JLL Achieve Ambitions

Developments with perspective

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Developments with Perspective

Introduction

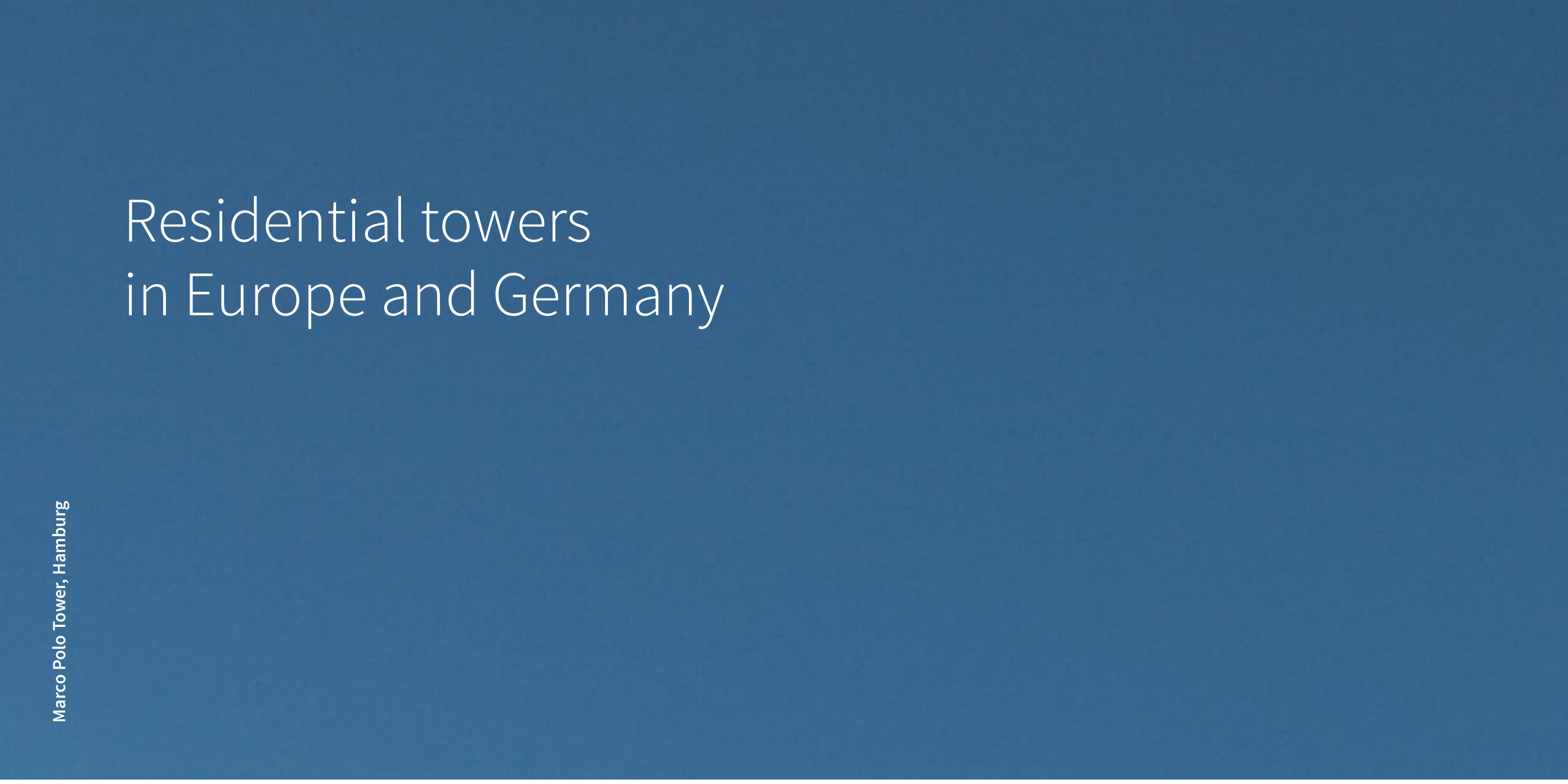
The recent growth of all German cities presents municipalities with ever greater challenges. Alongside the creation of supply and transport infrastructure, the provision of housing is one of the main tasks facing towns today.

The significant lack of housing is made clear by the rapidly declining vacancy figures. In almost all major cities with more than 500,000 inhabitants, there is now virtually no vacant space in residential properties. Against this background and the resulting rising rents and purchase prices, municipalities, developers and investors are focussing their attention ever more closely on the construction of residential buildings.

The image of residential high-rises is traditionally characterised by industrial housing constructed in the 1960s to 1980s in districts featuring little social mixing and integration. The experiences of more recent decades - especially in Asia and America - and the technological changes in architecture and building technology mean that today's towers are state-of-the-art.

They appeal to a variety of target groups, from low to very high income classes, aim to offer a high level of integration into urban areas by means of modern mobility systems and increase the value of previously commercially-used areas within cities, without initiating crowding-out processes.

On the basis of more than 20 European, and over 60 German projects, in the area of high-rise residential developments, this report offers a comparative, if not complete, overview of location criteria, equipment features and target groups in relation to users and investors.



Marco Polo Tower, Hamburg

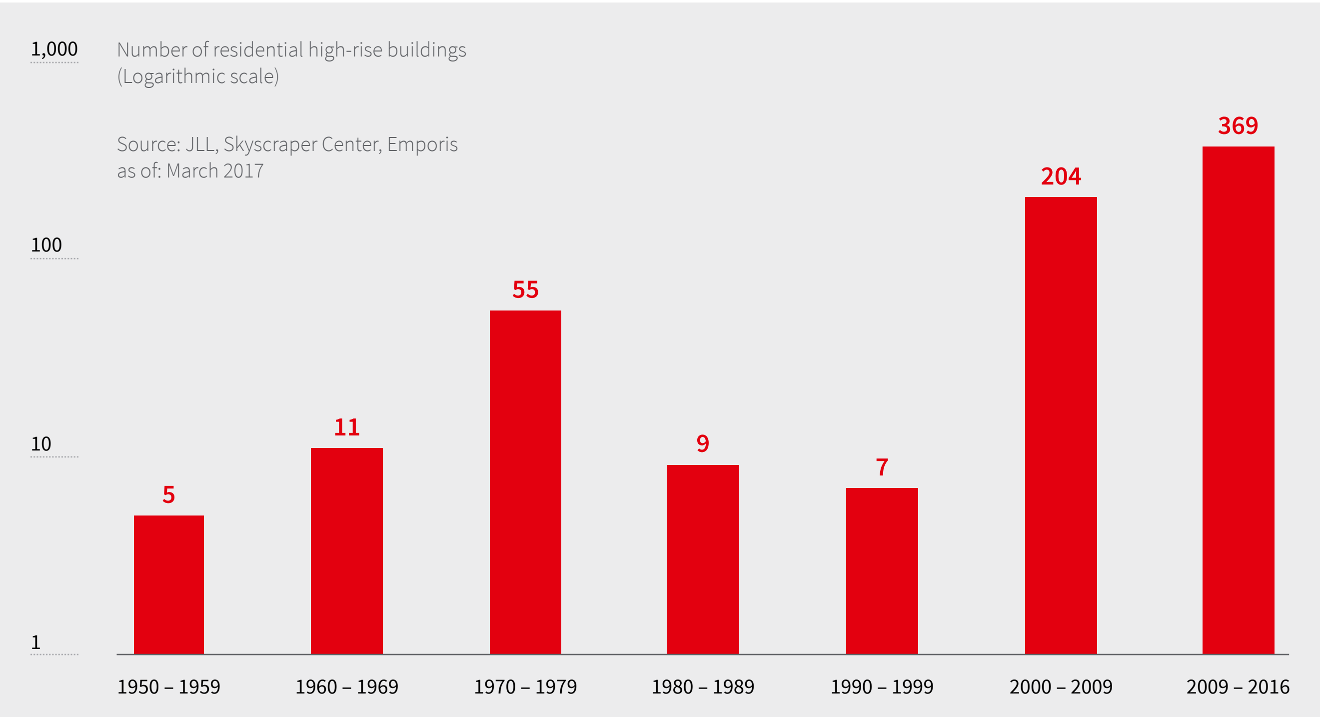
Residential towers in Europe and Germany

European residential high-rises are no rarity: according to the website, The Skyscraper Center, almost 680 residential towers (> 50 m) were constructed between 1950 and 2016; almost half of these, however, were built in Russia between 2000 and 2016 (approx. 370). Taking Western Europe into consideration on its own – that is, without Russia, Turkey and the Ukraine – there are still approximately 240 residential towers remaining. And here also, most high-rise apartment blocks were built after the turn of the millennium.

In Germany on the other hand, residential high-rises of over 50 m have thus far been less common. Colonia House, at about 150 m high, is not only the tallest residential building in Germany, but also ranks among the 20 highest buildings in the country. The purely residential buildings are joined by 20 other high-rise buildings with partial residential use. As in other countries, until the new high-rise building boom at the turn of the millennium, a large number of the residential towers had been built in the 1970s.

Residential towers in Europe

> 50 m by construction year classes



Germany’s tallest residential buildings built during and since the 1970s

Name	Town	Height in m	Floors	Completion
Colonia House	Cologne	147	42	1972
Uni-Center	Cologne	134	45	1973
Hercules High-Rise	Cologne	102	31	1969
Mundsburg Tower	Hamburg	101	29	1973
Development River Neckar (North)	Mannheim	100	30	1982
Mundsburg Tower III	Hamburg	97	26	1974
Collini Center	Mannheim	95	32	1975
Winter Garden High Rise	Leipzig	95	32	1972
Olympia Tower	Munich	88	19	1972
FH1 Hall of Residence	Cologne	85	21	-
Bonner Straße 211	Cologne	76	26	1971
In der Kreuzau 2–4	Cologne	73	23	1968
Kristall	Hamburg	72	20	2011
“An der Schanz” residential tower	Cologne	70	23	1976
Marco Polo Tower	Hamburg	63	17	2010

Source: JLL, Skyscraper Center, Emporis

After some delay, the revival of residential high-rise buildings already seen in other parts of Europe, has now made it to Germany. There are numerous plans for high-rise buildings over 50 m and in some cases even 100 m in height. By the end of 2016, at least 17 residential towers had been newly built or existing ones had enjoyed a major refurbishment in the German cities of Berlin, Frankfurt am Main, Munich, Stuttgart and Düsseldorf. Approximately 30 further projects are already under construction and almost 20 projects are in the planning stage in the “Big 7” cities.

Grand Tower visualisation

The majority of new residential high-rise projects are realised on former wasteland and thus contribute to the sustainable enhancement of the urban areas.

These figures make it clear that a change in attitudes towards residential high-rises has been taking place in Germany for some time now. And it also appears that a new level has been reached following the high-rise boom of the 1970s and that this new wave is not only exceeding the first boom but is also qualitatively different. There are various complementary reasons for this:

- **The recent revival of the city with growing numbers of inhabitants:** Since 2011, all cities in Germany with over 500,000 inhabitants have grown by between 1 and 6%. In total, that is an increase of more than 500,000 people or 270,000 households. These people need somewhere to live.

- **Low completion figures:** at the same time, only 150,000 homes were completed in these cities. The residential vacancy rate fell in this period to under 2%, which signals a massive shortage.

- **Two-figure rental and purchase price growth:** the residential deficit is reflected in rising rents and purchase prices for homes. In the aforementioned cities between 2011 and 2015, rents increased by an average of more than 20%, and purchase prices for ownership properties by more than 50%.

- **Rethinking by urban planners and planning authorities:** for those responsible for German city planning over the last few decades, the premise of § 34 BauGB (Construction Law Code) applied. This states that “the nature and degree of the structural use, the construction method and the surface of the plot of land that is to be built upon must fit into the nature of the immediate surroundings”. Since, for reasons of their history and for fire protection reasons, the development of many German cities was not allowed to exceed a height of 22 m (exception: Frankfurt am Main), high-rises tended to be in specially designated areas on the outskirts of the city. Rethinking by the planning authorities last year led to the initiative of the current minister for construction, Barbara Hendricks, to revise the construction code, by which means taller buildings should be allowed in “urban areas” that are yet to be defined.

- **Conversion of inner-city, formerly commercially-used brownfield sites:** for some time now, former commercial areas in the cities have been converted for new residential or mixed-use. These include former industrial areas, such as railway and port sites. Even before the revision to the construction code, development plans had been created for these, which allowed for taller development than the height restriction of 22 m.

Characteristics and types of current high-rise residential project developments in Germany

Many of the new projects have one thing in common: across Europe, previously unused areas either within or near the city centre are to be brought into new, more intensive use by means of the development of residential high-rises. In Amsterdam in the Netherlands, for example, the Pontsteiger (90 m) was built on a former harbour area; as was the Turning Torso (190 m) in Malmö in Sweden, currently Europe's tallest residential high-rise.

Germany is trailing behind a little. On the Berlin Mediaspree site, the Max and Moritz towers (86 m and 96 m) are being erected and the Living Levels (63 m) were completed back in 2015. Until a few years ago, this was the location of the city's eastern docks. In Frankfurt's Europa Quarter, a former goods train station area, the Grand Tower (172 m) will be built by 2019. As a former part of the port of Hamburg, HafenCity-Hamburg is home to the Marco Polo Tower (63 m). The development area for the new urban quarters of Derendorf in Düsseldorf is actually an old railway area, where the "Le Grand" and "Ciel et Terre" towers (both 60 m) are to be constructed.

Other new developments are planned in areas that are in the inner city, but whose development and usage are rather vague. These include the area around Berlin's Alexanderplatz. This is characterised by the framework conditions and objectives of the socialist urban development. Three specifically planned residential tower projects – the ABC Tower (150 m, by MonArch), Alexander Residential (150 m, by Hines) and GRANDAIR (65 m, by Kondor Wessels) – should serve to upgrade the central location on the "Alex". These towers could be the prelude to a city district development on the Alexanderplatz; something the square has been waiting for for almost 25 years. The Kollhoff plan was developed at that time, which provided for approximately ten 150 m high-rises, but was never implemented.

Refurbishments are another means by which new housing can be created. Where this occurs, the body of the building is almost completely demolished and only the structure is retained. This was the case with The Seven (54 m) in Munich. For construction law reasons, the steel construction of the former heating power plant forms the basis for the new residential ensemble with one of the tallest residential high-rises in Munich.

Office properties are also being increasingly converted into housing. In Berlin, on the Halleschen Ufer, the postal cheque office is due to be transformed into the "XBerg Tower" (89 m) and the Steglitzer Kreisel (118 m) will become the City Tower. In Cologne, the BDI high-rise (approx. 65 m) is being converted into the "Flow Tower" and the Frankfurt "Hochhaus am Park" (96 m) is being modified to become a residential tower by 2019. And last but not least, residential high-rise buildings, upon which the passage of time has already taken its toll, are today being revitalised – recently, for example, the Mundsberg Towers I and III in Hamburg and the Olympic Tower in Munich.

Grand Tower visualisation

Current high-rise residential projects in Germany

Revitalised inventory residential towers
- Mundsberg Tower Hamburg
- Olympia Tower Munich

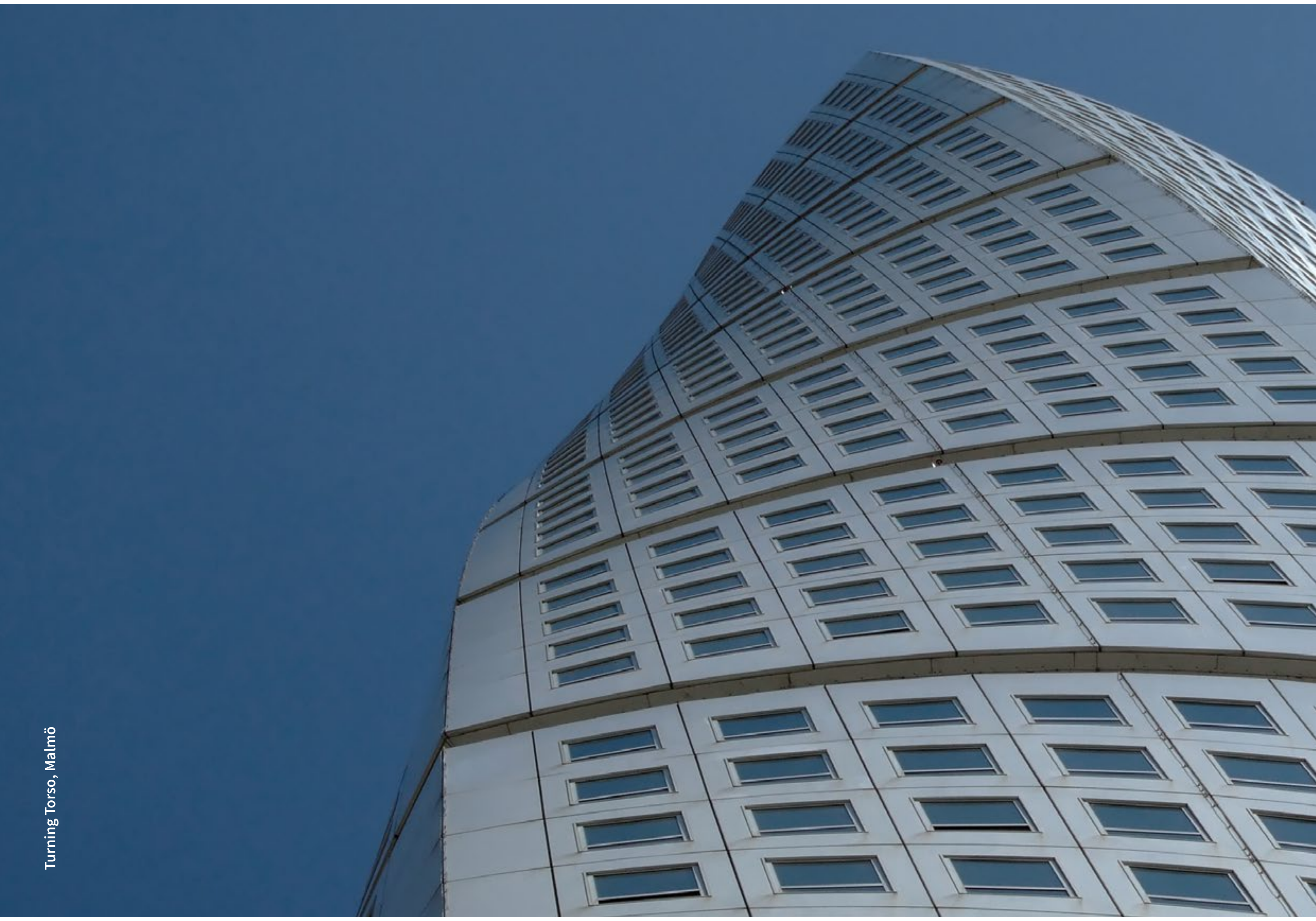
Converted high-rise office buildings
- XBerg Tower Berlin
- Flow Tower Cologne (former BDI high-rise)

New developments in integrated locations
- Grand Tower in Frankfurt am Main
- Stiftstraße Frankfurt
- The Seven Munich

New developments in new residential quarters
- Max und Moritz Berlin
- Marco Polo Tower Hamburg

Solitary
- Gewa Tower Fellbach near Stuttgart

Integration, innovation and sustainability as development principles



Turning Torso, Malmö

Today's residential high-rises are characterised largely by sustainability, integration and innovation.

For some years now, residential towers have been developing from pure purpose-built structures for as many people as possible into architectural shop windows in which new forms and technologies are tested. At 190 m, the Turning Torso in Malmo is the tallest skyscraper in Scandinavia and, with its nine rotated cubes, it stands as an internationally outstanding example of the deconstructivist style.

Two factors that unite most of today's residential high-rises are their integrated location in the city and their taking sustainability as a premise in terms of both construction and operation. Taller construction allows the realisation of more homes over a smaller surface area. At the same time, the closeness of the new mixed districts to places of work reduces traffic impact. This means that Germany's new residential high-rises can, and indeed must, become pilots for more sustainable traffic concepts.

Excellent transport connections

This need arises from the fact that the large number of people in the new districts causes a great deal of traffic. According to the Frankfurter Neue Presse, 2000 people live in the neighbourhood around the Henninger Tower, but the traffic infrastructure in the area is, as in other cities, physically limited. This means that complex solutions are becoming essential; complex solutions that include all modes of transport, from motorised personal vehicles to public transport, to sufficient parking spaces for bikes and car-sharing or car-pooling arrangements, which together with delivery services should serve to reduce traffic.

Combination of multiple uses

One indicator for the integration of current residential tower developments in existing transport systems is the fact that of 65 projects investigated, the average distance from the nearest local train or underground station or tram stop was only 380 metres. In approximately half of the projects, this distance was less than 300 m and for a quarter of them, it was actually under 200 m.

The Germans are a little more conservative with regard to architecture and design. Nevertheless, there are also a number of innovative projects, such as the Marco Polo Tower in Hamburg's HafenCity city with its modern, organic design and the Gewa Tower in Fellbach near Stuttgart. Innovation is not only to be found in the architecture, but also in the building technology. For example, the Marco Polo towers are cooled by means of vacuum collectors that use heat exchangers to convert the sun's rays into cooling air. And it is heated by solar energy.

Unlike in previous years, this therefore means that high-rise apartment blocks are no longer isolated individual entities; but rather that they should be seen as integrated neighbourhoods within the city centre which reduce land usage and promote sustainable ways of life. The move away from monostructural usages additionally supports the integrative character of current residential high-rise developments. Almost two thirds of the projects under consideration are to involve mixed usage; a third even evidence more than two usage types, including social uses such as kindergartens (nurseries).

Amenities such as cinemas, spa and wellness areas and service offerings increase the attractiveness of residential high-rises for the inhabitants.

In particular, an increasingly international clientele expects a high standard of facilities and services, as per the international norm. This includes the "Vertical Living" approach, whereby a range of facilities ("amenities") is provided for all user target groups of the buildings.

The "Vertical Living" offering is based on the services of premium hotels. Therefore, residential towers are often combined with hotels, ensuring not only a concierge service but also offering house services, such as dining and laundry services. At an international level, cinemas, spa and wellness areas, and also conference areas are integrated into the residential high-rise.

In Germany, this approach is still in its infancy and this is certainly primarily a result of the lower heights of the buildings compared to what is found elsewhere in the world and the ensuing reduction in the amount of space available. The towers under planning in Germany are on average only 85 m tall, while international projects often only start at a height of 100 m. It is however to be expected that an increased service depth will also be found in the projects in Germany, once the concept of high-rise living has become established here.

Living in the high-rise as a "lifestyle"

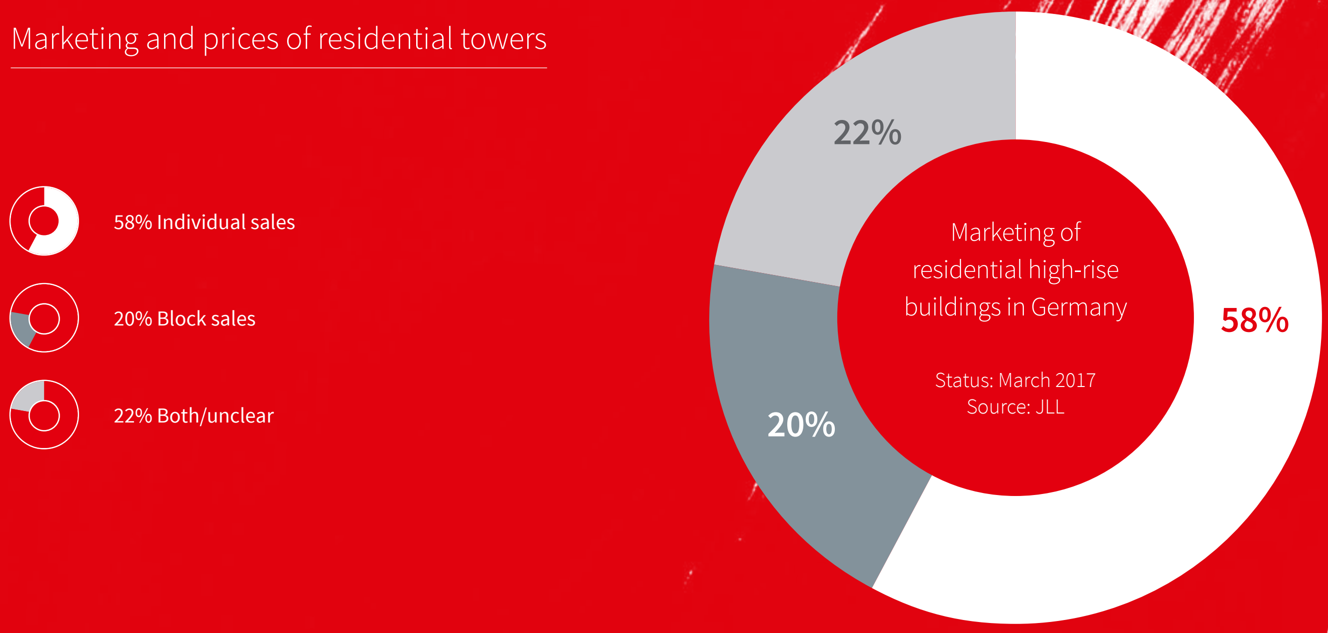
A current example of a German residential high-rise with various "amenities" is the Grand Tower in Frankfurt, which will one day be the tallest residential building in Germany. Various exclusive community areas within it are to make living in the high-rise even more attractive for its users: for example, at almost 1000 sqm, the relaxing Grand Garden on the 7th floor features not only a lounge area and a sun deck with comfortable beach chairs, but also water areas. If you like, you can cook in a fully equipped professional kitchen and play host to your guests within a communal setting. Day and night, the concierge service attends to the residents' individual wishes and concerns.

And unlike in earlier residential high-rise buildings, open areas are also common in higher areas, and are in demand. The Sunset Terrace on the 43rd floor of the Grand Tower offers a free view over the city. In the "Four" project on the former Deutsche Bank site, also in Frankfurt, public gardens are planned at a height of 25 m. And apartments in residential buildings without balconies and terraces would now no longer be marketable, because living here is no longer just about living per se, but also represents its own lifestyle.

Grand Tower visualisation

To this end, both cities and project developers are attempting to evade the accusation that the new residential high-rises have only been designed with a small group of wealthy people in mind. The projects should not initiate gentrification processes and displace existing neighbourhoods, but should rather integrate socially. Some of the homes in “Strandhaus 2017” in Hamburg or in “south one” in Munich are to be offered at a reduced rental price and in the Frankfurt project “Four”, as mentioned above, 30% of the homes have been developed using public funding. Half of these in turn are to be kept aside for traditional social housing and the other half for residents from middle income groups.

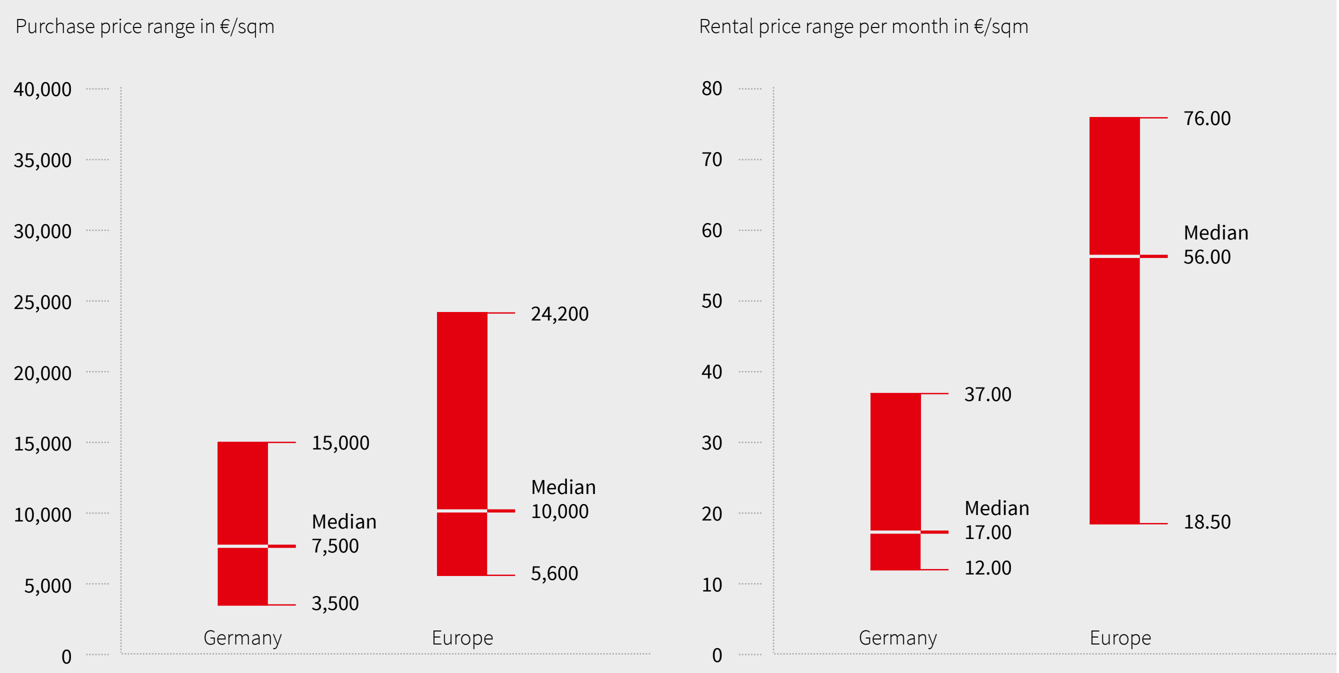
Marketing and prices of residential towers



Just like the equipment and design, the marketing of residential high-rises is also based on international trends.

Rental and purchase prices for apartments in residential high-rises

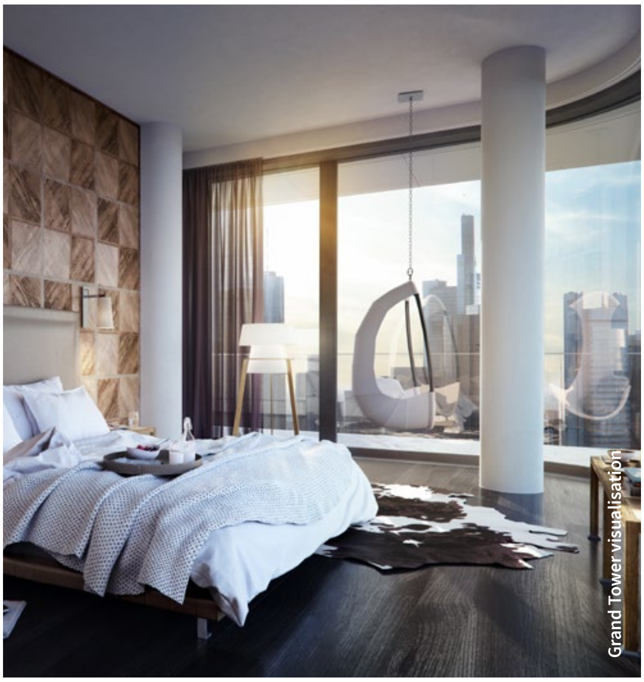
Source: JLL, Status: March 2017



Two marketing approaches are used in the case of residential high-rises that are also common practice in other residential projects: block sales and individual retail sales. Block sales to an end investor, e.g. in the form of a forward deal are on the whole rather rare in Europe. However, in the Netherlands and in Germany, they are relatively common as a consequence of the traditionally strong rental market. With this in mind, block sales are currently under consideration for about 20 projects. German special funds and developers, who are also active as portfolio holders, frequently step in as potential global investors in block sales, as do fund management companies and professional asset managers.

However, the form of marketing that is much more common – both internationally as well as in Germany – is the individual sale of the apartments. Interested parties often come from Asia or the USA. Furthermore, companies frequently purchase large parts of a housing offering or rent out the apartments as furnished apartments via a third company.

In Germany, apartments in residential high-rises are marketed for approx. €9,000/sqm, half of the apartments for a maximum of €7,600/sqm and one third for up to €6,500/sqm. It is clear that the developers view their target group as primarily being prosperous international users. The purchase prices are clearly oriented towards the top price segment in the cities. For comparison: according to the JLL Residential City Profile, the current peak price for apartment ownership in the most expensive German city, Munich, is over €9,000/sqm and in Frankfurt, it is around €7,000/sqm.



Top products in Germany command an average of €15,000/sqm. For residential towers, average purchase prices of over €10,000/sqm are the exception rather than the rule. In comparison to international residential tower projects, such prices are even moderate. An evaluation of 15 projects in the United Kingdom, the Netherlands, France, Sweden and Poland established an average of about €12,000/sqm, with a range between €5,600/sqm in France up to almost €25,000/sqm in London.

That residential buildings are not only conceived as a luxury projects, is made clear by the rental prices demanded for individual apartments. The range for the rental apartments on offer in Germany starts at €12.00 - 15.00/sqm per month for rental price alleviated apartments. The upper limit is around €25.00/sqm per month. Taking into account the top rents in Munich of almost €28.00/sqm per month or almost €20.00/sqm per month in Frankfurt, the rental prices in residential high-rises largely reflect those of the city housing market as a whole. Compared with the rents demanded in residential high-rises in various European countries, the German projects are able to offer reasonable rental prices. However, prices will rise in due course as a result of the expected increasing establishment of living in residential high-rises and the segment is starting to outgrow its re-establishment phase in Germany.

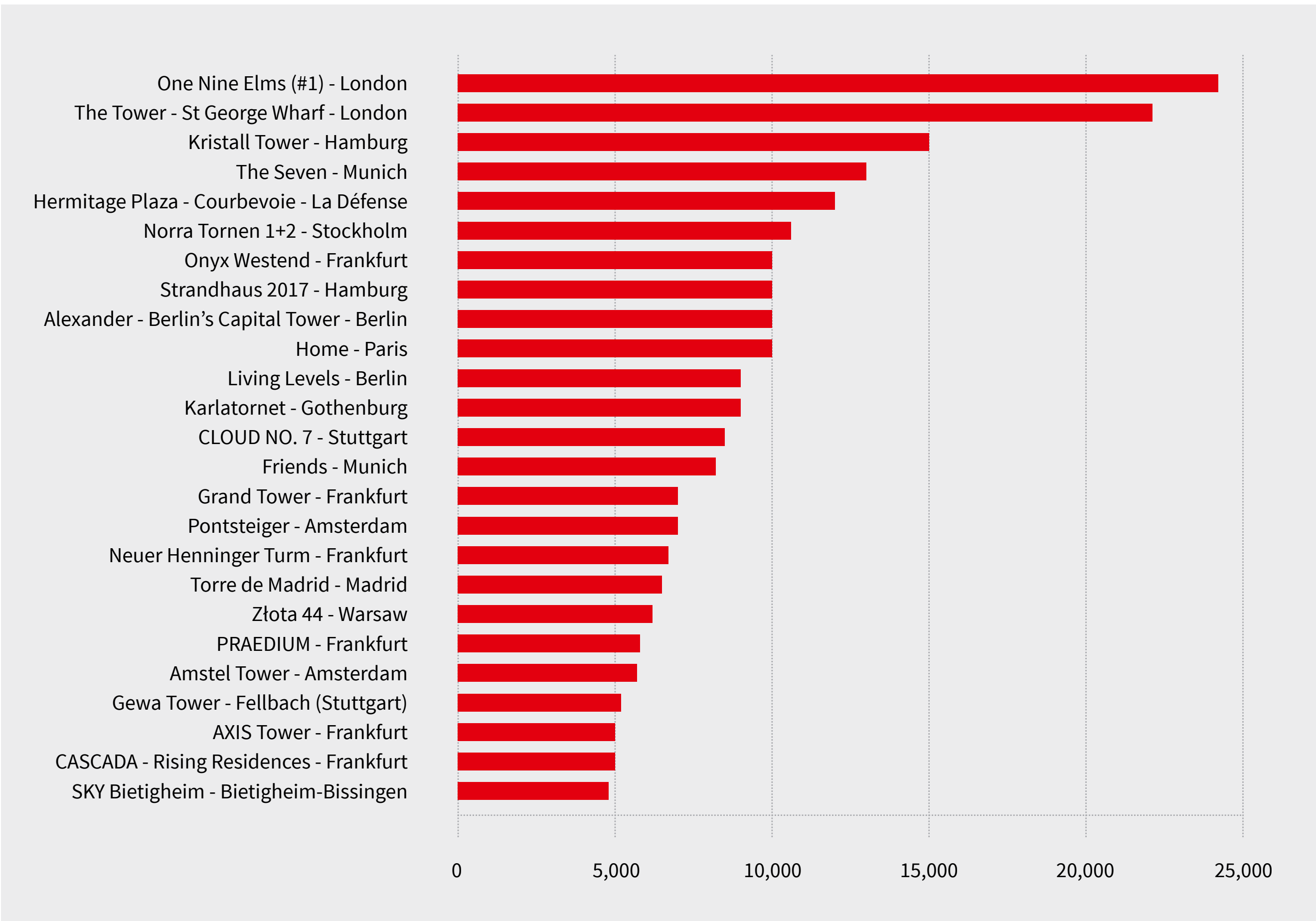
The construction costs for residential towers are between 10 and 15% above the expenditure for traditional multifamily houses, as a result of higher requirements in terms of fire protection, foundations and design. In high-rise buildings with above average equipment, the costs may even be more than 50% above normal building costs. However, the higher attractiveness, for example, by means of the amenities in residential high-rises described above, allows much higher purchase prices and an accelerated sales process than is the case for other residential units. Apartments in high-rise buildings are also characterised by good rentability. These aspects make an investment in residential high-rises worthwhile.

In comparison to the international standard, the purchase prices of apartments in Germany remain reasonable.

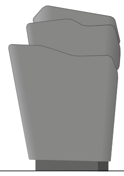
Purchase prices for apartments in residential high-rises

Purchase prices, averaged, in €/sqm
in selected projects in Germany and Europe

Source: JLL, Status: March 2017



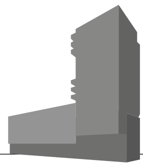
Top 12 residential towers in Germany



Hamburg

Marco Polo Tower

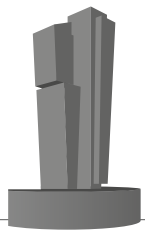
Completion	2010
Status	Completed
Measure	New-build
Usage	Residential
Residential units	58
Floors	17
Height	63 m
Purchase type	Individual sales
Developer	Hochtief/DC Residential
Architects	Behnisch Architekten
Price Ø	8,500 €/sqm



Hamburg

Adenauerallee 52–58

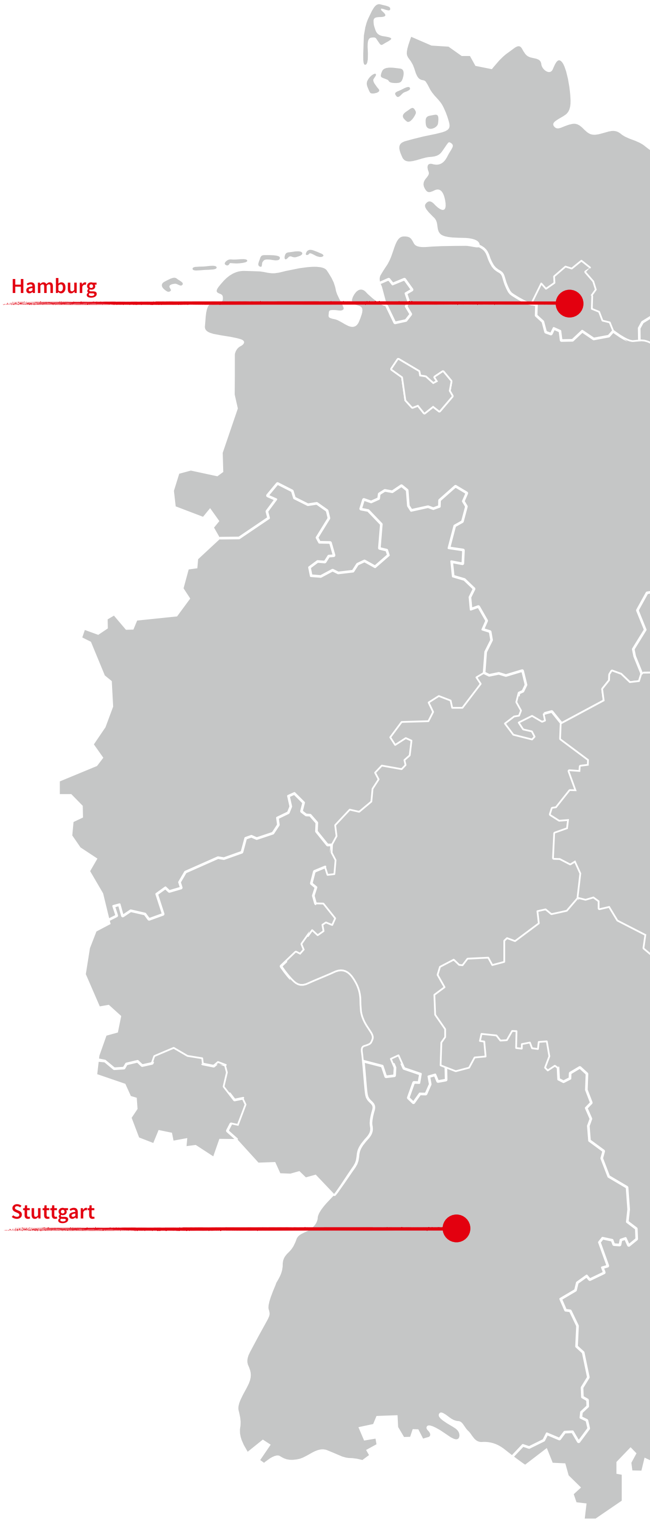
Completion	2018
Status	Under construction
Measure	New-build
Usage	Mixed use
Residential units	113
Floors	17
Height	55 m
Purchase type	Individual sales/block sales
Developer	HW Ingenieure GmbH
Architects	Störmer Murphy and Partners
Residential rent Ø	16.85 €/sqm

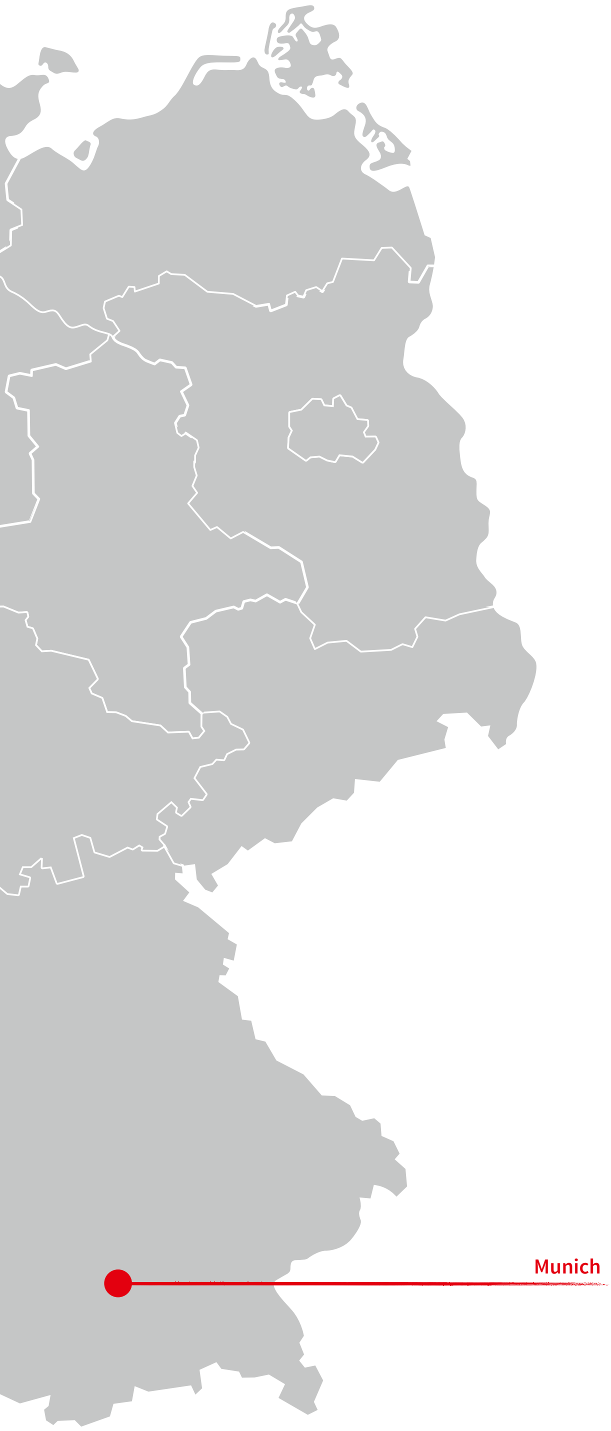


Fellbach (Stuttgart)

Gewa-Tower

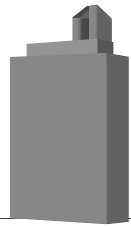
Completion	2017
Status	Under construction
Measure	New-build
Usage	Residential
Residential units	66
Floors	34
Height	107 m
Purchase type	Individual sales
Developer	GEWA 5 to 1 GmbH & Co. KG
Architects	wolf - Architects / Engineers
Price Ø	5,200 €/sqm





Munich

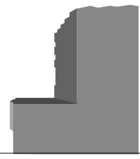
Olympia Tower



Completion	2013
Status	Completed
Measure	Total refurbishment
Usage	Residential
Residential units	344
Floors	19
Height	88 m
Purchase type	Block sales
Developer	Engelhardt Group
Architects	
Residential rent Ø	37.00 €/sqm

Munich

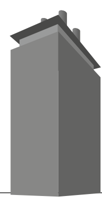
Friends



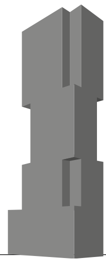
Completion	2016
Status	Completed
Measure	New-build
Usage	Mixed use
Residential units	260
Floors	15
Height	53 m
Purchase type	Individual sales
Developer	LBBW Immobilien
Architects	Allmann Sattler Wappner Architects
Price Ø	8,200 €/sqm

Munich

The Seven



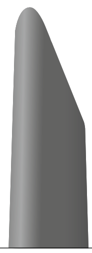
Completion	2013
Status	Completed
Measure	Total refurbishment
Usage	Mixed use
Residential units	56
Floors	15
Height	54 m
Purchase type	Individual sales
Developer	alpha invest Projekt/LBBW Immobilien
Architects	Léon Wohlhage Wernick
Price Ø	13,000 €/sqm



Berlin

Alexander - Berlin's Capital Tower

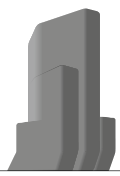
Completion	2019
Status	In planning
Measure	New-build
Usage	Mixed use
Residential units	447
Floors	37
Height	150 m
Purchase type	Individual sales
Developer	MonArch
Architects	Ortner & Ortner
Price Ø	10,000 €/sqm



Düsseldorf

Upper Nord Tower

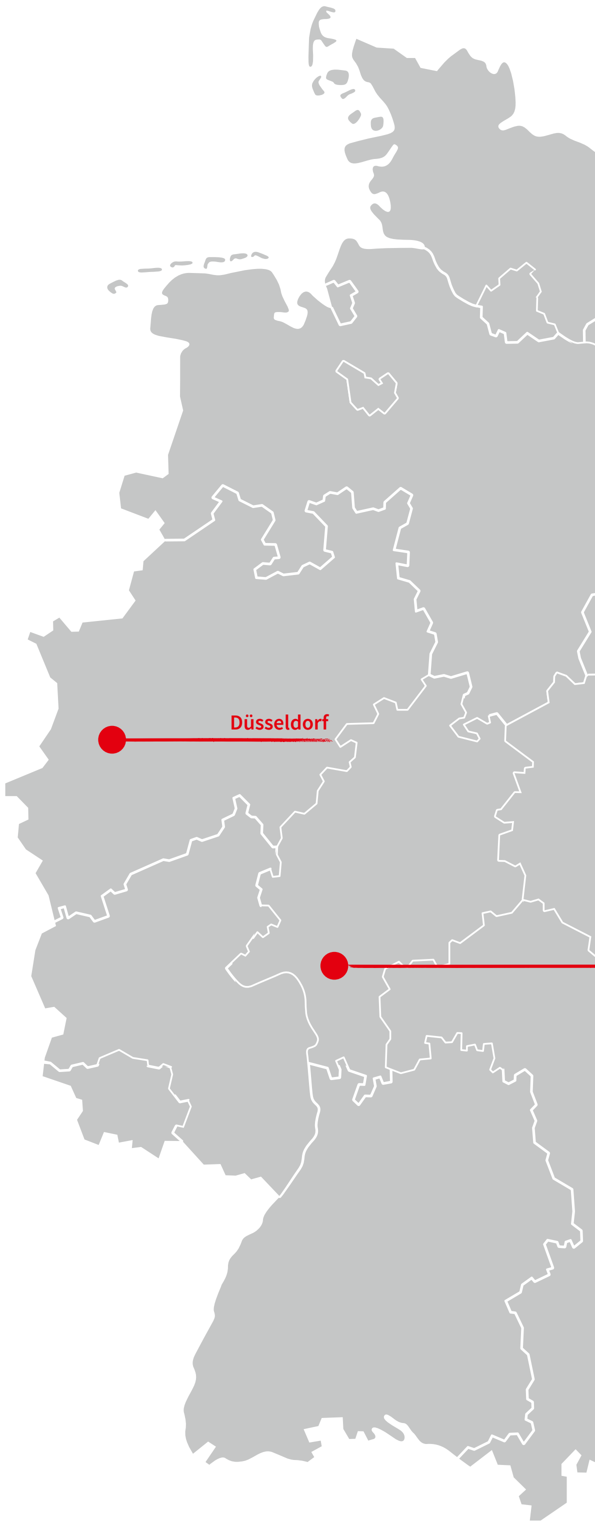
Completion	2020
Status	In planning
Measure	New-build
Usage	Mixed use
Residential units	> 400
Floors	35
Height	120 m
Purchase type	Block sales
Developer	CG Group
Architects	Sauerbruch Hutton
Residential rent Ø	Confidential

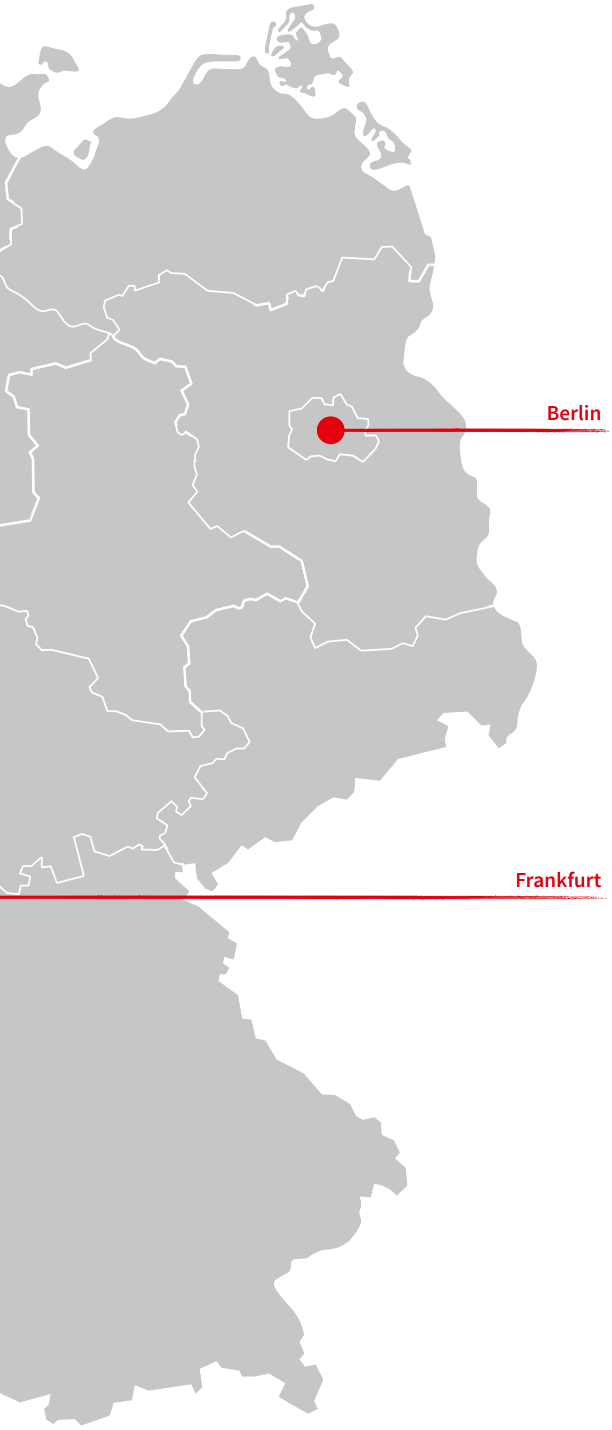


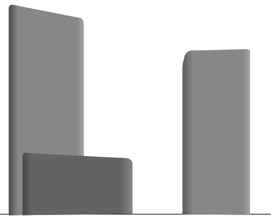
Düsseldorf

RHEIN740

Completion	2018
Status	Under construction
Measure	New-build
Usage	Mixed use
Residential units	113
Floors	17
Height	55 m
Purchase type	Individual sales/block sales
Developer	HW Ingenieure GmbH
Architects	Störmer Murphy and Partners
Residential rent Ø	16.85 €/sqm



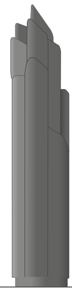




Berlin

Max und Moritz

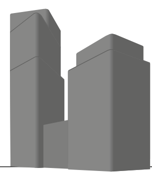
Completion	2019
Status	Under construction
Measure	New-build
Usage	Mixed use
Residential units	466
Floors	49
Height	182 m
Purchase type	Individual sales/block sales
Developer	Mikare
Architects	Nöfer Architects
Price Ø	6,500 €/sqm



Frankfurt

Grand Tower

Completion	2019
Status	Under construction
Measure	New-build
Usage	Residential
Residential units	401
Floors	48
Height	172 m
Purchase type	Individual sales
Developer	gsp company for town planning and project development
Architects	Magnus Kaminiarz & Cie.
Price Ø	7,800 €/sqm



Frankfurt

Stiftstraße 23–27

Completion	2020
Status	Under construction
Measure	New-build
Usage	Mixed use
Residential units	500
Floors	24
Height	85 m
Purchase type	Individual sales/block sales
Developer	Becken Development
Architects	Magnus Kaminiarz & Cie.
Price Ø	Still open

Summary and Outlook

Residential towers and residential buildings are currently experiencing a revival, both worldwide and now in Germany. With a little delay compared to other European countries, a number of projects are now under construction or at the planning stage.

Grand Tower visualisation

In contrast to those of earlier decades, these high-rises serve more than just residential purposes. They represent a modern lifestyle, based on principles of sustainability and integration into the urban space and urban life. They are no longer subject to the paradigm of separation of accommodation, supply and work, but on the contrary, they have diversified in terms of their usage and can claim to be particularly well-integrated into the town in terms of social and transport use. The actors involved in the projects – communities, developers, investors and marketers – work very closely together with the aim of avoiding social segregation, enhancing the urban space by means of sus-tainable development and ultimately also designing transport integration in an environmentally friendly fashion. And even if the German concepts in relation to technical innovation and amenities are still conservative, it is still very likely that German high-rise housing will rapidly become more important over the next few years and that this will enrich the diversity of urban housing.

JLL Achieve Ambitions

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