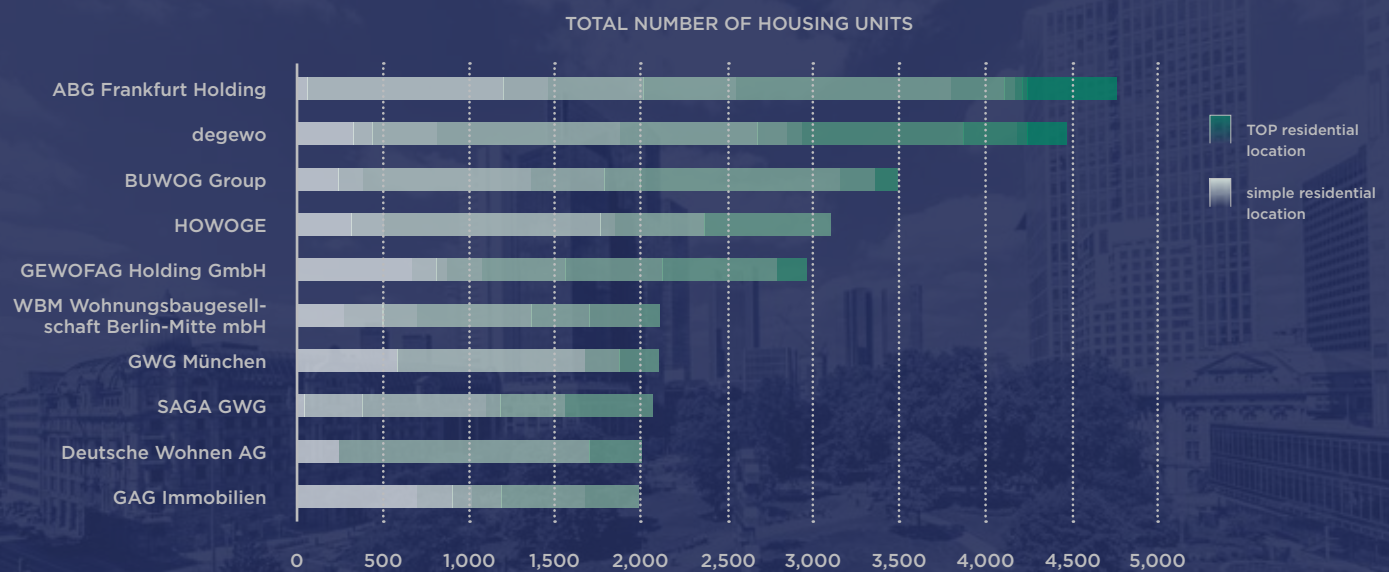
It is important to analyse the top actors in the develop-and-hold market at city level as the bulk of the top actors are public housing associations. And these are active on a large scale in one respective market. The top actors for each city are presented in more detail in the city portraits, therefore. Across all seven A-cities it is particularly interesting to observe how private actors fundamentally position themselves. In this respect it may be seen from the ranking that private actors are “on the advance”. Whereas BUWOG was the only private

actor among the Top 10 last year, it is joined this year by Deutsche Wohnen. Both private actors have also moved up the rankings: BUWOG from 5th position to 3rd position (more than 3,400 apartments, ca. +40% more housing units, several new projects primarily in Berlin), Deutsche Wohnen from 19th position to 9th position (ca. 2,000 apartments, ca. +100% more housing units, and in particular the “Marienhain” project in Berlin which has been included for the first time). Outside of the Top 10 Empira Gruppe occupies 13th position (ca. 1,800 apartments) as another major private company with a develop-and-hold approach. The next private actor is TREI Real Estate in

19th position (nearly 870 apartments). Also of note is the fact that Vonovia is developing a further 750+ apartments without BUWOG (in particular including "Alboingärten" in Berlin) and thus takes 23rd position. Other private companies are to be found beneath this ran-

king position (e.g. International Campus Group, Vivawest, Rathgeber), yet all of them have significantly fewer than 1,000 apartments under construction or fewer than 500 apartments in planning in all seven A-cities, and in part very much operate at local level.

Develop-and-hold housing – Top actors by housing units study year 2020* in the seven A-cities



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Companies in Munich benefit from a market value-based ranking

Similar to the structure of the actors in the cities, the ranking of the top actors can be conducted on the basis of the theoretical market value. In this case municipal and public holders of housing portfolios stand out in particular in the ranking for the expensive state capital Munich. In this respect it should not be

forgotten that the theoretical market value is based on a calculation with market ratios. As the rents at the public companies are often lower than rents on the private rental market, the actual capital values of these projects are often noticeably lower. The theoretical market value shown here is not the actual capital value of the company, therefore.

Develop-and-hold housing – Top actors by market value study year 2020* in the seven A-cities



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2 Regional market portraits

2.2.1 Berlin

In a comparison with the other A-cities Berlin is the largest market for housing project developments. The total housing project volume in the develop-and-hold segment in the capital is currently 28,730 apartments. This is nearly 13 per cent more than in the study year 2019. Major new projects in this segment are, for example, the Deutsche Wohnen “Marienhain” project (in total more than 1,200 apartments), the Gewobag “Waterkant” project (more than 2,000 apartments), the “East Ost” project (here the partial area of HOWOGE, more than 1,300 apartments), as well as the “Kietzer Feld” and “Bohnsdorfer Weg” projects of Degewo (each 400 to 500 apartments). In 2019 the analysis already included other major project developments from the develop-and-hold segment. For example the former Kabelwerk Köpenick project of Deutsche Wohnen (1,000+ apartments) and the city and federal state project “Buckower Felder” (ca. 900 apartments). Thus Berlin is seeing a number of projects of a consi-

derable scale in the develop-and-hold segment. Alongside the develop-and-hold projects are 43,800 housing units from trading-development¹¹. As in all the A-cities the classical project developers are also active in Berlin to a significantly lesser extent than they were in 2019. There have been very few new projects (e.g. “Wohnpark Südkreuz” from Hines, more than 650 apartments; the project at Segelfliegerdamm from Bauwert, 800 apartments; nearly 300 apartments at Tannhäuserstrasse from BUWOG). If the two segments are amalgamated, a total of 14,500 apartments per year is to be expected. This amounts to 300 housing units per year more than in the study year 2019. In this regard Berlin is the only A-city to post growth, above all as a consequence of there being significantly more projects in the develop-and-hold segment. With a need for nearly 17,700 housing units for Berlin¹² the supply volume of the housing projects in Berlin is still clearly not sufficient.













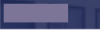























¹¹ Source: bulwiengesa Project Developer Study 2020

¹² Source: Apartments requirements prognosis bulwiengesa AG, spring 2019, here replacement/additional requirements annual average across all 7 A-cities 2020 to 2024

About 53 per cent of the apartments in the develop-and-hold segment in Berlin are being developed by actors in the public sector. Private companies are implementing 37 per cent of the

apartments; although they are currently developing fewer apartments than the public sector, they account for the bulk of the project growth under construction and in planning.

Develop-and-hold housing Berlin – Housing units by development status study year 2020* per type of actor

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	920		300	
Planning concrete	260		-30	
	1,180		270	
Church				
under construction	640		130	
Planning concrete	30		-60	
	670		70	
Public				
under construction	6,310		140	
Planning concrete	8,920		680	
	15,240		820	
Private				
under construction	2,580		1,050	
Planning concrete	8,050		1,330	
	10,640		2,390	
Other				
under construction	430		-100	
Planning concrete	580		-160	
	1,010		-260	
Total				
under construction	10,880		1,520	
Planning concrete	17,850		1,770	
	28,730		3,290	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

The current scenario for the development of rents takes into account possible Covid-19 effects for Berlin. As a consequence of the high demand and the ongoing low rent levels it is to be assumed that rents will increase in 2020/2021 and later despite the crisis associated with the pandemic.

If one considers the theoretical market value¹³, the projects of the private portfolio holders in the develop-and-hold segment are still much higher on average than the level seen at the public actors. Nevertheless, the public

companies have a greater volume of the total theoretical market value, among other things because of the larger volume of apartments. As new residential locations are established with bigger quarters and districts, the values for individual planning areas can improve following realisation. Among these are, for example, the "Speicherballett" (38,000 sqm living space) and "Gartenfeld" (18,000 sqm living space) projects of BUWOG, and the "Daumstrasse" project of Deutsche Wohnen. At the same time public actors are realising developments in very good residential locations,

¹³ See glossary for details

for example the “Leben und Wohnen auf dem Gut Alt-Biesdorf” project (500+ apartments) of STADT UND LAND, and the “Fürstenwalder Allee” (21,000 sqm) and “Wiesenschlag” (15,000 sqm) projects of Degewo.

Develop-and-hold housing Berlin - Market values study year 2020* per type of actor

	MARKET VALUE 2020			EUR per sqm	AVERAGE RESIDENTIAL LOCATION	
	in EUR bn	Change 2019* - 2020*			2020	2019
Cooperative	430	100		5,100	4.59	4.68
Church	200	70		4,200	3.88	3.13
Public	5,310	920		5,000	4.41	4.29
Private	4,270	990		5,700	4.77	5.04
Other	390	-140		5,000	4.41	0.00
Total	10,610	1,940		5,200	4.52	4.87

Source: Develop-and-Hold Study by Empira.

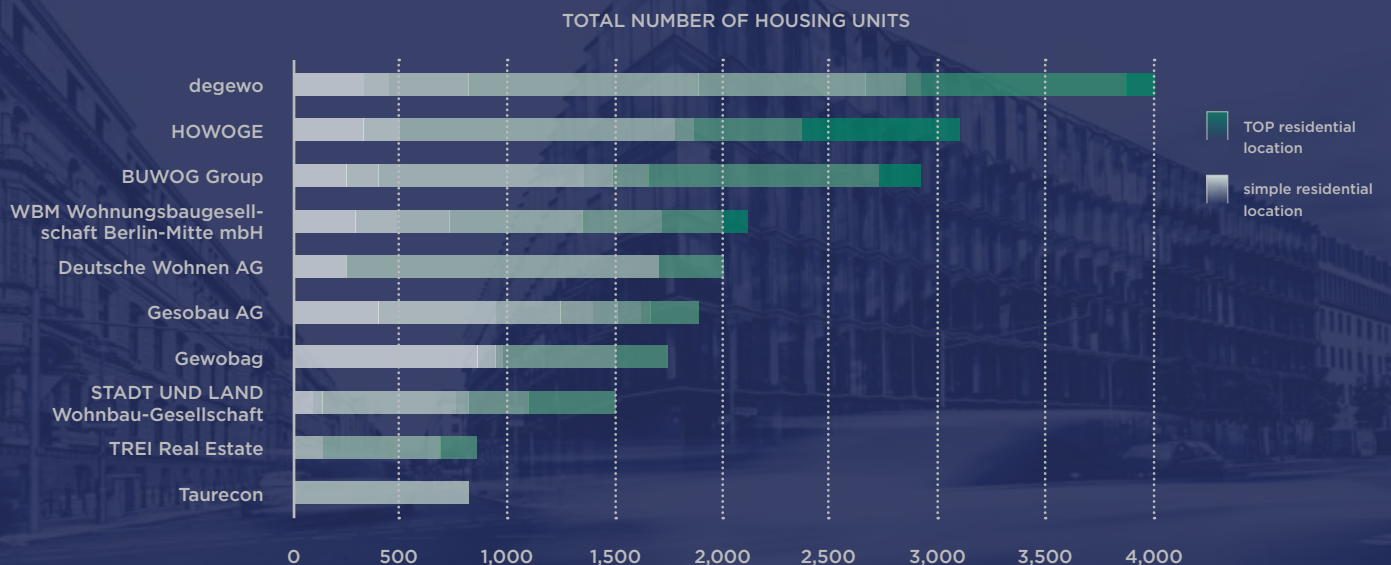
*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location.

The top actors in Berlin's develop-and-hold segment have changed somewhat since the previous study. Although the state-owned housing companies Degewo and HOWOGE still occupy the top positions, the publicly-listed BUWOG has significantly expanded its project volume in Berlin (starting from just over 2,000 apartments in the study year 2019). Deutsche Wohnen was also able to improve its position, and with ca. 2,000 apartments is now in fifth

place (in the study year 2019 it was in 8th place with ca. 1,000 apartments). These two developments are clear confirmation of the trend in the German capital towards private actors playing an ever increasing role in the develop-and-hold segment. With WBM, Gesobau, Gewobag and STADT UND LAND the Top 10 ranking in the develop-and-hold segment in Berlin continues to be very clearly dominated by public actors.

Develop-and-hold housing Berlin – Top actors by housing units study year 2020* in Berlin



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2.2 Düsseldorf

In Düsseldorf – the capital of the federal state of North Rhine-Westphalia – 4,780 housing units are being built as develop-and-hold apartments in the period analysed, 2020 to 2024. Alongside Cologne and Stuttgart, Düsseldorf thus ranks among the smaller markets in this segment. In a comparison with the study year 2019 the develop-and-hold volume in Düsseldorf has only decreased marginally. Overall the proportion of develop-and-hold apartments in the entire housing project volume in Düsseldorf is extremely small compared to the other A-cities. The classical trading-development segment has a volume that is nearly three times as large, with 14,150 apartments¹⁴. Taken together the two strategy types account for more than 3,700 apartments per year. This comes quite close to the 3,900 apartments needed as new housing for Düsseldorf each year¹⁵. The housing project volume in Düsseldorf is accounted for to a significant degree by a number of large projects in the trading-development segment which are still in the planning stage. These include, for example, the project “Grafenthal Wohnen” (500 apartments) of Brack Capital Group, “Neue Paulsmühle” from Bonava (nearly 600 apartments), “Grand Central” and “Bernrather Gärten” from CG Gruppe (900 and 1,300 apartments). The “Glasmacherviertel” district (currently Brack Capital Group with a joint venture partner, 1,400 apartments taken into account here) is to be mentioned as a plan; it has been sold several times in this stage and the beginning of construction postponed. Should such projects not come about in the scheduled form or with a longer development horizon, the number of apartments completed in Düsseldorf each year through to 2024 could be lower. Among the planned develop-and-hold projects on a larger scale to be noted in Düsseldorf is the “Ben & Mara” project (600+ apartments) from Industrieterrains Düsseldorf Reisholz AG (here in a joint venture with equity companies), a project developer that is actually predominantly active in the commercial sector and which is owned entirely by the City of Düsseldorf.

Even though the segment is small in Düsseldorf: in the develop-and-hold market the private companies are developing 44 per cent of the apartments and thus form the most

significant group of actors. In no other A-city do the private companies have a larger share. Public actors are developing 23 per cent of the apartments in Düsseldorf; a similar volume is accounted for by the cooperatives, which are generally well represented in Düsseldorf (21%). In this respect the housing associations are developing a strikingly high and ever increasing share of the apartments in planning. The projects in planning at the private companies in Düsseldorf, in contrast, have declined significantly.

The current scenario for the development of rents takes into account possible Covid-19 effects for Düsseldorf. Accordingly, rents are expected to stagnate in the metropolis on the River Rhine in 2020 and 2021, thereafter the rents should be able to increase again significantly as demand in Düsseldorf remains at an unbroken high level.

In Düsseldorf private and public actors are developing their projects in residential locations of virtually the same quality. Cooperatives, in contrast, have considerably better residential locations. Nevertheless, as a result of the project volumes private companies have the largest overall theoretical market value¹⁶ in Düsseldorf.






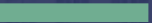





























The Düsseldorf develop-and-hold market is small: in total it has fewer than 30 actors. Among the Top 10 the largest actor is the municipal housing company Städtische Wohnungsgesellschaft Düsseldorf, which is represented in the study with nine individual projects. The largest project in this respect is “Neue Urbane Bauen” with 330 apartments. Düsseldorfer Wohnungsgenossenschaft (DWG) is in second position and is active in Düsseldorf with eleven individual projects. The largest of these is the new construction on the area formerly occupied by Rheinbahn (where, among others, BPD, Concepta and BNS are also active with trading-development projects) in five construction phases (ca. 250 apartments). In addition to DWG, three other cooperatives are also represented in the ranking. In third position is the private actor Vivawest (among other projects “Schöffenhöfe” with nearly 300 apartments and the new construction on the former WECO plot with 200+ apartments).

¹⁴ Source: bulwiengesa Project Developer Study 2020

¹⁵ Source: Apartments requirements prognosis bulwiengesa AG, spring 2020, here replacement/additional requirements annual average across all 7 A-cities 2020 to 2024

¹⁶ See glossary for details

Develop-and-Hold housing Düsseldorf – Housing units by development status study year 2020* per type of actor

ABSOLUTE NUMBER OF HOUSING UNITS					
	Actual figure 2020*		Change 2019* - 2020*		
Cooperative			absolute		
under construction	190		110		
Planning concrete	830		130		
	1,020		230		
Church					
under construction	130		90		
Planning concrete	100		10		
	230		100		
Public					
under construction	60		-150		
Planning concrete	1,030		70		
	1,090		-70		
Private					
under construction	550		180		
Planning concrete	1,540		-180		
	2,090		-		
Other					
under construction	100		-50		
Planning concrete	260		-210		
	360		-260		
Total					
under construction	1,030		180		
Planning concrete	3,750		-190		
	4,780		-10		










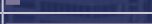

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Other private companies among the Top 10 are Empira Gruppe (291 apartments in two projects), Brune-Immobilien (in particular with the "Arcadia Höfe" project, 200 apartments) and Landmarken (with the projects "Wohnen am Sonnenpark" with 120 apartments and "GOL:D

ECK" with 110+ apartments). The municipal company IDR ranks among the Top 10 together with the private equity company Kyros through their joint large-scale project "Ben & Mara", whereby both have ca. 300 apartments each.

Develop-and-Hold housing Düsseldorf – Market values study year 2020* per type of actor

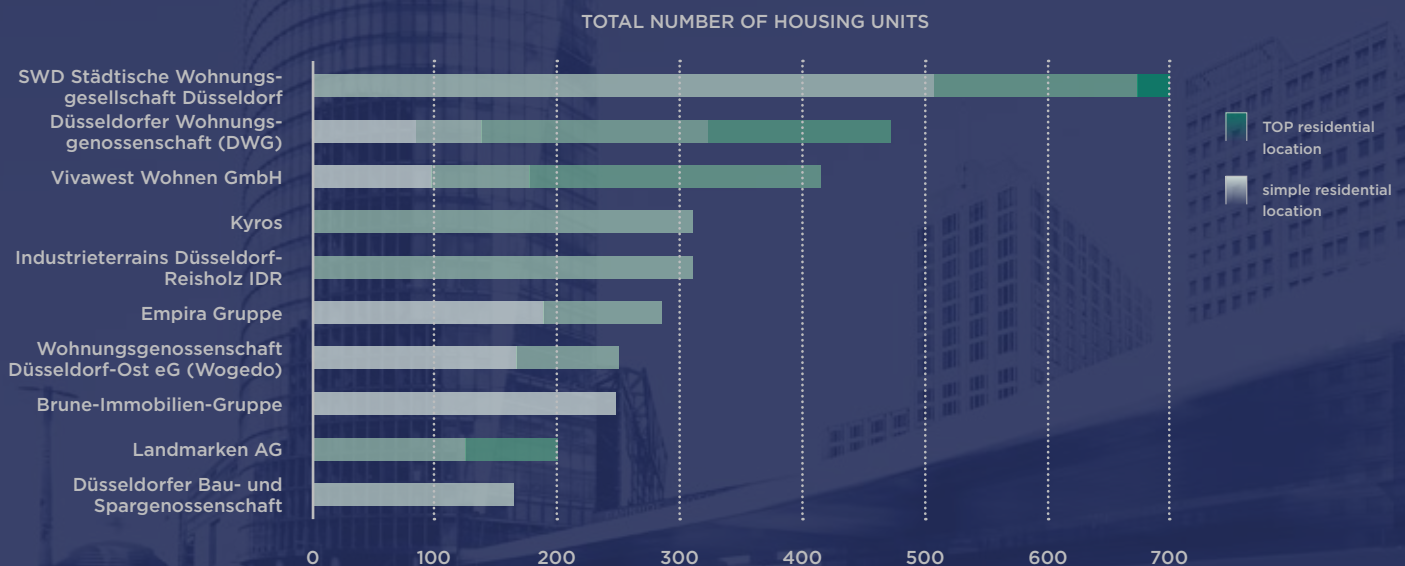
	MARKET VALUE 2020				AVERAGE RESIDENTIAL LOCATION		
	in EUR bn		Change 2019* - 2020*		EUR per sqm	2020	2019
Cooperative	440		98		6,000	5.74	5.68
Church	80		36		5,100	4.63	4.00
Public	400		-4		5,100	4.94	5.11
Private	730		8		5,200	4.97	4.96
Other	190		-46		6,900	6.15	4.00
Total	1,840		82		5,800	5.42	5.19

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location.

Develop-and-hold housing – Top actors by housing units study year 2020* in Düsseldorf



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2.3 Frankfurt (Main)

In the financial hub Frankfurt (Main) 39 per cent of the apartments under construction and in planning are being implemented by housing associations which retain the projects in their portfolios. With 9,400 apartments in the current period under analysis in the study the develop-and-hold segment in Frankfurt has more or less the same project volume as Hamburg, which is nearly three times as large. In addition to these apartments are a further 16,300 apartments from the trading-development segment¹⁷. Thus 5,140 apartments are being developed per year in Frankfurt. This is 300 units less than in the study year 2019. It is above all lower as the project volume in trading-development decreased considerably while the project volume in the develop-and-hold segment remained stable. This contrasts with a need for new housing of ca. 6,000 housing units each year for Frankfurt¹⁸. Demand remains significantly higher than supply, therefore.

In Frankfurt 72 per cent of the apartments in the develop-and-hold segment are currently being developed by public-sector actors. This is the highest proportion in the A-cities and it is being implemented in particular by ABG Frankfurt, which is majority-owned by the City of Frankfurt. A further 22 per cent of all the apartments in the develop-and-hold segment in Frankfurt come from private companies.

The largest projects in the develop-and-hold segment also originate from public housing companies: ABG Frankfurt (e.g. "Im Hilgenfeld", 850 apartments; "Am Römerhof", 2,000 apartments; "Platensiedlung", 600 apartments; "Kulturcampus Bockenheim", 1,800 apartments) and Nassauische Heimstätte ("Siemens-Areal", 500+ apartments), which belongs to the state of Hesse, a number of local municipalities, administrative districts, pension schemes and trusts.

¹⁷ Source: bulwiengesa Project Developer Study 2020

¹⁸ Source: Apartments requirements prognosis bulwiengesa AG, spring 2020, here replacement/additional requirements annual average across all 7 A-cities 2020 to 2024

Develop-and-hold housing Frankfurt – Housing units by development status study year 2020* per type of actor

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	30		-	
Planning concrete	-		-80	
	30		-80	
Church				
under construction	40		-	
Planning concrete	110		80	
	150		80	
Public				
under construction	2,390		-20	
Planning concrete	4,330		650	
	6,720		630	
Private				
under construction	810		270	
Planning concrete	1,160		-320	
	1,970		-50	
Other				
under construction	300		-460	
Planning concrete	230		60	
	530		-400	
Total				
under construction	3,570		-220	
Planning concrete	5,840		400	
	9,400		180	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

The current scenario for the development of rents takes into account possible Covid-19 effects for Frankfurt. Accordingly, stagnating rents are expected in the financial metropolis for 2020 and 2021, thereafter the rents should be able to increase again significantly as demand remains at a high level and is not met by supply.

The private companies in Frankfurt are developing project areas in particularly good residential locations. This is reflected in the theoretical market value¹⁹. In this respect an important role is played by the high-quality residential towers in central residential locations. These have been accounting for ever greater market shares in the residential segment since 2014 and rank among Frankfurt's landmarks. Although the

majority of these high-rise projects are being developed as classical trading-developments, such projects are also being implemented in the develop-and-hold sector. Examples in this respect are "Ruby Tower" (GWH Hessen project, 150 apartments, Niederrad), "The Flag" (RMW Wohnungsgesellschaft project, 165 apartments, West End-South) and "One Forty West" (Commerz Real with Groß & Partner, ca. 190 apartments plus hotel, West End-South), which are all under construction or have been completed. Some of the residential projects on the part of private actors have been in the planning stage for a long time already without the projects being tackled in concrete terms. Corrections are possible in the coming months, therefore.

¹⁹ See glossary for details

Develop-and-hold housing Frankfurt – Market values study year 2020* per type of actor

	MARKET VALUE 2020			EUR per sqm	AVERAGE RESIDENTIAL LOCATION	
	in EUR bn	Change 2019* - 2020*			2020	2019
Cooperative	20	-20		6,300	6.00	5.25
Church	50	20		6,300	5.50	7.25
Public	2,780	340		6,200	4.89	4.87
Private	1,020	430		6,900	5.38	5.17
Other	260	-150		7,100	5.23	0.00
Total	4,130	620		6,600	5.13	5.42

Source: Develop-and-Hold Study by Empira.

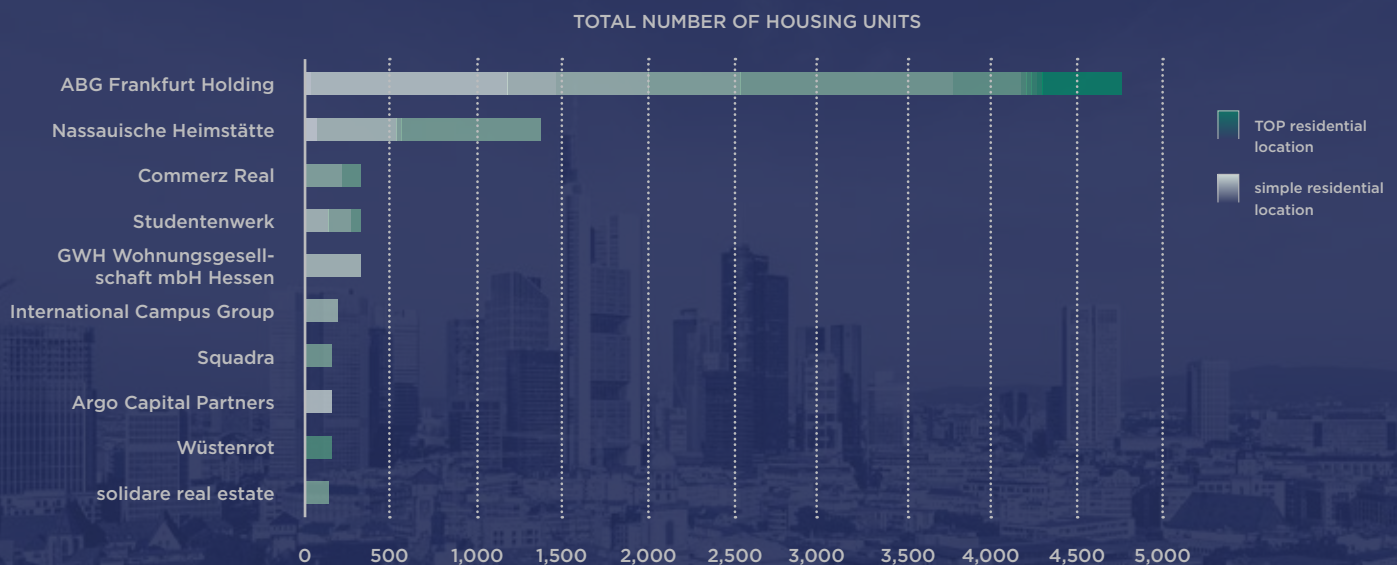
*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location.

The ranking once again shows the key role played by public actors in Frankfurt's develop-and-hold residential segment. Alongside ABG Frankfurt, the clearly dominant actor by far, Nassauische Heimstätte ranks among these actors. Both are also developing apartments in very good residential locations. All the other actors on Frankfurt's project development market have much lower volumes. Other public actors are GWH Wohnungsgesellschaft and Studentenwerk; the latter is developing three halls of residence for students with a number of smaller apartments. International Campus Group, a private company, is also represented among the top actors thanks to a micro-living

project from THE FIZZ brand. The rest of the ranking is occupied by private companies. As a rule these are each implementing one project in Frankfurt or have one in the pipeline: in a joint venture with Groß & Partner Commerz Real is developing the residential high-rise "One Forty West", and in doing so it intends to retain the property for its portfolio. Argo Capital is developing "Westpark" for its own portfolio. By acquiring a new area for the Frankfurt bus depot in Rödelheim, ABG Frankfurt has the potential for a further 2,000 apartments in the Europaviertel district which have not yet been taken into account in the study.

Develop-and-hold housing – Top actors by housing units study year 2020* in Frankfurt



Source: Develop-and-Hold Study by Empira.



























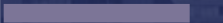
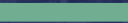


*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2.4 Hamburg

Hamburg is the third-largest market for project developments after Berlin and Munich. In the Free Hanseatic City of Hamburg 10,250 housing units are being erected as develop-and-hold properties between 2020 and 2024. Thus the volume has increased slightly compared to the study year 2019. Alongside these develop-and-hold apartments are a further 25,200 apartments from the classical trading-development segment in Hamburg²⁰. There the project volume, as already described in the general trend, has declined noticeably, although there are a number of new projects

in the classical project developer segment, for example ca. 700 apartments in “Eastside Hamburg” from Instone, ca. 200 owner-occupied apartments from Hamburg Team in the “Osterbrookhöfe” quarter and various projects in the “Kolbenhöfen” from Otto Wulff. In total nearly 7,100 apartments are being built in Hamburg each year according to the current case studies. This contrasts with a calculated annual housing requirement of 9,500 housing units²¹. It is not surprising that supply is not able to meet demand in terms of quantity in Hamburg, therefore.

Develop-and-hold housing Hamburg – Housing units by development status study year 2020* per type of actor

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	1,090		-390	
Planning concrete	980		170	
	2,070		-230	
Church				
under construction	-		-	
Planning concrete	-		-	
	-		-	
Public				
under construction	480		-770	
Planning concrete	1,670		-510	
	2,160		-1,270	
Private				
under construction	1,940		630	
Planning concrete	2,090		790	
	4,030		1,420	
Other				
under construction	170		-1,190	
Planning concrete	1,820		1,380	
	2,000		200	
Total				
under construction	3,680		-1,730	
Planning concrete	6,570		1,840	
	10,250		110	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

²⁰ Source: bulwiengesa Project Developer Study 2020

²¹ Source: Apartments requirements prognosis bulwiengesa AG, spring 2020, here replacement/additional requirements annual average across all 7 A-cities 2020 to 2024

The structure of the actors in Hamburg is strikingly balanced. A distribution in this form is not to be found in any of the other A-cities. The private companies have recently expanded their project volume considerably and now account for the largest group of develop-and-hold actors. New projects on the part of private companies are, for example, the quarter "Am Neumarkt" (Norddeutsche Grundvermögen, 350 apartments), "Urban Living Hamburg Apartmenthaus" (more than 320 apartments) from i Live, two projects on the part of Empira Gruppe (360 apartments), "Heidbrook Plateau" (Hochtief/Procom, ca. 160 apartments, construction area 5 "Wohnen an der Tarpenbek" (100+ apartments), which the Hamburg-based company Otto Wulff intends to keep in its portfolio, and "VES – Versmannstrasse Baufeld 82b" at HafenCity (purchased from Süddeutsches Versorgungswerk, ca. 90

apartments).

The current scenario for the development of rents takes into account possible Covid-19 effects for Hamburg. Accordingly, it is expected that rents will stagnate for 2020 and 2021, thereafter the rents will be able to rise again sharply as demand remains high and is not met by supply.

In Hamburg the private companies are also primarily developing in better residential locations. Their project volume measured in terms of the market value per square metre is highest in each case, just as it is for their overall theoretical market value²². The difference to the other groups of actors is negligible, however. In comparison to the study year 2019 the private companies have seen tremendous gains in terms of market value, in particular due to the significant growth in the project pipeline.

Develop-and-hold housing Hamburg – Market values study year 2020* per type of actor

	MARKET VALUE 2020					AVERAGE RESIDENTIAL LOCATION	
	in EUR bn		Change 2019* - 2020*		EUR per sqm	2020	2019
Cooperative	920	<div><div></div></div>	-50	<div><div></div></div>	6,100	4.81	4.81
Church	-		-		-		
Public	1,020	<div><div></div></div>	-550	<div><div></div></div>	5,800	4.72	4.20
Private	1,840	<div><div></div></div>	793	<div><div></div></div>	6,500	5.08	5.25
Other	920	<div><div></div></div>	347	<div><div></div></div>	6,300	4.50	6.00
Total	4,700	<div><div></div></div>	529	<div><div></div></div>	6,300	4.81	4.52

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

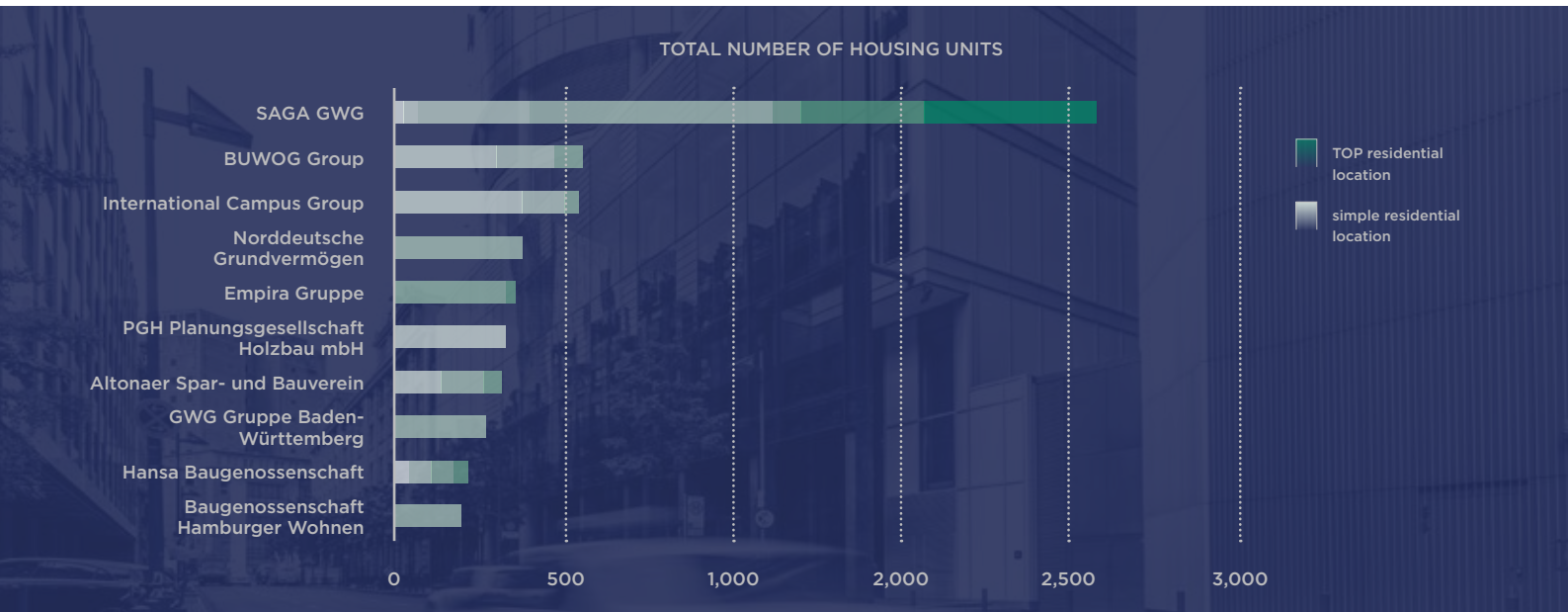
**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location

As in the previous study year the municipal housing association SAGA GWG clearly dominates the Hamburg develop-and-hold market. 40 per cent of the area accounted for by the Top 10 actors originates from this association. In this respect SAGA is developing various projects in Hamburg within the analysed period. Second place in the ranking is occupied with a much lower project volume by the publicly-listed BUWOG AG as a subsidiary of Vonovia in Hamburg. Its volume primarily comes from the district development "Stadtquartier Bergedorf"; in this respect all the projects are still in the planning stage. Smaller apartments are being developed by the likewise private

actor International Campus Group with three apartment buildings under its THE FIZZ brand in Hamburg. Norddeutsche Grundvermögen is active in Hamburg in the "Am Neumarkt" quarter in Wandsbek. Empira Gruppe is represented to a similar degree with three projects and a total of 360 apartments; the residential locations for these projects are of a particularly high quality. PGH Planungsgesellschaft Holzbau and GWG-Gruppe Baden-Württemberg, a subsidiary of the insurer R&V-Versicherung, also rank among the private companies. Thus alongside the public actor SAGA GWG, private companies clearly dominate the Top 10 in Hamburg.

²² See glossary for details

Develop-and-hold housing – Top actors by housing units study year 2020* in Hamburg



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2.5 Cologne

In Cologne 4,480 housing units are being erected in the develop-and-hold segment in the period analysed, 2020 to 2024. The volume has declined considerably. Alongside these apartments are an additional 11,600 apartments from the classical trading-development segment²³. This figure is also discernibly lower than in the study year 2019. Thus, according to this analysis, only about 3,200 apartments are being built in Cologne each year. This contrasts with a much higher housing requirement of 7,100 housing units per year for Cologne²⁴. The gap between supply and demand in this study year is still very large for Cologne's housing market.

The decline in project volume in Cologne is a big one compared to the other A-cities. Affected above all are the project volumes at the public and private companies. The housing cooperatives, which are also strongly represented, have remained more or less stable. Deutsche Welle, a joint venture of Empira Gruppe which will probably not be completed in its entirety until

after 2025, is the largest individual project on Cologne's housing market with a total of more than 749 apartments.

The current scenario for the development of rents takes into account possible Covid-19 effects for Cologne. Accordingly, stagnating rents are expected for 2020 and 2021, thereafter the rents will rise again sharply as demand remains high and cannot be met by supply.




































The theoretical market values²⁵ in the Cologne develop-and-hold segment are declining noticeably because the project volumes are decreasing with virtually all company types as we have already stated. The public actors in Cologne are also having to contend with a clear deterioration in the quality of the residential locations. Their theoretical market value per square metre is declining accordingly; for the private companies, in contrast, it has increased significantly.

²³ Source: bulwiengesa Project Developer Study 2020

²⁴ Source: Apartments requirements prognosis bulwiengesa AG, spring 2019, here replacement/additional requirements annual average across all 7 A-cities 2019 to 2023

²⁵ See glossary for details







Develop-and-hold housing Cologne – Housing units by development status study year 2020* per actor type

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	920		-330	
Planning concrete	240		150	
	1,170		-160	
Church				
under construction	90		60	
Planning concrete	-		-20	
	90		50	
Public				
under construction	1,350		-1,090	
Planning concrete	680		90	
	2,030		-1,000	
Private				
under construction	40		-680	
Planning concrete	920		130	
	970		-540	
Other				
under construction	60		20	
Planning concrete	170		170	
	230		190	
Total				
under construction	2,460		-2,010	
Planning concrete	2,020		530	
	4,480		-1,480	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Develop-and-hold housing Cologne – Market values study year 2020* per type of actor

	MARKET VALUE 2020			EUR per sqm	AVERAGE RESIDENTIAL LOCATION	
	in EUR bn	Change 2019* - 2020*			2020	2019
Cooperative	360	-44		4,300	4.40	4.28
Church	40	12		5,700	5.50	6.00
Public	520	-325		3,400	3.19	3.97
Private	300	-154		5,200	5.28	4.70
Other	80	65		4,700	4.86	4.50
Total	1,290	-444		4,400	4.37	4.50

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location

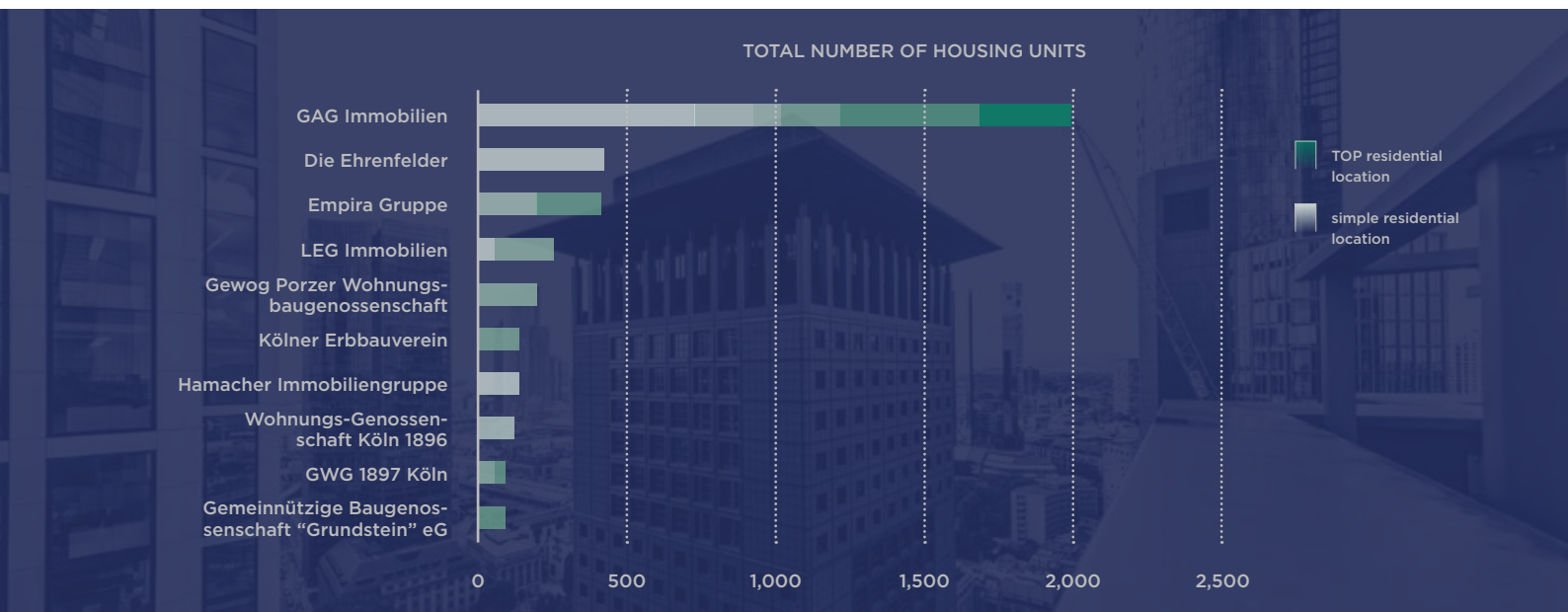
In Cologne the most important actor by far in the develop-and-hold segment is GAG Immobilien. The publicly-listed company is owned to significantly more than 80% by the City of

Cologne, and accordingly it is included in the “public actor” category in our analyses. With this company the City of Cologne has a strong instrument with which it can influence the ren-

ted apartment market in Cologne. The largest project of GAG is “Butzweiler Hof” (3 construction plots, in total ca. 400 apartments). The remaining actors are all represented on the market with considerably fewer apartments. Among the actors are a number of cooperatives. Private property owners are also represented through Empira Gruppe (here among other projects “Die Welle” with a total of 749 apartments in a joint venture, which are in part taken into consideration in the current study), LEG Immobilien (here in particular

“Schleibbuscher Weg”, urban re-densification, ca. 400 apartments) and Hamacher Immobiliengruppe (is developing parts of the Lindgens plot). In the previous study year more private companies were among the Top 10, for example Kondor-Wessel with the “OPAL” high-rise project, which has been completed in the meantime and is thus no longer included in the current analysis. In total fewer than 25 companies are active in Cologne’s develop-and-hold housing segment.

Develop-and-hold housing – Top actors by housing units study year 2020* in Cologne



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2.6 Munich

In the capital of the federal state of Bavaria 14,910 housing units are being built on a develop-and-hold basis in the period under analysis, 2020 to 2024. Although this is 460 housing units less than in the study year 2019, Munich is still the second-largest project market in this segment after Berlin. Alongside these apartments are a further 24,000 apartments from the classical trading-development segment²⁶. The volume has also declined there (-3,500 apartments). In total nearly 7,800 apartments are being constructed each year. The current downturn in the

project volume does not affect the quantitative need for housing of ca. 9,700 housing units per year for Munich. As in other cities, in Munich this is leading to the need for housing increasingly being met in Munich’s outer conurbation area. The classical project developers have reacted accordingly and are implementing ever more projects in Munich’s urban hinterland. In the develop-and-hold segment the major urban development areas in Munich play an important role as a source of new plots of land. The City of Munich is able to regulate this to a

²⁶ Source: bulwiengesa Project Developer Study 2020

vast degree through the strict policy of awarding construction plots on the basis of the quality of the respective concepts. The share of the public-sector companies in the number of housing units under construction or in planning is correspondingly high. New planned projects on the part of public companies taken into account are, for example, "Freiham-Nord WA 18" from the city-owned GWG München and the "Freiham-

Nord WA 17 Südwest" project from the likewise city-owned GEWOFAG. The private actors are also responsible for new developments, including Empira Gruppe with the "Mäander" project (200+ apartments), and the "FritzNeun" project from Hines, in which more than 250 apartments are being constructed alongside more than 40,000 square metres of office space.

Develop-and-hold housing Munich – Housing units by development status study year 2020* per type of actor

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	260		-300	
Planning concrete	220		110	
	480		-190	
Church				
under construction	110		-50	
Planning concrete	110		90	
	220		40	
Public				
under construction	5,090		-480	
Planning concrete	4,510		320	
	9,590		-170	
Private				
under construction	1,610		-510	
Planning concrete	1,570		550	
	3,180		40	
Other				
under construction	770		510	
Planning concrete	670		-690	
	1,430		-190	
Total				
under construction	7,830		-850	
Planning concrete	7,080		390	
	14,910		-460	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Demand for apartments in the capital of Bavaria remains high and thus so do rents and prices. The current scenario for the development of rents takes into account possible Covid-19 effects for Munich. Accordingly, it is expected that rents will stagnate in Munich for 2020 and 2021, thereafter the rents should increase again considerably as demand remains high and is not met by supply. As a result they will continue to be at peak levels compared to the other A-cities. Con-

sequently, the theoretical market values²⁷ per square metre in Munich are extremely high for all actors compared to the other A-cities. In this respect, the small number of church apartments have the highest theoretical market values per square metre, among other things due to their location. The apartments owned by public and private companies have comparable averages for their residential locations and thus also for the market values.

²⁷ See glossary for details

Develop-and-hold housing Munich – Market values study year 2020* per type of actor

	MARKET VALUE 2020					AVERAGE RESIDENTIAL LOCATION	
	in EUR bn		Change 2019* - 2020*		EUR per sqm	2020	2019
Cooperative	350	<div></div>	-296	<div></div>	9,500	4.95	5.80
Church	220	<div></div>	114	<div></div>	13,700	6.40	6.33
Public	6,990	<div></div>	81	<div></div>	10,600	4.73	4.91
Private	2,350	<div></div>	-145	<div></div>	10,200	4.88	5.25
Other	1,300	<div></div>	-118	<div></div>	12,000	5.62	5.58
Total	11,200	<div></div>	-363	<div></div>	10,800	5.00	5.58

Source: Develop-and-Hold Study by Empira.

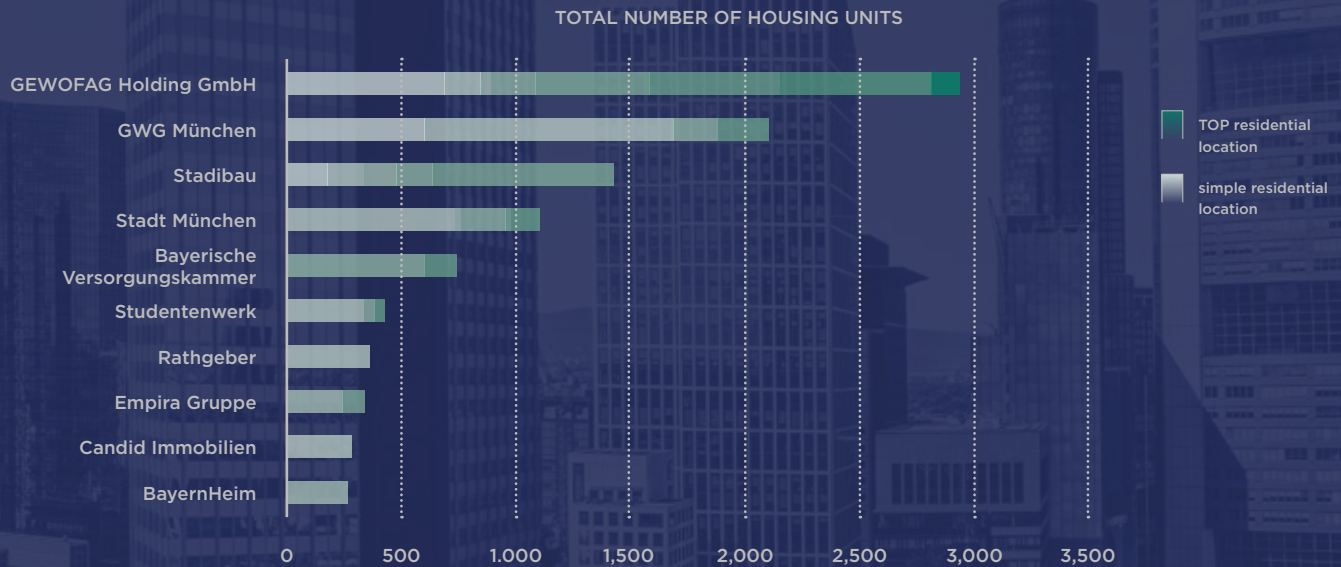
*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location

At 64 per cent, the share of the public-sector actors, municipal housing companies therefore, in the develop-and-hold market in Munich is high. This may be seen in the ranking of the top actors in this segment: the first four places are municipal (GEWOFAG, GWG, City of Munich) and state-owned (StadiBau) housing companies. In fifth position is the likewise state-owned BVK and in sixth place Studentenwerk, which belongs to the City of Munich. BayernHeim is also a state-owned company. Newly founded in July 2018 the company is intended to create rented apartments for households throughout Bavaria which cannot otherwise secure suitable apartments. This situation also existed in the same form in the study year 2019. Private companies are represented in the Top 10 ranking by Rathgeber and Candid Immobilien. Both of these companies are developing one project area ("Meiller Gärten" with 350+ apartments, and "Wohnanla-

ge am Candidplatz" with 300+ apartments). Another private developer and property owner in Munich is Empira Gruppe, which is represented with a total of three projects among the Top 10 in Munich. With the "Grünquartier" project Empira has more than 400 additional apartments in the pipeline in Munich which are not yet included in the analysis as the project is planned to start after 2024. With this project Empira Gruppe would be developing a volume for its rental portfolio in Munich comparable with that of Bayerische Versorgungskammer. Through the take-over of a project platform from ISARIA with a number of projects in Munich in 2020, Deutsche Wohnen will be clearly present with a rental portfolio in Munich in the future. All these developments show: the significance of the private companies in Munich's develop-and-hold segment will continue to increase.

Develop-and-hold housing – Top actors by housing units study year 2020* in Munich



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

2.2.7 Stuttgart
































In Stuttgart, the capital of the federal state of Baden-Württemberg and the smallest of the A-cities, a total of 2,600 apartments are being completed as develop-and-hold projects between 2020 and 2024. There are a further 3,500 housing units from the classical trading-development segment. In both the develop-and-hold and trading-development segments these are by far the lowest figures for the seven A-cities. Each year 1,200 new housing units are created on average; the actual need for new housing is twice as high, however. There is thus a clear imbalance between supply and demand in Stuttgart.

With a share of less than five per cent of the apartments in the develop-and-hold housing segment, private actors in Stuttgart are developing the smallest proportion between 2020 and 2024. Due to its setting in a circular valley the state capital only has a limited potential amount of building land available. Project developments

in the develop-and-hold segment thus primarily come from the municipal company Stuttgarter Wohnungs- und Städtebaugesellschaft (SWSG).

It is interesting that the private portfolio owners nevertheless account for 40 per cent of the new apartments in planning status, nearly as many as the large share on the part of public actors (53%). With these two groups Stuttgart has a major advantage in terms of planned new apartment construction. This is borne by a new construction by Aldi-Neubau with 55 rented apartments in Böblinger Strasse, for example, as well as several new projects on the part of SWSG. On the whole, however, taking into account the projects under construction, the number of apartments in the analysis is declining – above all among the private companies and the cooperatives, yet also among the other groups of companies. The only exception is formed by the housing companies connected to churches.

Develop-and-hold housing Stuttgart – Housing units by development status study year 2020* for each type of actor

ABSOLUTE NUMBER OF HOUSING UNITS				
	Actual figure 2020*		Change 2019* - 2020*	
Cooperative			absolute	
under construction	190		-70	
Planning concrete	260		-70	
	450		-140	
Church				
under construction	-		-80	
Planning concrete	150		90	
	150		10	
Public				
under construction	420		-170	
Planning concrete	1,420		170	
	1,830		-10	
Private				
under construction	-		-240	
Planning concrete	130		130	
	130		-110	
Other				
under construction	-		-60	
Planning concrete	10		10	
	10		-50	
Total				
under construction	610		-630	
Planning concrete	1,960		320	
	2,570		-310	

Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

Parallel to the declining volumes, the theoretical market values²⁸ in Stuttgart's develop-and-hold segment are decreasing substantially among all the groups of actors. The only exception is again formed by the church companies, whose values have remained stable. At the same time, the effect of the high levels of rents and prices has noticeably impacted on

the theoretical market values in the study year 2020. The highest market values per square metre are attained in Stuttgart, after Munich and Berlin. The best residential locations and the highest market values per square metre in Stuttgart are accounted for by private and church actors.

²⁸ See glossary for details

Develop-and-hold housing Stuttgart – Market values study year 2020* per type of actor

	MARKET VALUE 2020			EUR per sqm	AVERAGE RESIDENTIAL LOCATION	
	in EUR bn	Change 2019* - 2020*			2020	2019
Cooperative	160	-57		4,800	3.79	4.14
Church	80	7		6,600	5.33	5.50
Public	700	-21		5,400	4.16	4.19
Private	60	-71		6,500	4.50	5.50
Other	-	-30		4,900	4.00	6.00
Total	1,000	-171		5,400	4.18	6.00

Source: Develop-and-Hold Study by Empira.

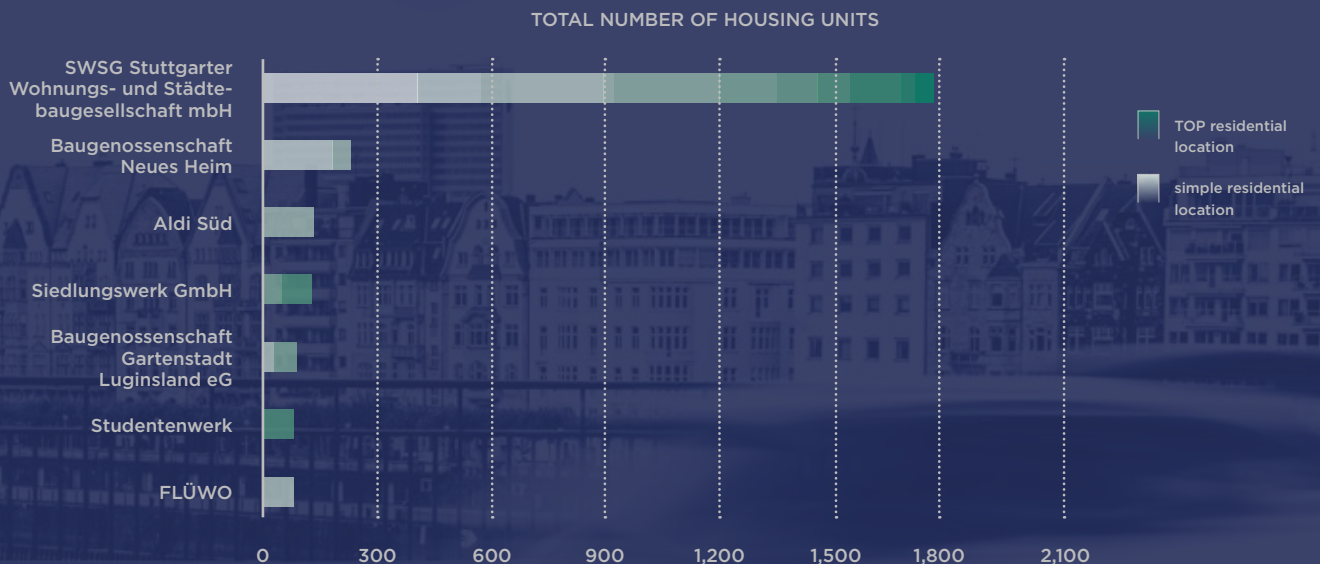
*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

**Residential locations: 2 = simple location, 4 = average location, 6 = good location, 8 = very good location

The develop-and-hold market in Stuttgart is so small that only seven actors can be identified. In this respect the market is clearly dominated by Stuttgarter Wohnungs- und Städtebaugesellschaft (SWSG), a public-sector company, with a share of 70 per cent. Many of the numerous projects of SWSG are still in the planning stage. Other important actors are cooperatives (Neues Heim, Luginsland, FLÜWO) and Siedlungswerk

GmbH, a company which is majority owned by the diocese of Rottenburg-Stuttgart. For the first time ever Aldi Süd ranks among the top actors on the develop-and-hold market in Stuttgart. Aldi Süd intends to construct a residential park with a number of stores on land formerly belonging to Schlecker in the southern area of Stuttgart.

Develop-and-hold housing – Top actors by housing units study year 2020* in Stuttgart



Source: Develop-and-Hold Study by Empira.

*Accumulated here the living space per study year in the projects which will be completed up to four years after the study year.

CHAPTER 2

FOCUS TOPIC –

The consequences of the coronavirus for local authority budgets – the renaissance of PPP?

Public-private partnerships (PPP) have been discussed for several decades now as an instrument to enhance efficiency in the housing construction sector. This debate has taken place with a view to a comprehensive provision of public services and a simultaneous reduction in the burden on (often empty) public coffers at national, state and local authority level. Yet PPP has also been repeatedly rejected. Above all the transformation of the consulting company ÖPP Deutschland AG in 2008, into PD – Berater der öffentlichen Hand GmbH, revealed the political implications and the major conflict of interests in the model, which in turn led to a tangible cooling-off of interest in Germany. Nevertheless, 35 ongoing projects with PPP elements are currently listed in the PPP Project Database²⁹ and are testimony to a certain justification for the model.

Private capital for quarter infrastructure

The major increase in investor-developments (develop-and-hold) in recent years, which in the A-cities alone have grown to a volume of 20 million square metres,³⁰ is being driven by the billion-euro private capital market, the phase of low interest rates in the eurozone and the relative benefits of sustainable real estate investments. This development has a correlation with the topic of PPP insofar as further developments of districts and quarters in cities with considerable demand for housing also require a considerable amount of public infrastructure, for example roads, qualified open-space land, energy and waste water treatment plants, as well as educational facilities. On the basis of the KfW Kommunalpanel 2020 – a survey of local authorities – the German Institute of Urban Affairs think tank (difu) has determi-

ned an investment backlog on the part of local authorities above all with roads (74% of the responses), water (56%), schools (56%) and sports facilities (52%)³¹.

Urban development contracts for districts under transformation

The urban development contracts which have become customary for districts and quarters undergoing development, in which the proportion of private and public investment is regulated and the respective market and budgetary ratios are amended, will be negotiated differently in the year following the coronavirus-driven recession. In this respect the volume of public investment in the majority of German cities will decrease substantially. As early as the second quarter of 2020, for example, larger towns and cities in North Rhine-Westphalia experienced a noticeable loss of business tax revenue averaging 44% and in individual cases of as much as 77% (Düsseldorf).

Even if the shortfall from business tax revenue was counteracted in the summer months of 2020 thanks to compensation funding from central government and the federal states, investments by local authorities in construction measures, which had recently totalled more than 20 billion euros, are – in contrast to the prognoses in 2019 – seriously jeopardised³².

Potential magnitudes of PPP after the coronavirus recession

As an order of magnitude for the shortfall in the necessary local authority investment in construction measures, of which new quarters

²⁹ www.ppp-projektdatenbank.de (25.10.2020)

³⁰ cf. bulwiengesa Project Developer Study 2020, page 10

³¹ KfW Bankengruppe/difu 2020: KfW Kommunalpanel 2020

³² Deutscher Städtetag/ZEW/Difu 2020: Kommunale Antworten auf die globale Corona-Krise: Finanzen, Innovationskraft und Lebensqualität verbessern

are ultimately only one element, it is possible to derive a figure of over 10 billion euros per year from numbers calculated by Deutscher Städtetag, the Association of German Cities and Towns. This corresponds to the volume which was stated with an improved budgetary position as the planning on the part of the local authorities for the period after 2019. In addition, the local authorities state an investment backlog of 147 billion euros from the years 2009 to 2019 (2020 survey of local au-

thorities), but which only affects the urban development contracts in the framework of new quarter development to a minor degree.

As a rough estimate, as a result of the structures already outlined, between 5 and 10 billion euros per year from private PPP and/or fund structures will be necessary both in inner cities as well as in the quarters, above all so as to improve the provision of living space through the construction of new quarters.

BUSINESS TAX REVENUE IN SELECTED CITIES IN NORTH-RHINE WESTPHALIA

CITY	BUSINESS TAX REVENUE				
	In Q2 2019	In Q1 2020	In Q2 2020		
	Tax revenue			Change over Q2 2019	
	IN EUR				IN PER CENT
Cologne	343 985 707	323 887 367	209 954 820	- 134 030 887	-39.0
Dortmund	98 284 139	77 394 603	99 543 374	+ 1 259 235	+1.3
Essen	118 029 032	82 906 592	94 873 921	- 23 155 111	-19.6
Düsseldorf	250 728 292	241 293 141	58 530 595	- 192 197 697	-76.7
Münster	89 954 207	80 549 136	56 418 035	- 33 536 172	-37.3
Leverkusen	41 173 696	4 574 466	43 150 880	+ 1 977 184	+4.8
Bochum	58 127 986	54 386 956	30 993 417	- 27 134 569	-46.7
Bielefeld	68 040 482	59 153 490	29 406 338	- 38 634 144	-56.8
Bonn	51 174 828	53 766 123	27 988 137	- 23 186 691	-45.3
Duisburg	62 561 828	10 524 284	27 010 161	- 35 551 667	-56.8

CHAPTER 3

INDUSTRY VIEWS ON THE FOCUS TOPIC – Will the foreseeable problems for local authority budgets will lead to more PPP?

The interplay and balance between private investment and public frameworks did not just become a key issue for the real estate market and project developments in 2020. As part of the study we asked industry experts to comment in brief from their stance on how they assess the future framework for project developments and the framework for a deve-

lop-and-hold strategy against the background of the lack of construction land and the shortage of apartments in towns and cities, and in conjunction with the high levels of liquidity on the capital market and strained local authority budgets. Will “PPP 4.0” backed by publicly-listed companies be a solution?



“In our analyses we see a major need for an integrated approach to future residential quarters. We believe the capital market as opposed to local authority budgets will actually continue to be more capable of meeting the ongoing high demand for housing in the coming years. The question will be how social policy and urban development policy will possibly be repositioned after the coronavirus recession. This will undoubtedly not take place from one moment to the next.”

Prof. Dr. Guido Spars,
Head of Department Planning and Construction Economics
Faculty for Architecture and Civil Engineering
University of Wuppertal

“The BFW views the possibilities for investment at local government level following the coronavirus crisis with scepticism. It is not just the ambitious goals of the green deal in the EU which urgently require investment in municipal infrastructure that allow for the new construction of environmentally-friendly quarters and the refurbishment of existing properties. The involvement of private capital through more PPP would certainly be desirable in this respect, but our past experience means we remain somewhat sceptical.”



Andreas Ibel,
President, Federal Association of Independent Housing
and Real Estate Companies (BFW)



“Ensuring private housing construction clients and planning administrations at local government level work hand-in-hand has always been one of the main tasks in project development. The capital market could in theory actually plug the impending gaps in the finances of local authorities. Rather than adopting a new PPP model the local authorities are undoubtedly more amenable to family-managed companies, cooperatives or construction firms so as to involve private capital in integrated quarters. Future concepts will ultimately be characterised by the extent of the financial difficulties.”

Dr. Reiner Götzen,
Managing Partner
Interboden GmbH & Co. KG

CHAPTER 3

3.1 Expert dialog – The real estate market and urban development following the coronavirus recession

The focus topic “Problems with local authority budgets and PPP” cannot be considered separately from the general trends in urban development and the demand for housing. A

brief impression of the fundamental framework parameters at the current time is provided by the expert dialog between Prof. Dr. Steffen Metzner and Andreas Schulten.

Schulten: *Dear Prof. Metzner, straight off, the million-dollar question: would you as a private individual invest now (or after) the coronavirus recession in German residential real estate? What does the real estate economist have to say on this?*

Metzner: I will answer this as diplomatically as possible. There is always a certain risk of making a mistake with a single investment. An extraordinary interest rate environment, strong interest in political regulation, and regional market risks mean there is a need to conduct one's own research, analysis and preparation prior to a transaction. But in basic terms and as part of a diversified portfolio, German residential real estate remains on “buy” in the medium to long term in my view. I do not believe that demand for living space in the key investment locations will be met in the foreseeable future. But let me throw the question back: how do you regard this?

Schulten: *In the final analysis, when you start weighing up the options you have to start at a higher cruising altitude: a real estate investment always has to be evaluated on a time axis over a specific – long – lifecycle. And what could be the causes of a decline in price and value in a negative case? Starting from the high level that we can see in many locations now? I don't believe an economic decline such as that seen in the 1990s is likely. Nor do I see competing investment options that are more attractive and more profitable in the ongoing low interest rate environment. Without appreciable immigration to Germany the demographic outlook in Germany is at best very much a long-term factor which has the effect of depreciating values. But actually we want to talk about urban development after the coronavirus. A provocative question: is anything still happening in Berlin, Munich and elsewhere?*

Metzner: We are observing the respective medium-term development of the populations

in the major German cities very closely. The growth rates have already slowed down noticeably compared to the years 2012 to 2017. Whereas a few years ago the average growth rate was ca. 1.3% per year, we now see a figure of about 0.5%. Nevertheless, there is an obvious need for housing – namely in all segments, be these cheaper developments or housing of a higher quality, otherwise we would not be confronted with the broad increase in prices and rents that we are still seeing in the coronavirus recession. Here high pent-up demand and continually changing housing needs play a role that should not be underestimated. There is definitely a lack of large-scale, newly-constructed residential quarters in the major cities. These can also attract additional inhabitants who are perhaps currently having to live in smaller neighbouring towns.

Schulten: *More urban development that favours newly-constructed quarters therefore?*

Metzner: Why certainly! The only question is how. At bulwiengesa you rightly point out in your project developer studies for the A-cities that the volume has been declining slightly for some years now – in particular in the residential segment. Likewise your diagnosis is correct when you say that the most important causes of this are above all an exorbitant rise in costs for plots of land and high construction costs, alongside political regulation such as restrictions on rent increases or even a rent cap (in Berlin). The complicated nature of German building legislation also slows down processes, as do the empty coffers of the local authorities, which also accompany every new construction project as an investor. As described in Chapter Two, there is a major investment backlog with regard to road construction, water supply and sewage systems, as well as schools and sports facilities. The move towards new quarters is also always a question of public budgets, therefore.

Schulten: *What is your view of my thesis that after the coronavirus recession the entire procedure with urban development contracts and PPP will have to be expanded so as to ensure there is more construction work – with a shift to private rather than public infrastructure investment? If this shift can be supported by a basic understanding on the part of society as a whole and the capital markets can find good solutions in their new ESG endeavours...*

Metzner: Now you are bringing a new topic into the discussion: ESG. This will certainly not be a one-day wonder, but will adjust the balance of state and private investment. The PPP activities in Germany failed because, among other things, the higher burden of interest payments at that time was shifted through so-called forfaiting into the future and thus to subsequent generations. A fundamental factor is unquestionably the sheer volume which is looking for investment opportunities on the global capital markets. In this context the attractiveness of Germany as a “safe haven” has

the effect of being a Hoover for capital. But I still have some doubts. Do you not think that the cash-flow sources for a predominantly private investment are limited? Who will then ensure the regular income for the new roads, parks, sewage treatment plants and schools if not the public purse?

Schulten: *This point is certainly justified. But what would be the alternative? Naturally many people wish that there was simply more money in the public coffers, especially in times of crisis. I will be interested to see what effect the coronavirus will have in this context.*

Metzner: Definitely! But in a global context there will also undoubtedly be other surprises awaiting us where we are not expecting them. So I will stick by my answer to your opening question: an investment on the residential market is – provided there is sufficient spread – not the worst idea right now. Thank you for this interesting conversation.



Prof. Dr. Steffen Metzner MRICS
Head of Research,
Empira Asset Management GmbH



Andreas Schulten
General Manager,
bulwiengesa AG

GLOSSARY AND EXPLANATIONS

Research and universal set of this analysis

In the first Develop-and-Hold Study by EMPIRA the volume of the develop-and-hold housing project developments in the seven A-cities is identified and evaluated.

The universal set for the data analysed in this study is as follows: All of the projects in the required data set which may be researched

- with completion in the years 2020 to 2024,
- with an address within the A-cities (clearly demarcated by municipalities),
- with project land owned by the ranked company,
- which are in concrete planning or already being implemented,
- with a living space of at least 1,000 sqm,
- which are at least a comprehensive refurbishment (not a so-called superficial renovation/pseudo retrofit, not a refurbishment while building is still occupied).

bulwiengesa uses various sources to research the projects and the respective actors, the planned project areas, the development status and construction period, the location and project name, and ultimately also the expected project strategy (trading-development or develop-and-hold).

The actors with a minimum living space of 5,000 sqm in development were allocated to the company types public, private, cooperative, church or social especially for this Develop-and-Hold Study by EMPIRA. All other actors with a smaller project area, as well as all projects whose actors are not known or are not 100% identifiable, are included in this study under the actor type "Other".

In addition, the living spaces of the projects were recorded or calculated specially for this Develop-and-Hold Study by EMPIRA.

The cut-off date for the above definition is 31.12.2019.

Meaningfulness of this analysis

With this definition of the universal set and the cut-off date the study offers a very good overview of the market for develop-and-hold project developments in Germany. This strict approach allowed for the creation of a valid data basis. Nevertheless, the following points should be borne in mind in the interpretation:

- Not included in the study are residential projects of less than 1,000 sqm, which are generally initiated by smaller project developers, construction clients or private individuals.

- A clear differentiation between trading-development and develop-and-hold is not always possible at project level. New information, yet also strategy changes at project/corporate level make such a classification fluid.
- The definition of the refurbishment projects taken into consideration excludes so-called superficial renovations/pseudo retrofits or refurbishment without any major changes in the construction quality.
- For the purposes of gathering data the necessary clear demarcation by municipalities “crops” the functional residential markets in some A-cities.

How are the projects allocated in the ranking?

In the ranking the projects were allocated to the actors as follows:

- Fundamentally exclusively all projects with a develop-and-hold strategy which fulfil the above criteria were taken into account here.
- The relevant unit for the ranking are the housing units.
- With a joint venture the housing units are allocated equally or insofar as known another distribution to the respective actor is used for the ranking.
- Some actors have been combined and assessed in the ranking under a group of companies.
- The important factor is: the plot of land has to be owned by the ranked company.

Classification of the locations

The 127 RIWIS locations have been sub-divided into four classes by *bulwiengesa* in line with their functional significance for the international, national, regional and local real estate markets.

- A-cities: The most important German centres of national and in part international significance. Large, functioning markets in all segments. E.g.: available office space (gross floor area) of more than 5 million sqm, average take-up of more than 100,000 sqm over many years.
- B-cities: Large towns of national and regional significance. E.g.: available office space of 1.5 to 4 million sqm, take-up of more than 35,000 sqm.
- C-cities: Important German towns of regional and limited national significance, of less significance, with a key impact for the surrounding region.

- D-cities: Small location with a regional focus and a key function for their immediate environs, lower market volumes and take-up.

The study exclusively considers A-cities
(with clear demarcation by municipalities).

Definition of trading-development

Projects are regarded as trading-development if a project developer functions as an intermediate investor for project developments from the purchase of a plot of land (possibly also the purchase of an ongoing project) through to completion with the objective of marketing the project. In this respect the projects are developed at its own risk and for its own account.

Definition of develop-and-hold

In the case of projects with a develop-and-hold strategy a company functions as an intermediate and end investor for its (own) project developments from the purchase of a plot of land through to completion with the objective of retaining the project for its own portfolio. In this respect the projects are developed at its own risk and for its own account with the intention of keeping the project in its portfolio.

Definition of service-development

Companies are regarded as service-developers if they are active as a service provider for concept development, consulting, management and marketing services. These companies conduct developments at the risk of and for the account of third parties and can serve trading-developers and investor-developers. Actors and information on service-development projects are not analysed in the study.

Lack of definition in the allocation

With the increase in the frequency of so-called forward deals, yet also with the increase in the depth of research, the question of the respective project strategy can now no longer be answered generally. Ultimately it is a question of the risk allocation in the project phase. Through the exchange of data with the project developers in the course of the bulwiengesa Project Developer Study the strategy allocation can be clarified quite well in the meantime. Nevertheless, a certain lack of definition is always to be expected, if only because such project strategies can change daily, both at project level and at the overall corporate level.

Explanations on the methodology theoretical market value model

For each of the analysed housing construction projects a theoretical market value is determined for 2019 and for the planned year of completion. This is based on the available information on the project size (with regard

to the living space in sqm), a market rent for newly-constructed apartments derived from the residential location, and the gross multiplier for newly-constructed apartments:

Input variables: Project size and year of completion

The project size and the respective year of completion for the residential housing project are the result of an intensive research process, which combines bulwiengesa's desk research methods and a comparison of this information with the respective actor.

Input variable: Residential area quality

The residential area quality is an important parameter for land and apartment prices, as well as the local rent levels. In this respect information on the integration in urban planning terms, the sociodemographic environment and criteria specific to real estate are included in the model used to calculate residential location quality. These include:

- Desirability
(volume of people moving into the area from further afield),
- Geographic embedding (proximity to parks and greened areas, distance from industrial areas),
- Building structure (apartment sizes new construction/portfolio),
- Population composition in the residential area (social status),
- Microm status variables
(dominant milieus, typology, payment index).

There is differentiation between the following four main categories:

- Very good residential area: particularly prestigious locations and areas with expensive villas close to city centres, as well as particularly sought-after residential areas
- Good residential area: residential areas which have traditionally been popular, typical urban "trendy districts", quiet residential areas with adequate to good infrastructure and a positive image
- Average residential area: areas without the drawbacks of simple residential areas and the benefits of good areas
- Simple residential area: remote residential districts with predominantly compact, dense housing, inadequate infrastructure and/or proximity to larger business parks, industrial areas or heavily frequented transport axes

There are also intermediate categories between these main categories.

The residential areas are available as information at both city block and urban district level. For city blocks without residential use, with predominantly commercial use, with fewer than five households and/or a park/greened area proportion > 80%, no residential area is designated. For the final derivation of the residential area quality the mean value of the residential area quality at city block and urban district level is chosen. In those cases in which there is no available residential area quality at city block level (for example with the development of new quarters) the value for the residential area quality of the urban district is used. In this study the resulting residential area qualities are applicable when deriving the customary benchmarks for new construction rents and multipliers.

Input variable: Market rent

The market rent for new housing developments is derived from the definition as used in bulwiengesa's own database RIWIS:

„Apartment rents are stated for first occupation (new construction and retrofit) and re-letting in euro/sqm of living space and apply ideally to an apartment with three rooms and with approx. 65-95 sqm of living space and standard facilities and fittings. As the fittings and size are standardised, the price range for rents fundamentally represents a variable which is influenced by the location and/or the micro-location. The stated rents are nominal values. Rents are recorded exclusive of ancillary costs and without taking into account other possible perks. Minimum, maximum and average values are stated for first occupation and re-occupation in each case. Minimum and maximum rents encompass the lowest and highest 3-5% of the market, from which a mean value is then derived. They do not correspond to the absolute top rents (defined as outliers). Average rents represent the mean value across the defined overall market.“

This range of market rents at partial area level is interpolated on the residential areas.

Input variable: Multiplier

The gross multiplier is based on the customary market definition as it is also used in bulwiengesa's own RIWIS database. Accordingly the multiplier corresponds to the inverse value of the gross initial yield.

“Gross initial yields are understood to be the ratio of the incoming rental income to the purchase price, without taking into account incidental costs (maintenance, incidental purchase costs, taxes and costs which clearly cannot be recovered from other persons). The rent is the rent which can be attained in the first year (viewed as of the point in time of the purchase). The multiplier is applicable to a purely residential property, approx. 20 years (old), at least six tenants, no package sales, no first occupation/complete refurbishment. As the fittings and sizes are standardised, the price range for rents is fundamentally represents a variable which is influ-

enced by the location and/or the micro-location. Minimum, maximum and average values are stated. Minimum and maximum values encompass the lowest and highest 3-5% of the market, from which a mean value is then derived. They do not correspond to the absolute top multipliers (defined as outliers). The average multiplier represents the mean value across the defined overall market."

This range of multipliers at partial area level is interpolated on the residential areas.

The derivation of multipliers for newly-constructed residential properties is conducted by adding three years' rent to the respective multiplier for existing residential properties.

Manual adjustment with apartment projects

In the case of projects with average apartment sizes of less than 40 sqm of living space the initial calculated market rent is adjusted to take into account the customary significantly higher rent per square metre.

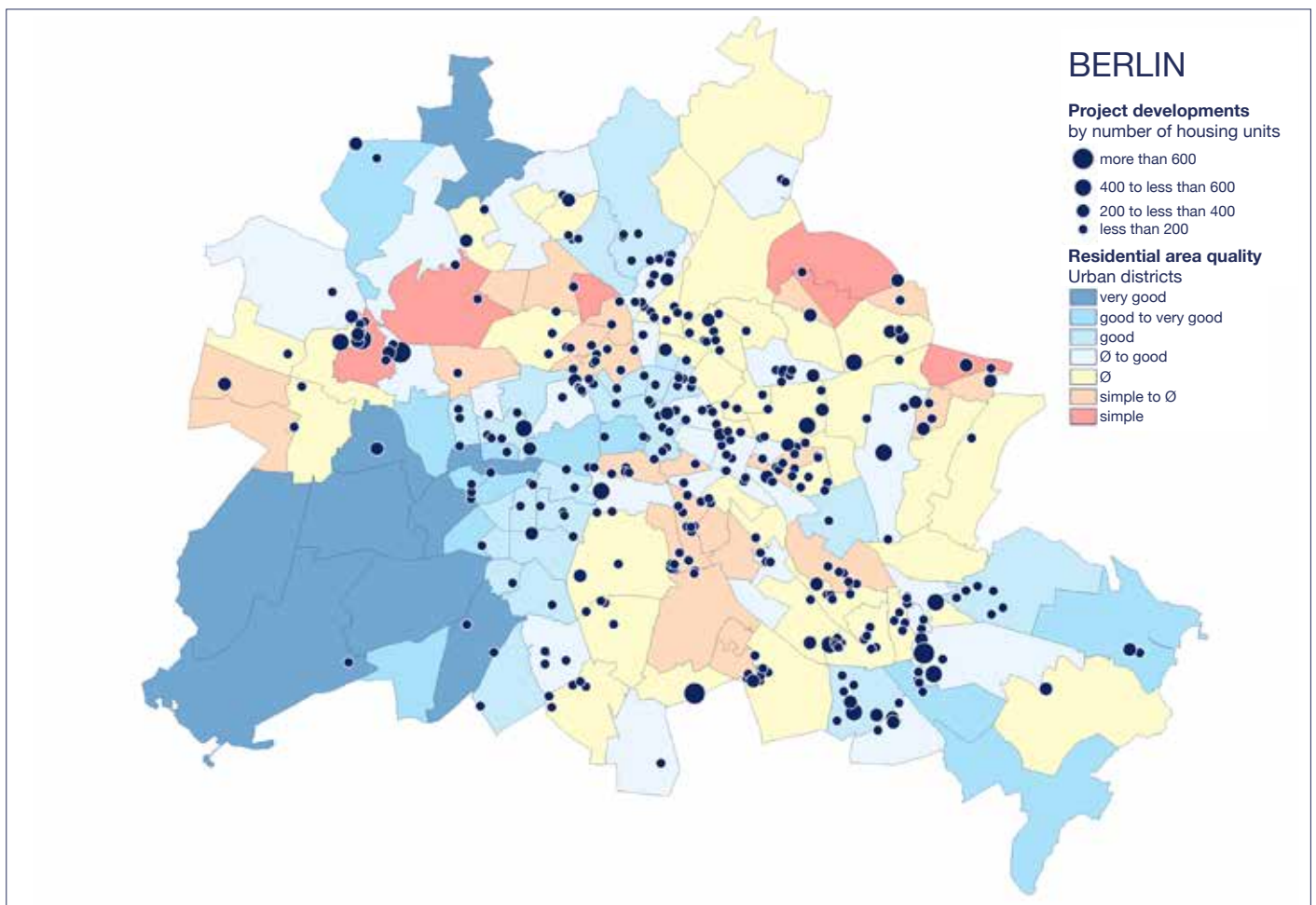
Result: Theoretical market value per housing construction project

As a result of the above approach, for each analysed housing construction project there is a theoretical market value for 2019 and for the respective year of completion.

Please note: as the input variables are classical parameters for non-subsidised new housing construction, this theoretical market value may not be equated with a company-specific capitalised value or the like.

Residential area quality and project development of all seven A-cities

- Berlin
- Düsseldorf
- Frankfurt (Main)
- Hamburg
- Cologne
- Munich
- Stuttgart



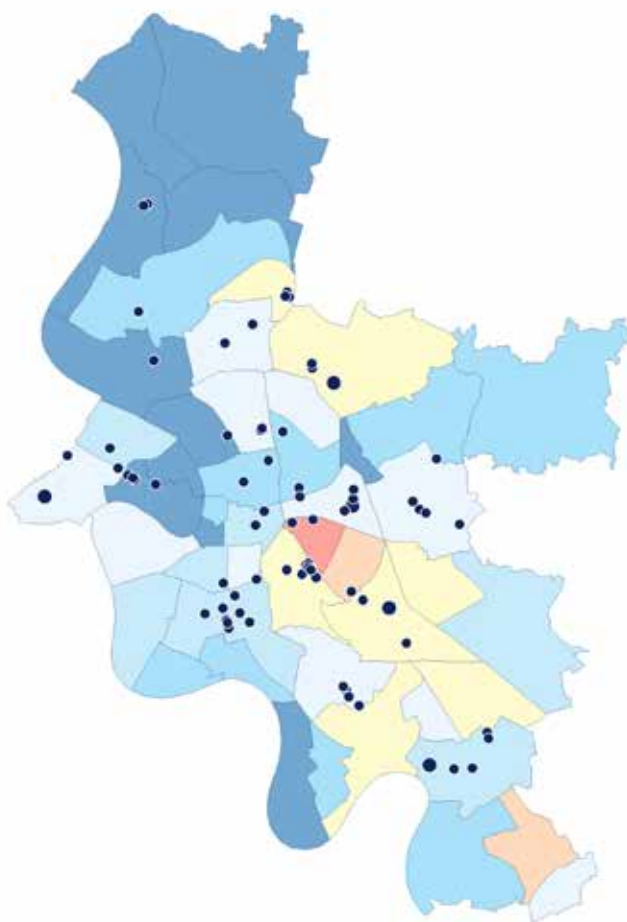
DÜSSELDORF

Project developments by number of housing units

- more than 600
- 400 to less than 600
- 200 to less than 400
- less than 200

Residential area quality

- Urban districts
- very good
 - good to very good
 - good
 - Ø to good
 - Ø
 - simple to Ø
 - simple



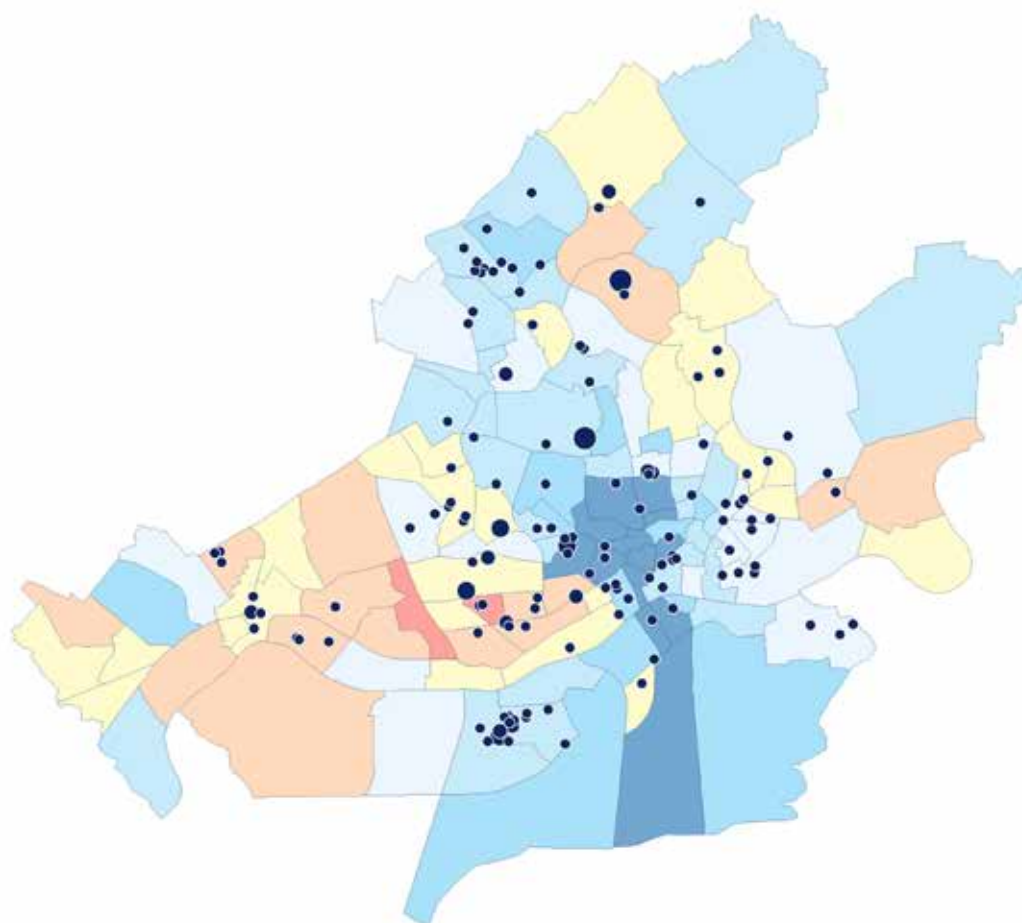
FRANKFURT

Project developments by number of housing units

- more than 600
- 400 to less than 600
- 200 to less than 400
- less than 200

Residential area quality

- Urban districts
- very good
 - good to very good
 - good
 - Ø to good
 - Ø
 - simple to Ø
 - simple



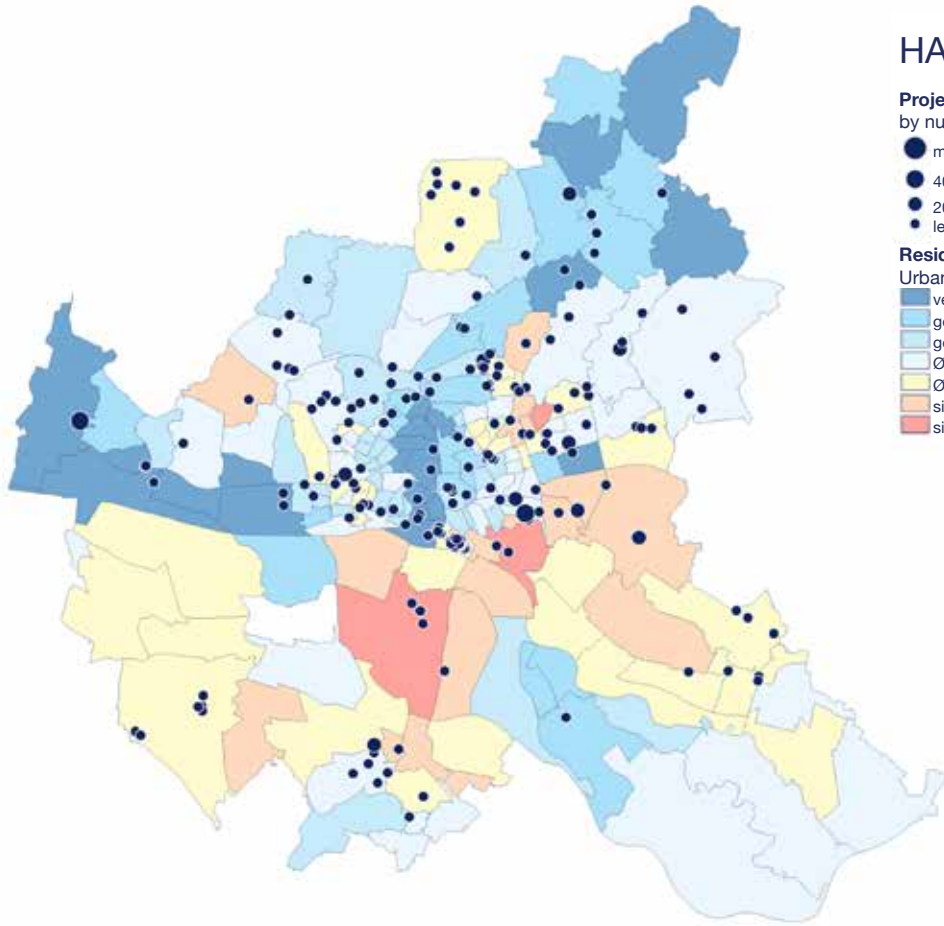
HAMBURG

Project developments by number of housing units

- more than 600
- 400 to less than 600
- 200 to less than 400
- less than 200

Residential area quality Urban districts

- very good
- good to very good
- good
- Ø to good
- Ø
- simple to Ø
- simple



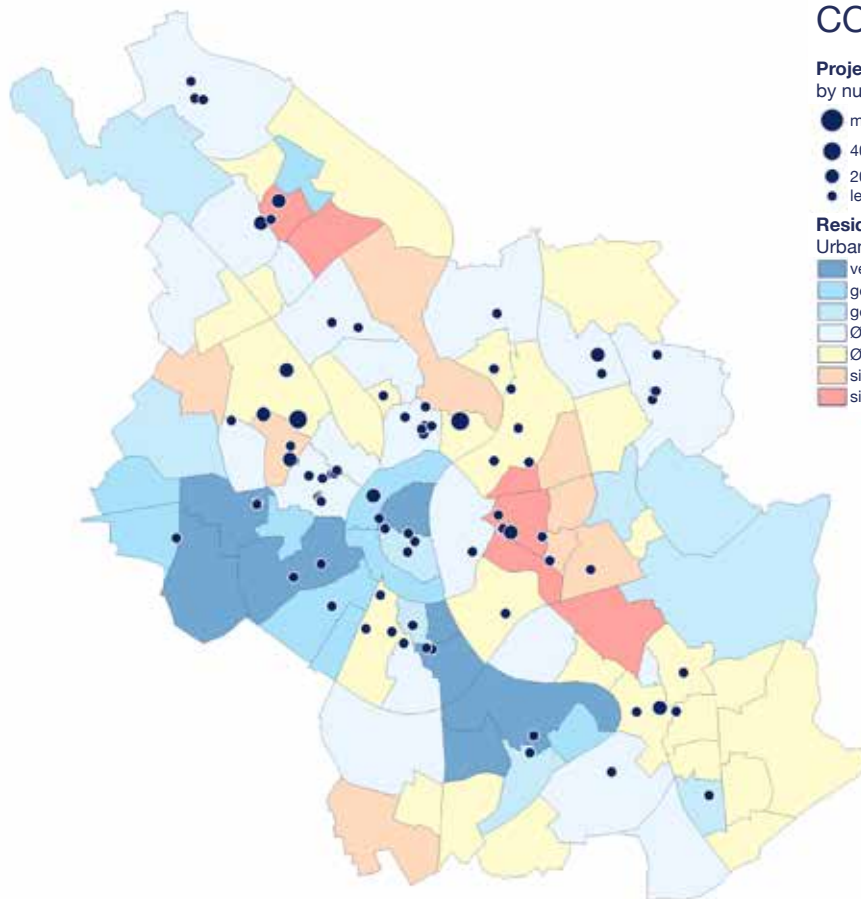
COLOGNE

Project developments by number of housing units

- more than 600
- 400 to less than 600
- 200 to less than 400
- less than 200

Residential area quality Urban districts

- very good
- good to very good
- good
- Ø to good
- Ø
- simple to Ø
- simple



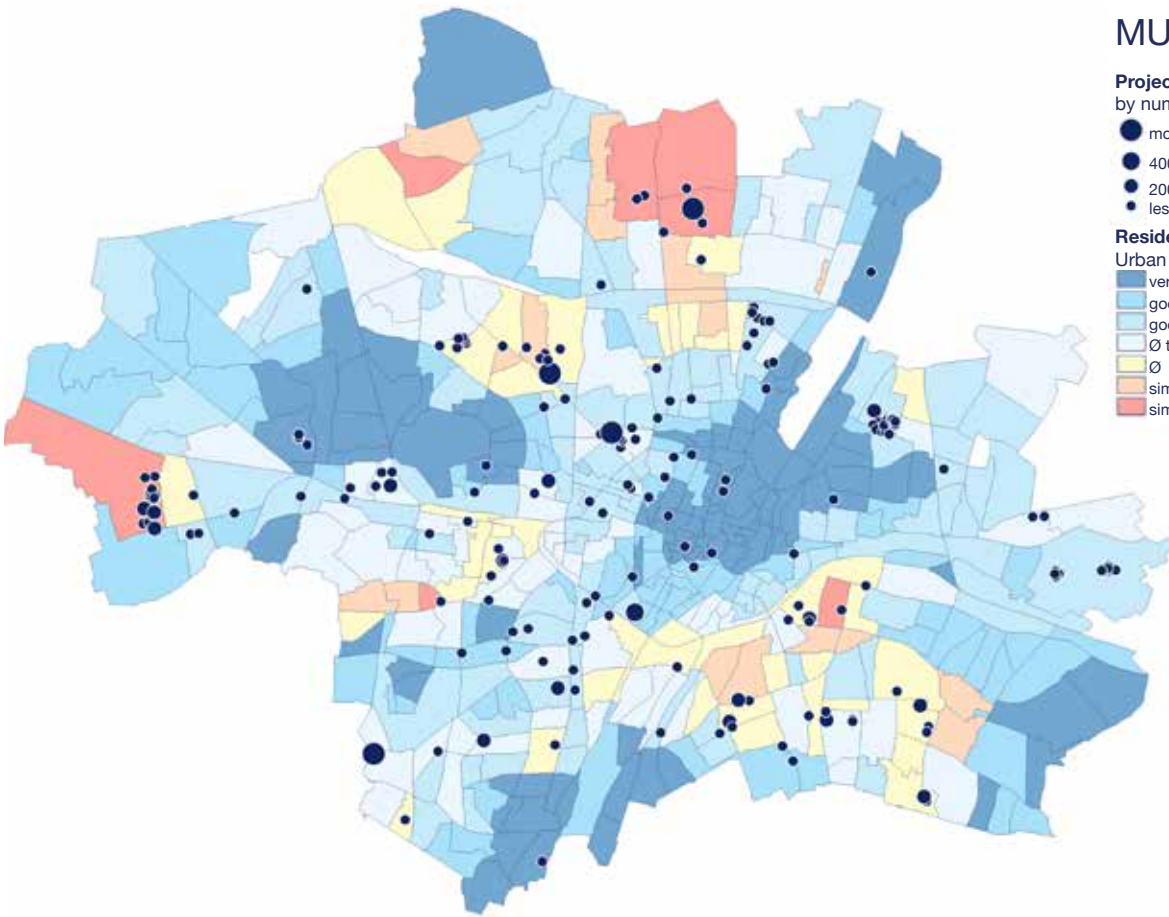
MUNICH

Project developments by number of housing units

- more than 600
- 400 to less than 600
- 200 to less than 400
- less than 200

Residential area quality

- Urban districts
- very good
 - good to very good
 - good
 - Ø to good
 - Ø
 - simple to Ø
 - simple



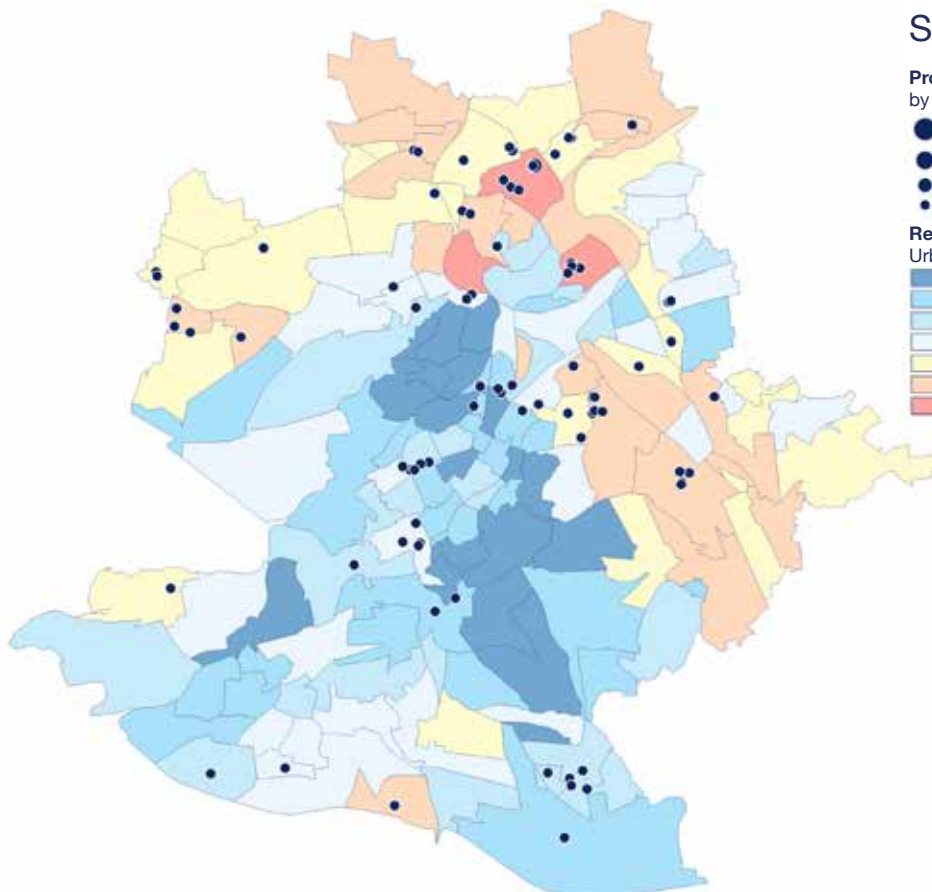
STUTTGART

Project developments by number of housing units

- more than 600
- 400 to less than 600
- 200 to less than 400
- less than 200

Residential area quality

- Urban districts
- very good
 - good to very good
 - good
 - Ø to good
 - Ø
 - simple to Ø
 - simple





IMPRESSUM



Empira AG
Baarerstrasse 135
6300 Zug
Switzerland
Telephone: +41 41 728 75 75
Telefax: +41 41 728 75 79

www.empira.com



bulwiengesa AG
Wallstraße 61
10179 Berlin
Germany
Telephone: +49 30 27 87 68-0
Telefax: +49 30 27 87 68-68

www.bulwiengesa.com