



PARKING FACILITIES

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INDEX

› Editorial office	4
› Editorial	5
› Definition	6
› Operating options	7
› Features	14
› Conclusion	27
› About DIWG	29



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EDITORIAL

Parking is and remains a topic that provokes much discussion. In particular, politicians and urban planners are concerned with the question of how to continue to create the parking spaces needed despite the scarcity of available space and the high demand for housing, or how to make better use of the little space that is available. The steadily increasing number of vehicles only exacerbates this problem. At first glance, parking facilities seem to be a solution to this problem due to their mostly vertical design. However, a closer look reveals that the utilisation of parking spaces often leaves much to be desired, even in locations that are in demand. The number as well as the optimal distribution between long-term and short-term parking spaces also causes further discussion when it comes to the issue of parking.

This trend report focuses on the reasons for this and looks at alternative forms and development possibilities to make multi-storey and underground car parks interesting and modern, not only as parking facilities. Because even if the traffic turnaround continues to gain in importance in the future, the car is and will remain by far the most popular means of transport in Germany. For this reason, parking facilities will continue to be an important aspect in the planning of cities and their parking space. How the topics of traffic change and parking are interlinked is described in more detail below. Rents and the investment market for parking facilities will also be examined and the attractiveness of multi-storey car parks for operators and investors will be discussed: do multi-storey car parks still represent a worthwhile investment today or will politics and laws that want to ban cars more and more from cities lead to a decline in parking facilities in the future?

Due to the fact that parking facilities are still a niche product on the real estate market, no claim to completeness of the researched data and figures is guaranteed due to low transparency of the market.

DEFINITION

The term „parking facilities“ covers all forms of parking spaces for public use. These serve to park a wide variety of vehicles and come in different forms. The most common types are multi-storey and underground car parks, but parking pallets and uncovered parking spaces can also be classified as parking facilities. Conventional garages or carports, on the other hand, are not included and are therefore not considered in detail in this trend report. Parking facilities are usually built in multi-storey construction.

The construction is possible both above ground (high-rise garages) and underground (underground garages) and is very practical for construction in inner-city areas due to the thus low land consumption. This is also where the majority of existing car parks in Germany are located. Especially in metropolitan areas and in places of great public interest such as shopping centres or sports venues, multi-storey car parks are crucial for providing sufficient parking spaces in a confi-

ned space. In addition, multi-storey car parks are located at airports and near railway stations.

At the same time, cities recognised the increasing importance of parking spaces in cities at an early stage. The first multi-storey car park in Germany was built in Berlin as early as around 1913. Thus, after a few years, the development also arrived in Germany: the world's first multi-storey car park was built as early as 1901 at Piccadilly Circus in London and offered space for around 100 vehicles on seven floors. After the First World War and the increasing number of vehicles, the number of multi-storey car parks also rose slowly. With the end of the Second World War and the beginning of mass motorisation, the multi-storey car park became an essential part of German city centres, which is still the case today.

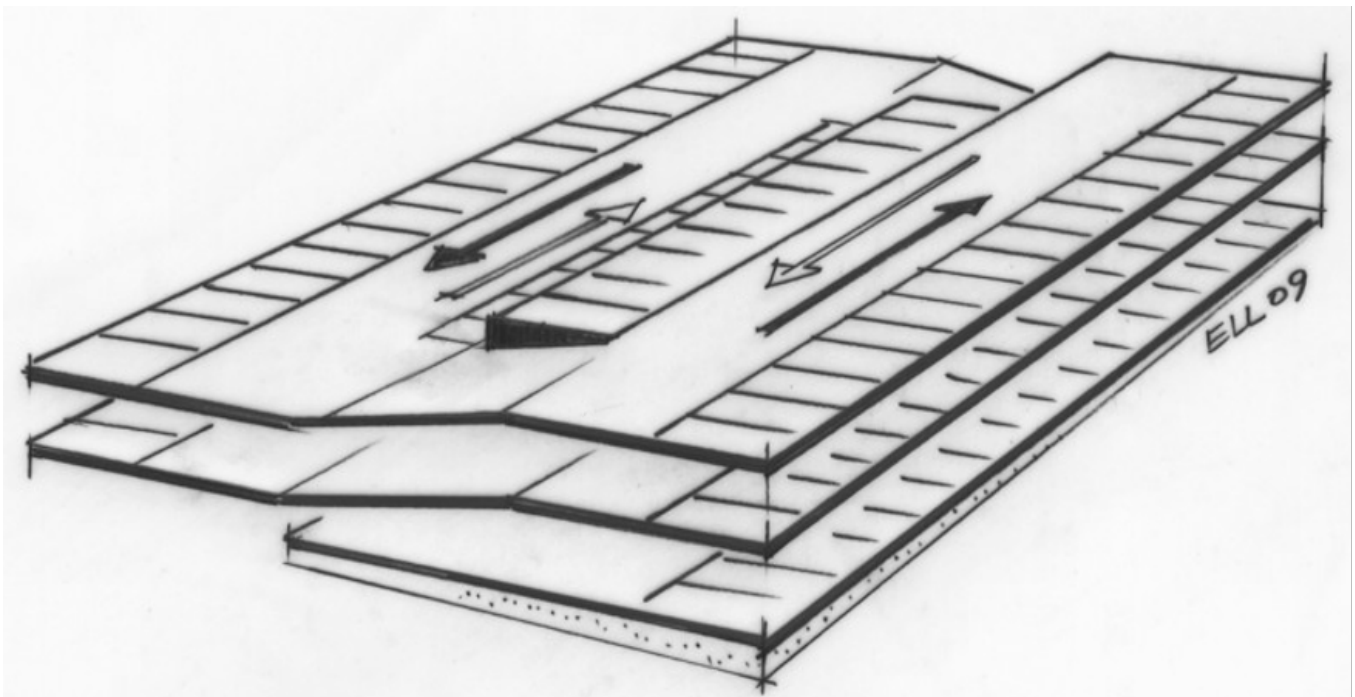


OPERATING OPTIONS

SHORT-TERM PARKERS BRING IN THE MOST MONEY

Car parks can come in a variety of forms. Most use ramp-like paths to allow entry to the next level up or down. The most common form is the so-called D'Humy system, also called split-level system, in which the ascent and descent are offset to save as much space as possible. In other car parks, however, the parking spaces are

arranged directly on the ramps (parking ramps). The shape of these ramps can also vary greatly from car park to car park. Straight ramps are the norm, but spiral or helical variants are also common.



Source: Arrangement in the form of the D'Humy system, Wikipedia Commons

Differences can also be observed in the arrangement of the parking spaces. In most cases, the parking spaces are next to each other, but parking pallets in the form of stacked parking spaces (duplex parking spaces) are also found in multi-storey car parks, although usually not in multi-storey car parks open to the public. A new development are parking boxes in which the car is parked by the driver and moved to a free space automatically (e.g. airports) or by car park employees. This presents another different operating option: some car parks are operated by permanent staff, while others are almost automated and only require staff in case of maintenance or cleaning. Car parks differ not only in terms of construction, but also in terms of parking time.

A distinction is usually made between short-term and long-term parkers, and the operation is also designed for one of these target groups. While short-term parkers usually use a parking space for a few hours, long-term parkers can rent a parking space for several days, weeks or even years. The decisive factor here, however, is the right location to ensure maximum utilisation. Depending on the location, the parking duration usually also varies, although clear differences can be seen here.

SHORT-TERM PARKING	LONG-TERM PARKING
Shopping centres / Retail	Airports / Train stations
City centres	Residential areas
Sports venues	Hotels
Event locations / - venues	
Offices / Companies	
Fairs	
Hospitals	

Source: DIWG

Car parks for long-term parkers normally offer the larger number of parking spaces due to the high demand for parking spaces at their respective locations. It is therefore not surprising that Germany's largest multi-storey car park will soon be located at Frankfurt Airport: around 8,500 parking spaces are to be built on an area of 20,000 m² by the end of 2023, which will be a new record for a single building in Germany. In a global comparison, however, this is a manageable figure: the West Edmonton Car Park in Canada has

space for 20,000 vehicles. Short-term parkers, however, normally bring in more revenue for the operators than long-term parkers, as there is a higher frequency here and the parking fees are significantly higher per hour.

LOCATION FACTORS

In order for a multi-storey car park to be profitable, even on such a large scale, there must be a high utilisation of the parking spaces. To guarantee this, the optimal location is of decisive importance, especially in cities with a large parking supply. The decisive criterion here is a high user frequency: the higher the demand for parking space, the higher the utilisation and thus the profit. For this reason, large cities with increased traffic volumes or a low supply of parking space are particularly suitable for the construction of new multi-storey car parks. Inner-city main roads and important traffic hubs such as Frankfurt Airport are particularly suitable for the operation of a multi-storey car park because of the high vehicle frequency there. The increasing importance of multi-storey car parks as mobility hubs can also be ensured at these locations.

In addition, venues such as football stadiums, event locations or shopping centres attract many visitors and thus need a large supply of parking space, which means that multi-storey car parks outside city centres can also prove profitable in

the right location. However, good transport connections are also essential here in order to be able to reach the parking areas quickly and easily. Nevertheless, city centres and prime retail locations are preferred for the construction of new car parks. One reason for this is that roadside parking in city centres is to disappear more and more. The additional parking spaces required in this way can be compensated for by the vertical construction of multi-storey car parks and the comparatively small amount of land they require. Above all, city centres with high purchasing power and a still high retail offer come into question for the operation. Competition in the surrounding area, the centrality of the city and the number of commuters also have a major influence on the optimal location and thus the economic viability of parking facilities.

SUPPLY AND DEMAND

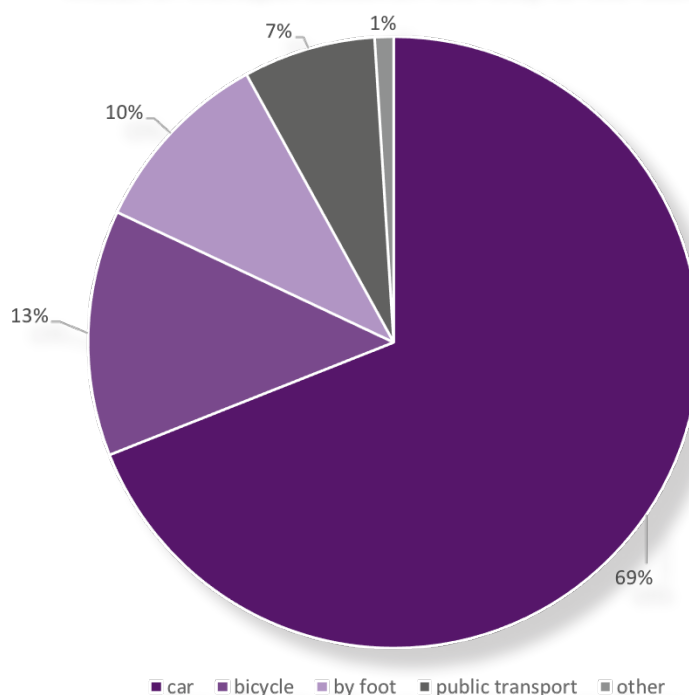
It is not only the location that is decisive for the economic success of car parks; other asset classes can also have an influence on the profitability of a car park. In the past, for example, the neighbouring retail trade was particularly important for the success of a multi-storey car park. In cities with high purchasing power, such as Düsseldorf and Munich, this effect can still be observed. In cities with declining retail importance and low purchasing power, car parks also have problems achieving high occupancy rates in city centres. Here, parking facilities at public assembly points in particular are a more economically viable alternative.

Offices can also have a decisive impact on the profitability of a car park. During the Corona pandemic, previously high-demand car parks, especially those with a high proportion of short-term parking, remained empty in top office locations. The reason for this was the lack of occupancy of office space. Since remote work could also cause many offices to have a lower occupancy rate in the future, car parks in previously good locations are also at risk of becoming vacant, as it is no longer necessary for the companies con-

cerned to rent many parking spaces. It is therefore important to take into account a wide range of relevant location parameters in the future choice of location when planning a car park and thus reduce the risk of vacancies.

Despite the problems during the pandemic, car parks remain an important asset class for German city centres. The reason for this is the continuing high number of passenger cars in Germany. In 2023, almost 49 million cars will be registered in Germany, which is a new record. Added to this are tourists or visitors from other countries who are also looking for parking spaces in the cities. Despite increasing alternatives and a growing sense of sustainability, the car remains by far the most popular means of transport in Germany: around 68 % of people in Germany use a car for their daily commute to work.

Mode of transportation on the way to the workplace

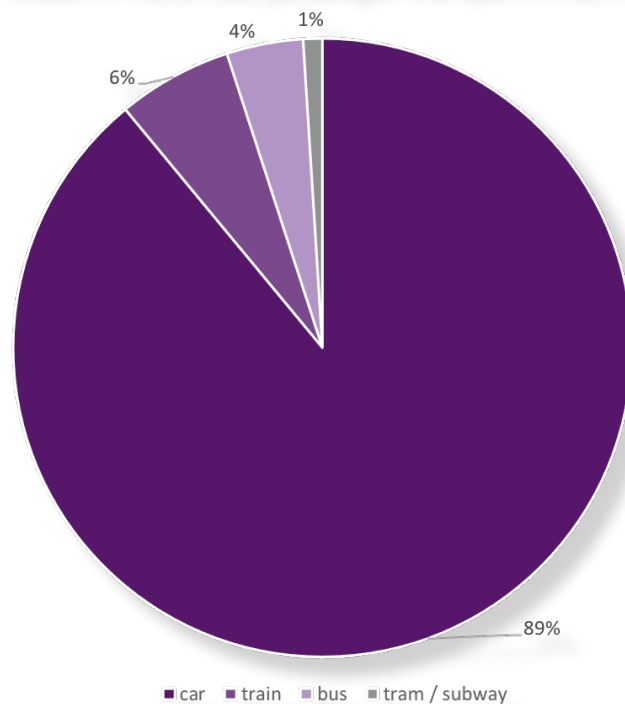


Source: Federal Statistical Office, Illustration: DIWG

Compared to the use of motorised alternatives in everyday life, the dominance of the car is even stronger. In 2021, cars accounted for almost 89 %

of motorised passenger transport. Buses, trains and trams, on the other hand, were responsible for just 11 % of passenger transport.

Mode of motorized passenger transport in Germany



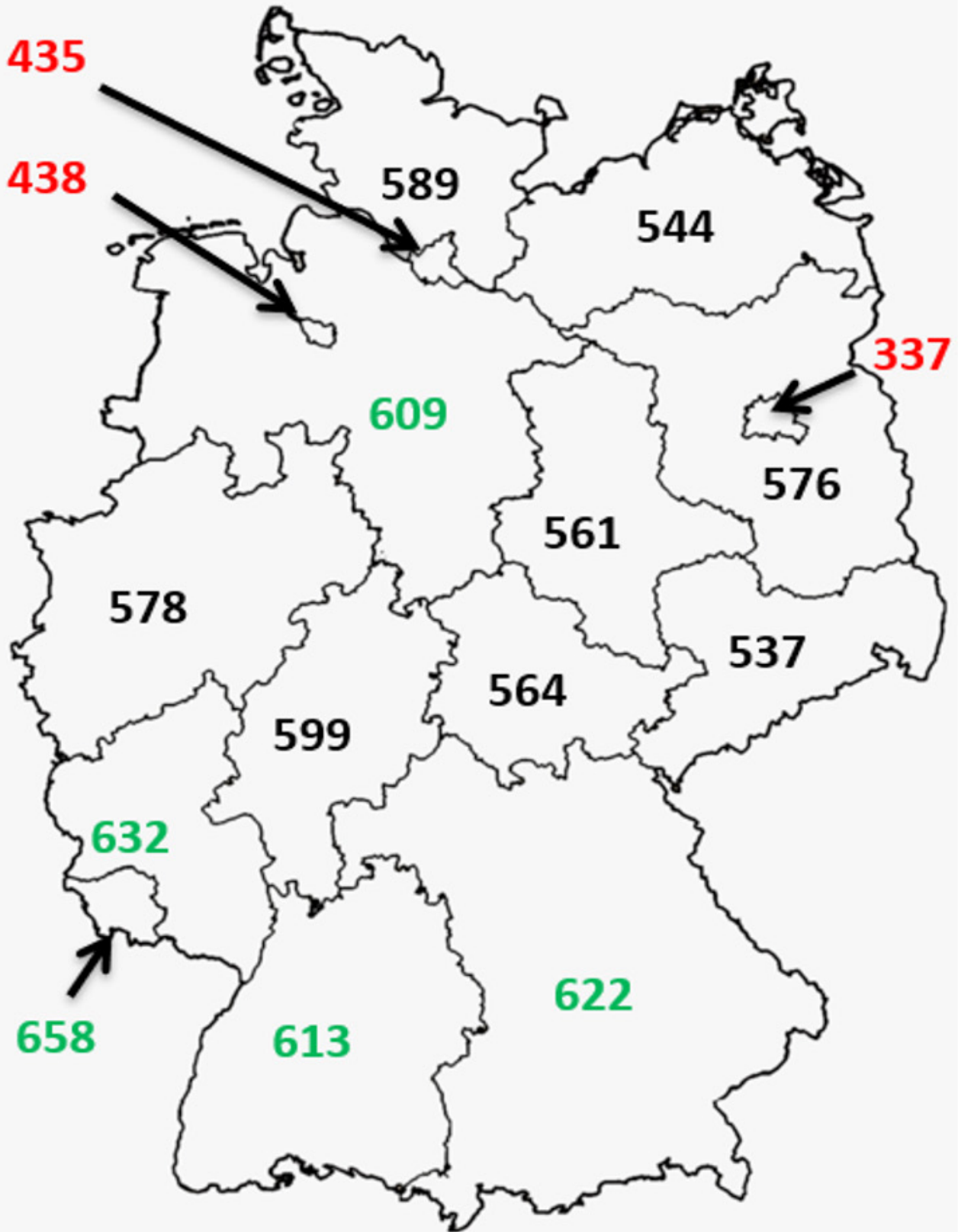
Source: Federal Statistical Office, Illustration: DIWG

The car, and thus the multi-storey car park, thus continues to have a high status in Germany, especially with the increasing shortage of space and a further increase in the number of cars in recent years, parking facilities can and will represent a viable asset class for the future. However, the simpler concept of earlier years will not prevent vacancies in the long run.

However, the importance of the car and thus of car parks can vary greatly within Germany. Especially in the three city states and the top 7 cities in Germany, which have a very good transport infrastructure of the public transport network, the car seems to be increasingly losing importance. This is also shown by the fact that young people, also due to the decreasing number of apprenticeships, are doing their driving licences later and later, especially in big cities. The reason for this is the good transport infrastructure and the large number of alternatives, but also problems with traffic jams and lack of parking spaces in the inner cities, which makes using the car much more difficult. In contrast, the car remains indispensable, especially in the southern and southwestern federal states and the rural lowland. The rural po-

pulation in particular, who work in the cities, cannot do without the car as a means of transport, partly due to inadequate rail transport infrastructure. This target group is absolutely dependent on sufficient parking spaces in order to reach their place of work as well as leisure facilities and local amenities without great effort.

Registered cars per 1,000 inhabitants in GER



Source: Federal Statistical Office, Illustration: DIWG

In the federal states and cities with higher car density, multi-storey car parks can therefore continue to be a worthwhile investment, but also in areas with lower car density, multi-storey car parks with the right concept can continue to ensure high occupancy rates. This is also reinforced by the fact that the population in Germany spends an average of 41 hours per year looking for a free parking space. Since a car in Germany also stands for an average of 23 hours a day instead of driving, it is reasonable to assume that parking facilities are reaching the limits of their capacity. In addition, some experts recommend that three parking spaces should be provided per car to meet the existing demand: one for home, one for work and one for any leisure activities. This includes, for example, doing the shopping. With the aforementioned 49 million cars in Germany, there should be almost 150 million parking spaces according to this recommendation, excluding visitors from abroad. But is this really the case?

It is difficult to estimate the exact number of parking spaces in German multi-storey car parks. The members of the Bundesverband Parken e.V., which includes just under 200 car park operators throughout Germany, report a total of 1.32 million car park parking spaces, the majority of which are located in multi-storey buildings. The number of parking spaces counted as parking facilities is probably much higher due to a significantly higher number of uncovered outdoor parking spaces. According to the ADAC, there are approximately 160 million parking spaces of all types in Germany, but only a small proportion of these are in multi-storey and underground car parks. Outdoor parking spaces, for example at the roadside, on the other hand, have a share of about 70 %. However, the maximum utilisation of all parking spaces is also just 70 %. This is a particular problem with multi-storey car parks: around 98 % of multi-storey car parks in Germany are never fully booked. So despite the actually high demand, there seems to be further growth potential here. In order to increase the attractiveness of multi-storey car parks, different concepts and equipment options can be used.

FEAUTURES

INCREASING DEMANDS ON PARKING FACILITIES

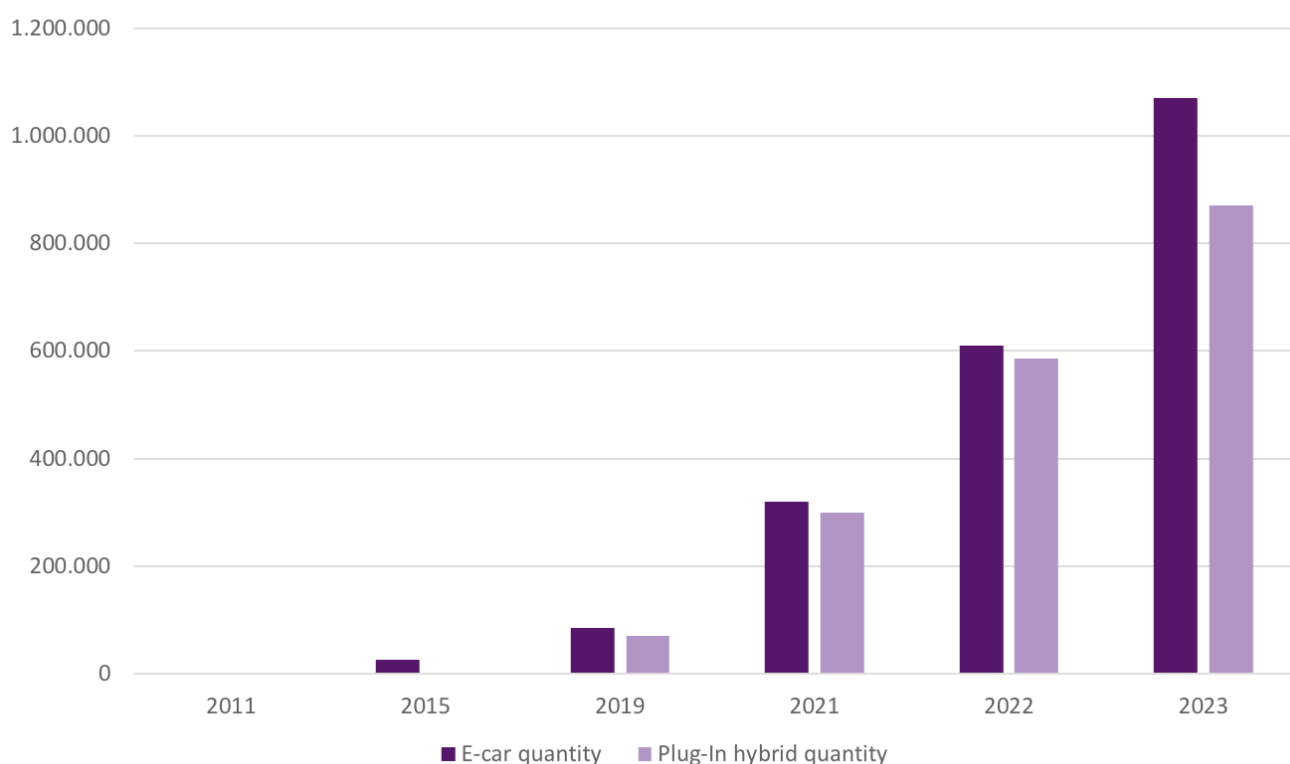
In order to be attractive to users and thus achieve a high occupancy rate, the classic concrete buildings of earlier years are no longer sufficient. Even in times of parking space shortage, car parks must be equipped with certain features. Above all, the safety of the users must be guaranteed. Whereas car parks used to be known as dark and confusing places, good lighting, the avoidance of corners that are difficult to see and the installation of surveillance cameras are nowadays of decisive importance for the users' sense of security.

In addition, a multi-storey car park must be designed for different target groups in order to increase occupancy. Thus, parking spaces for different users should be covered in a modern multi-storey car park. This includes, among others, parking spaces for the disabled, women or mothers/children. But not only the different users have to be taken into account, cars have also changed compared to the boom of multi-storey car parks in the 1970s and 1980s. In the meantime, vehicles are significantly wider than they were decades ago, also due to the increase in SUVs. The usual width of a conventional parking space of approx. 2.30 m is therefore no longer up to date. When building new car parks and also modernising existing ones, it is imperative that the new recommended parking space width of at least 2.50 m is observed in order to allow all types of vehicles to park and thus keep vacancies as low as possible. The width of driveways and ramps of a car park must also be adapted to the changing demands of vehicle owners.

It is not only the size of the vehicles that is changing, but also the increasing electromobility that has an influence on the future equipment of parking facilities of all kinds. The number of electric

cars and plug-in hybrids will be just under two million in 2023, which corresponds to a share of about four percent of the total passenger car population. However, the trend towards more electric cars is clearly upward. For example, the share of electric cars in new registrations in 2023 has already reached 17.7 %. Therefore, it will be crucial in the future to provide a sufficient number of e-charging stations at all parking facilities. This will also make these parking spaces interesting for users who would otherwise not necessarily have chosen a multi-storey car park as their parking space.

Development of e-cars and plug-in hybrids over the last few years



Source: Statista, Illustration: DIWG

However, there is still a need to catch up in terms of the number of existing e-charging stations in German car parks. At the moment, only about 6,000 of the more than 88,000 charging stations registered in Germany are located in German car parks. With a number of almost 1.08 million e-cars, this corresponds to a coverage rate of just 0.5 % by car parks. By 2025, this number is therefore to be almost tripled in the car parks of the Bundesverband Parken, which includes almost 200 companies from the parking industry. In particular, the market leader Contipark wants to significantly expand its offer by the end of 2023. In other countries, e-cars and thus charging stations are already a much larger market. In Sweden, for example, there are car parks that can be used entirely for e-cars. In Stockholm, for example, there is a multi-storey car park with almost 1,000 parking spaces, each of which has a charging plug. In other European countries, too, the share of e-cars and thus their influence on parking is significantly greater. In this respect, there is still growth potential in Germany. In the case of underground garages, other structural and ventilation requirements also

play a role. Since carbon monoxide accumulates more quickly in underground garages, it is imperative that there is an effective means of ventilation. In conventional underground garages, a duct system is usually used that provides ventilation through exhaust fans. In larger garages, on the other hand, a jet fan system is more economical and effective in operation. Proper ventilation is also crucial for the fire protection of such underground garages, especially for parking e-cars, in order to ensure smoke-free conditions in case of fire.

DIGITALISATION ALSO INFLUENCES PARKING

Accessibility is also an important aspect for the success of a car park. A good parking guidance system makes it easier for users to find a parking space. A distinction is made between static and dynamic parking guidance systems. Static parking guidance systems only indicate the location and accessibility of the respective car park on signs or electronic displays. In some cases, the total number of available parking spaces is also displayed. Dynamic systems, on the other hand, show the number of free parking spaces or whether a car park may be closed. This data is automatically updated on an ongoing basis and thus greatly simplifies the search for free parking spaces for users. In a functioning parking guidance system, these displays should not only be mounted just in front of the respective car park, but should already point to the car park at some distance. In most cases, the display of available parking spaces becomes more accurate the clo-

ser users get to the car park. In addition, apps already exist that can display free spaces and guide the way there based on a dynamic parking guidance system.

Since dynamic parking guidance systems significantly simplify the search for free parking spaces, they are particularly available in large cities with an increased parking shortage. Static parking guidance systems now only work in locations where car park occupancy rarely reaches one hundred percent. The picture on the left shows an example of a dynamic parking guidance system in a large city like Düsseldorf, and on the right a static parking guidance system in a small town like Heppenheim.



Source: Wikipedia Commons, City Heppenheim

But it is not only the parking guidance system that is becoming increasingly digitalised; in the future, entry and payment processes will probably also take place digitally for the most part. Whereas in the past there were still personnel who opened and closed the barrier when entering, almost every multi-storey car park is now equipped with an automated barrier. But the payment process is also about to change. Direct payment in apps developed for this purpose could sooner or later replace the existing system with automatic pay stations. For many users, this cashless payment option is much more convenient and time-saving, which is also reflected in a wide range of providers of these parking apps. Many of these apps are even carried by the respective cities. In addition, free parking spaces are also displayed in the app and the respective fee can also be paid in advance. Furthermore, there are now barrier-free systems that automatically record the number plate of cars ent-

ering and leaving the car park. This helps to avoid backlogs in front of the barriers.

The right equipment of a car park is also crucial for image reasons. Cities that take the safety of their visitors into consideration when parking can also count on constant utilisation of parking spaces in the future. A modern, well-maintained multi-storey car park can also have a direct influence on the respective location. Businesses or even shopping centres look much more inviting if you can park your car in a modern multi-storey car park. If car park operators also take into account the various user groups and their different needs, modern car parks are much more likely to achieve a high occupancy rate than ageing concrete buildings with a worn-out usage concept and a lack of innovation.

GREEN CONCEPTS ARE CRUCIAL FOR LETTABILITY

So while the equipment has an effect on the image of a car park, in times of increasing ESG requirements, green solutions will also play an increasingly important role in the construction and operation of car parks. There are several ways to make a car park environmentally friendly. The most effective way to minimise the CO₂ emissions already caused by cars is to change the building fabric. Conventional multi-storey and underground car parks are mostly made of concrete. On the one hand, this is bad for the CO₂ balance; on the other hand, it also means that car parks often look the same and unfashionable. One possibility for a more modern and significantly more environmentally friendly alternative is to build them in steel skeleton construction. Although the conversion of existing buildings is only possible at great expense, this construction method offers many advantages for new buildings. For example, the façade can also be customised according to the wishes of the operator, which is only possible to a limited extent with concrete buildings. Car parks are usually more sustainable than conventional outdoor parking

spaces due to their lower land consumption. Nevertheless, even existing car parks can be made much more environmentally friendly with comparatively simple methods. A simple and inexpensive alternative is the planting of greenery on the surfaces. This can be done either on the façade, for example on the girders, or in the form of a green roof. On the one hand, these green areas absorb CO₂, on the other hand they also ensure that rainwater is absorbed. The sealing of the ground is a problem that makes multi-storey car parks look energy inefficient. In order to avoid this sealing, the use of certain materials is necessary in addition to greening. Lawn paving or gravel and chippings instead of concrete and asphalt allow rainwater to infiltrate over a much larger area. Planted swales or retention basins also promote this infiltration.



Even the colour of the car park can have a positive effect on the sustainability of a car park and its surroundings. A white roof, which has a high albedo value and thus reflects a lot of sunlight, provides significantly less ambient heat than, for example, a black roof with a low albedo value. This means that more light is reflected and thus both the surroundings and the car park itself heat up much less. A light colour on the roof, so-called „cool roofing“, thus also contributes to a sustainable concept.

Since multi-storey car parks are rarely used to full capacity, there is an opportunity to design free spaces in a sustainable way. For parking decks, i.e. the top floor of a multi-storey car park that can be used for additional parking spaces, photovoltaic systems are particularly suitable. If no parking deck is available, they can also be installed on the roof of the car park. On large outdoor parking spaces, roofing photovoltaic systems are a good option, which also protect the car from the sun or rain while it is parked. In some federal states, such as Baden-Württemberg, these are even compulsory from a certain size of parking facility and are subsidised by the state government. However, the installation of PV systems, especially in multi-storey car parks, where installation is not possible over as large an area as

in car parks, often entails some costs. Although these also generate money through the electricity generated, installation and operation can be a criterion for exclusion for economically minded operators if the available area is small. Installation is also made more difficult by the high bureaucratic and tax costs involved in setting up PV systems. In the future, however, politicians want to make this easier, which can also make the use of PV systems on parking facilities much more attractive.

There is also potential for savings during the use of a car park. When illuminating dark areas, the use of LED lamps can reduce both energy consumption and light pollution, which brings an additional positive aspect, also for wildlife. Savings in electrical energy as well as water supply can also increase the efficiency of the building and thus reduce operating costs at the same time. If certain sustainability requirements are met, funding can also be applied for, for example through the DGNB. Anyone who wants to plan or build a multi-storey car park can apply for this certifica-

tion from the DGNB. On the one hand, this leads to a sustainable concept and thus an image gain; on the other hand, the car park also becomes more attractive on the market. The DGNB's funding opportunities can thus represent an economic aspect in the development of a sustainable multi-storey car park. Requirements that a car park must fulfil for certification include:

- **A low carbon footprint**
- **The use of energy-efficient technologies**
- **Low costs in operation**
- **Deconstruction options**
- **Avoidance of building materials that are harmful to the environment and health**
- **Promotion of offers for sustainable mobility (e.g. in the form of e-charging stations)**

Source: DGNB

The decisive factor here is not only to design new buildings sustainably. In particular, existing car parks from the 1970s and 80s will soon reach the end of their economic life. As these are responsible for a large part of the emissions of multi-storey car parks, the modernisation and application of the described strategies to these existing properties represent a major challenge, but at the same time they also offer a great opportunity for the sustainability of the entire asset class.

On the other hand, increasing sustainability also poses risks for the operation of a car park. Above all, car-free zones, as they are emerging in more and more large cities, can have a major impact on the accessibility and utilisation of a multi-storey car park. There are already car-free city districts in Hamburg, Munich and Cologne. At the

moment, these zones are still limited to residential neighbourhoods, which are not necessarily the main location for car parks. But if politicians have their way, such zones could also increasingly be created in city centres in the future. In this case, the classic car parking garages would be exposed to a high risk of vacancy, which would increasingly lead to the consideration of new, alternative forms of use.

CONVENTIONAL CAR PARKS WILL HAVE A HARD TIME IN FUTURE

Primarily for reasons of sustainability, the old, unrefurbished car parks will find it difficult to achieve high occupancy rates in the future. But pure parking use is also not a concept with a future. For this reason, various possible uses should be considered when designing a multi-storey car park and the right concept determined.

The most popular alternative to classic parking at the moment is the use as mobility hubs. In this way, a multi-storey car park can be optimally used to park the car and, from this point, to use a public means of transport, but also car-sharing offers or bicycles. In this way, the car can be used for regions that are rather weak in terms of infrastructure, but in the cities the option of more sustainable means of transport can be used. In this way, the volume of traffic can be significantly reduced in these cities. In this case, the car park must have a good location, especially the proximity to public transport stops is crucial. The provision of bicycles or e-scooters within the car park is also essential for the mobility hub usage concept. In this way, car parks can earn money not only by parking cars, but also by providing alternatives, which makes mobility hubs in urban areas a popular secondary use not only because of their sustainability, but also because of their economic return. A good example of a sustainable system is offered by the city of Amsterdam:

here, users of mobility hubs receive discounts on their train ticket when they switch from car to public transport. So there are different ways to make this concept attractive for users as well as for operators.

The use of bicycles in particular plays a major role in the transport transition. However, the infrastructure in Germany, especially when it comes to bicycle parking, is still in need of improvement. According to the Federal Ministry of Transport, there is a shortage of around 1.5 million bicycle parking spaces, especially in large cities. Therefore, the construction of these parking spaces is to be funded with up to 110 million euros until 2026. The construction of these necessary parking spaces can take the form of so-called bicycle parking garages, in which only bicycles can be parked. However, it is also possible to use them in parallel with car parking. Since only very few multi-storey car parks achieve full capacity, there is often enough space in the existing multi-storey car parks for the construction of bicycle parking spaces.





Exhibition space of the Stilwerk in the former Kant garages in Berlin, Source: stilwerk KantGaragen

Another alternative is the use as a logistics hub as part of last-mile logistics. Here, goods can be temporarily stored on free floors of the multi-storey car park and later delivered to the customer. Especially because of their usually central location and good transport connections, multi-storey car parks are ideal for this use, which requires fast and efficient delivery of the goods. It is crucial that the entrances, exits and manoeuvring areas of the multi-storey car parks are large enough for trucks or vans to deliver the goods. For the delivery of smaller parcels, the use of cargo bicycles, for example, is also optimally possible, which can be parked in the multi-storey car park for this purpose.

Car parks offer more uses than just providing parking spaces. Secondary use is particularly crucial, as the third-party use of this asset class is limited. It may still be possible to use the existing spaces for storage or even logistics, but this would require closing the open sides of the conventional car parks. Residential and office use in existing multi-storey car parks is possible in isolated cases, but then only with a great deal of effort and high costs, among other things because the necessary insulation is lacking in multi-storey car parks, the floor height is insufficient and the requirements of the building codes of the respective countries are difficult to implement for other

asset classes. That conversion is nevertheless possible is shown by the Kant garages in Berlin: the high-rise garage built before the Second World War has been converted for several years. The existing space is used by „Stilwerk“, among others, for the exhibition of interior design and for gastronomy, but according to the company, a concept store or a bookshop are also possible in the future.

Provided they belong to a company, these can also be rebuilt at moderate cost when the company moves to a new location. In addition, an extension is possible at any time in case of increased parking space requirements. However, this concept only works with prefabricated components, which means

that the existing car parks, which are mostly made of concrete, are usually not suitable for this. Thus, if there is no third party use, the only option is usually to demolish the unused or uneconomical building.

RENTS AND COSTS: A-CITIES DOMINATE IN EARNINGS

As in other asset classes, the location is also decisive for the profitability of parking facilities. In inner-city locations, significantly higher rents and parking fees can be achieved than in peripheral locations with lower frequency. In addition, central locations have a higher occupancy rate and therefore usually represent a more worthwhile investment from an economic perspective. The size of the city also plays a major role for the rent level of the car park: in large cities, significantly higher rents per parking space can be generated than in smaller cities. This means that D-cities in particular have significantly lower parking space rents in comparison. The type of building is also decisive for the rent level: the average rental costs per parking space are higher in underground car parks than in above-ground car parks through-

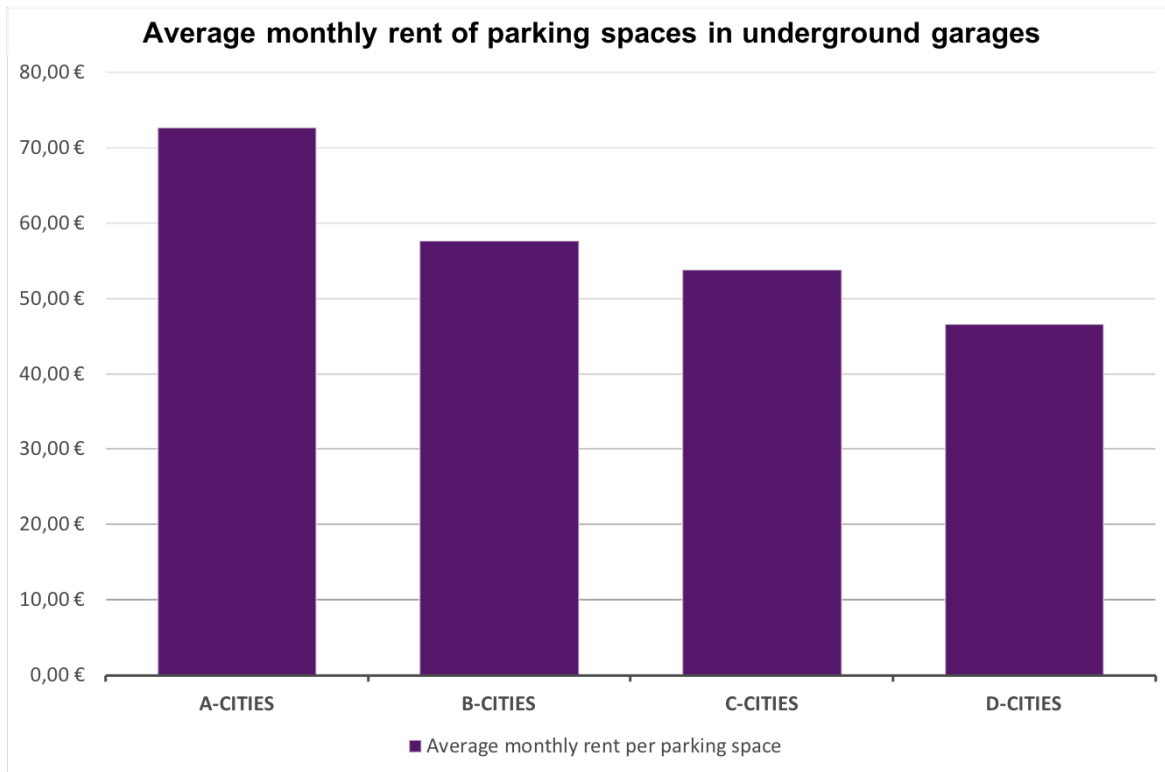
out Germany. Outdoor parking spaces have the lowest rents in comparison. The monthly rents for long-term parkers in various cities in Germany are shown below. For short-term parkers, comparable prices are charged in most cities, although these are normally calculated on an hourly basis and, depending on the location, range from one to ten euros per hour. For short-stay parkers, proximity to frequency drivers is also crucial. Car parks that belong to a shopping centre, for example, sometimes do not charge any additional parking fees. The operator, either public or private, can also have an impact on the amount of the parking fee, with public providers such as cities and municipalities usually charging slightly more favourable fees than private operators.



Source: DIWG

For above-ground car parks, B-cities have the highest rents with an average rent of €59.79 per parking space per month, followed by A-cities with €52.82 per parking space per month. While C-cities can still keep up with an average of €50.81 per parking

space, D-cities have a much lower rent of €32.48 per parking space. The situation is different for rents for underground parking spaces. Here, the A-cities have by far the highest average rents with a rent of €72.73 per parking space per month.



Source: DIWG

In D-cities, with an average of €46.65 per parking space, a significantly higher rent is charged for underground garages than for multi-storey car parks. Thus, the difference to B- and C-cities is also significantly smaller for underground garages. For this reason, underground garages can also be a worthwhile investment in small cities. It should be noted, however, that underground car parks are significantly more expensive to build than above-ground car parks, which is also reflected in the higher rents. The fact that parking

and thus also renting a parking space is often cheaper in small cities is reflected in the price ranges: the top rents for parking spaces in A and B cities are sometimes twice as high as in C and D cities. It is interesting that the rent ranges for underground car parks vary significantly more than for above-ground car parks: both the cheapest rents and the top rents are in some cases significantly above the level of car parks. The most expensive parking spaces surveyed by DIWG, up to €240 per month, are in Munich.

City categories	Rental range per parking space / month in above-ground car parks	Rental range per parking space / month in underground garages
A-cities	7.18 – 131.39€	20.00 – 240.00€
B-cities	7.43 – 158.53€	20.45 – 150.00€
C-cities	12.90 – 75.34€	18.46 – 90.87€
D-cities	5.08 – 58.28€	4.98 – 110.18€

Source: DIWG

Bicycle parking spaces, on the other hand, have only been rented out to a small extent so far. Therefore, only rents for bicycle parking spaces in A-cities could be investigated, which again illustrates the growth potential of this sector, especially in smaller cities. In A-cities, bicycle parking spaces cost an average of €10.56 per month. However, the range varies greatly here as well: for example, the cheapest parking space is only €2.92 per month, but the most expensive is €35.51. The rents that can be achieved are therefore quite attractive for potential investors. However, in addition to the high costs of land in central locations, the rising construction costs must also be taken into account, which can vary depending on the type of parking space. For example, the construction costs for underground car parks are significantly higher than for above-ground car parks. Depending on the parking space, costs of approx. 3,000 € (outdoor parking space) up to 40,000 € (mainly underground parking spaces) have to be calculated. Depending on the size, material and technical equipment, the construction costs also vary with

different parking facilities, making it difficult to give an exact cost figure for a parking space. However, it is not only the construction costs that must be taken into account when calculating the profitability of a multi-storey car park; the operating costs in particular should not be neglected. In the conventional car park concept, personnel costs in particular represented a large part of the operating costs. However, due to modern technology such as entry barriers or surveillance cameras, savings can often be made in terms of personnel, as security or cashier staff can be dispensed with. However, cleaning and maintenance still incur not inconsiderable personnel costs, especially in non-modernised parking facilities. Thus, these personnel costs continue to represent a large part of the operating costs in a multi-storey car park. However, other cost centres must also be taken into account in proper operation. These include, for example:

- **Energy costs (lighting, ventilation, heating)**
- **Insurance costs and fees**
- **Administrative costs**
- **Costs for operating resources**
- **Marketing costs**
- **Maintenance, repair, servicing**

These costs vary depending on size and equipment. For example, underground car parks usually incur higher operating costs than multi-storey car parks due to the necessary ventilation system and the greater amount of lighting required. The type of operation also has an impact on costs. In parking facilities with 15-hour operation, for example, personnel costs are lower than in facilities with 18-hour or 24-hour operation. In addition to personnel costs, rising energy costs in particular pose a challenge for car park operators in existing properties. In this case, new, energy-saving properties offer an interesting investment opportunity both due to their savings in personnel and in more efficient operation despite possibly higher construction costs. It is important not to consider these aspects only during opera-

tion, but to be aware of all future costs and risks already in the planning phase in order to enable successful and efficient car park operation.

TRANSACTIONS: FALLING YIELDS DETERMINE THE INVESTMENT MARKET

Car parks and multi-storey car parks represent a thoroughly interesting investment opportunity for investors. Insurance companies and pension funds in particular are among the largest investors in parking facilities on the institutional side. However, this asset class was also hit by the effects of the Corona pandemic, which is reflected in a declining transaction volume during the pandemic years. For parking facilities in the years 2020 to 2022, this was just 325 million € across Europe, a significant drop compared to the years before. The reason for this is also the low availability of space, which means that there have only been a few parking garage transactions in Germany in recent years. This also has to do with the declining yields: a few years ago, sales proceeds of 14 to 16 times the annual rent were the norm, thus guaranteeing high yields, but in recent years these have levelled off at four to five percent in good locations. Across Europe, they are still somewhat higher, averaging 5.25 % over the last three years, with a slight downward trend. This trend is likely to continue in the coming years. The main reasons for this are the rising construction costs and increased technical requirements for new car parks. For multi-storey car parks in need of refurbishment

or those in non-central locations, however, higher gross yields can be achieved due to the higher letting risk and the modernisation work to be carried out, despite currently high interest rates. However, since older car parks also have higher modernisation and maintenance costs, the net return on older car parks is usually lower than on new buildings. Nevertheless, new, modern car parks are much more popular with investors due to lower operating costs and higher occupancy rates, as are secondary-use car parks: in the last eight years, there have been three times more transactions for secondary-use car parks than for conventional car parks used only for the provision of car parking spaces. However, due to the still comparatively low operating costs compared to other asset classes, parking facilities can still represent an attractive investment, which is also reflected in the estimated turnover from parking in recent years, which was over one billion euros in 2021.



In addition to the location and frequency of the car park, the creditworthiness of the tenant is also of decisive importance for investors. Tenants and owners can either be private companies, but also the public sector in the form of cities or municipalities, which often have a higher credit rating. Public owners are responsible for a large part of the available space, estimated at up to 80 %. The respective owner rarely operates a multi-storey car park himself, but leases it to an external operator specialised in parking facilities. The market for operators in Germany is largely limited to the large providers, who have also joined forces in the Bundesverband Parken (Federal Parking Association).

Of the parking spaces available in Germany, a large share is accounted for by the seven largest operators. The largest operators are Apcoa and Contipark, followed by Q-Park. Each of the seven largest companies operates at least 20 car parks throughout Germany. In the case of Apcoa, which is the largest car park operator in the whole of Europe, the company is responsible for over 230,000 parking spaces throughout Germany. This offer is even to be expanded significantly by 2030, which shows that parking continues to be a functioning and, above all, economic business for already established operators. The reason for this is that

operators are generally allowed to set the parking fees themselves. Thus, prices can be adjusted at will depending on the market situation or capacity utilisation, even during a day. However, it is not uncommon for cities and municipalities to regulate parking prices, especially for short-term parking, as soon as they become too expensive in their view. This is especially the case with inner-city car parks, which can also affect adjacent retail if the fees are too high. It has been observed over the last few years that parking tariffs have not increased as much as ticket prices for public transport. This is another reason why parking can still be attractive for users. It is crucial that operators both follow current trends and developments and apply them to the car park in order to continue to guarantee a high level of customer satisfaction in the future and thus ensure the highest possible utilisation. In addition, possible laws and requirements of politics, especially with regard to traffic planning, should also be considered in the future before the purchase and operation of a multi-storey car park.



CONCLUSION

WITH THE RIGHT CONCEPT, PARKING FACILITIES REPRESENT AN ASSET CLASS WITH A FUTURE

The traffic turnaround and e-mobility will certainly influence the future of parking garages. Whether and to what extent the car will disappear from German cities remains to be seen. Despite the possible use of a wide range of alternatives, the demand for cars and thus also for parking remains high, at least in the short to medium term. A rapid decline in parking facilities is therefore not to be expected. Nevertheless, landlords and operators must increasingly think about the utilisation concept. Both the location, which has been a decisive criterion for the success of a multi-storey car park for years, and increasingly the appearance and equipment will be the most important aspects for high lettable in the future. Above all, secondary uses with mobility or logistics hubs, but also the thought of a future third-party use are decisive in the planning and design of new multi-storey car parks. For the majority of existing car parks from the 1970s, the next few years will be the decisive phase. This raises the question of whether a costly modernisation of these properties is still worthwhile in order to create a safe and sustainable parking facility in the future. If this is not the case, many of these concrete buildings could face demolition in the next few years. At the same time, however, this also offers the opportunity to build new, more sustainable properties and thus to create contemporary buildings in line with current developments that can guarantee a significantly higher occupancy rate. In order to maintain the supply of housing and also inner-city living, parking facilities in their various forms will continue to be indispensable. This asset class therefore remains interesting for investors. Even though yields have

declined somewhat over the years, they remain stable at five percent, even with high construction costs. If parking retains its importance or even regains it, yields may rise again in the future due to rising rents and higher occupancy rates, as multi-storey car parks will continue to be special properties for which there are only a few new buildings or transactions per year. However, there is also the risk that higher purchase price factors will be paid in the future due to the resulting competition, which in turn can also have a negative effect on the level of future returns. With the right concept, multi-storey car parks can still be an interesting asset class with a future for both users and operators. However, it is increasingly important to also consider political factors in the planning and operation of the property.



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