



# Defining asset class. Identifying potential.

Life sciences & tec real estate in Germany



# Life sciences & tec real estate as a growing subsector

The life sciences and technology industry in Germany has seen impressive growth in recent years, accelerated by the Covid 19 pandemic, demographic change and rising healthcare spending. In this context, the economic and social importance of health technologies has increasingly come to the fore and, as a result, is showing a direct impact on the real estate market.

In this report, Colliers International, one of the world's leading real estate service providers and investment managers, and the European Science Park Group, ESPG AG, show how much life sciences & tec real estate has attracted the interest and capital of investors in recent years. Life sciences & tec real estate is already an established sub-sector of the commercial real estate market in the US and now also offers attractive investment and utilisation opportunities in Europe, especially in Germany.

This report provides a conceptual framework for the German life sciences & tec real estate market. Our analysis of proprietary data taken from Colliers' confidential data base, demonstrates exceptional growth rates and surprising transaction volumes – over € 1.8 billion of investment transactions – in the last 5 years. The developing German market seems to be catching up fast, with stakeholders raising questions such as:

What defines a life sciences & tec real estate asset?

What are the key success factors?

Why is it valued differently from other property types?

Where is this new subsector heading?

## Research Approach: concept work, interview, and access to data

This report analyses the fundamentals of this emerging asset class, outlining the three main research fields covered and try to narrow down life sciences & tec real estate based on definitions established in the US and the UK. This will be followed by findings from a series of 14 in-depth interviews with a panel of market leading experts – 40 % of whom are investors and 35 % real estate developers – to gain qualitative insights into the German life sciences & tec real estate market. It will be complemented by a thorough analysis of the leasing and investment database collected by Colliers' Market Intelligence & Foresight.

We hope that this report provides valuable insight into the German life sciences & tec real estate market and helps to deepen the understanding of this fast-growing and socially highly relevant sector. We wish you an interesting read and would be pleased if you contact us with any suggestions or questions.



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# Executive summary

## 1. REMARKABLE GROWTH IN LIFE SCIENCES & TEC REAL ESTATE IN GERMANY

Our database of carefully selected transactions demonstrates a take-up of more than 1,000,000 m<sup>2</sup> since 2018. This is based on an increase in annual take-up from 179,300 m<sup>2</sup> in 2018 to 302,300 m<sup>2</sup> in 2022 – reflecting an average growth rate of 16 % per annum.

In the same period, sales transactions of life sciences & tec real estate of over € 1.8 billion were recorded, with over € 1.1 billion of investments in 2021 and 2022 alone. This corresponds to an annual growth rate of over 200 %.

It is not surprising that key market participants from our interviews agree that the German market for life sciences & tec real estate is poised for strong rental and capital value growth:

*“Firstly, the industries in which science & tec tenants operate are very different to typical office tenants. As a result, investing in life sciences & tec offers strong benefits of diversification. Secondly, the powerful growth in this sector drives leasing demand and hence rental growth, especially if compared to other asset classes. Thirdly, the sector is still early in its market cycle at both the rent level and the cap rate level, unlike all other markets.”*

— Andreas Höfner, Managing Director  
Garbe Institutional Capital GER

## 2. THE SUBSECTOR IS LARGER THAN JUST LIFE SCIENCES

Several trade bodies – such as the International Association of Science Parks (IASP) and the German Association of Innovation, Technology and Business Incubation Centres (BVIZ) – provide definitions of the life sciences & tec real estate subsector which sit alongside more conceptual work from the OECD, the World Bank and various academic sources. These definitions all share the observation: in addition to life sciences, other industries – like climate tec and digitalisation – are future drivers of innovation and progress. This is confirmed by a sectoral analysis of the leasing data and statements from interviews:

*“It makes more sense to talk about life sciences and tec because it allows a wider range of usage requirements to be recognised. Life sciences alone is too narrow as a definition to work with.”*

— Martin Czaja, Partner  
INBRIGHT Investment GmbH

## 3. TREND FOR LIFE SCIENCES & TEC REAL ESTATE TO BE LOCATED IN URBAN CENTRES

A third, surprising finding from our market research and data – confirmed by interviews – is that there is an increasing desire from tenants, users and investors for life sciences & tec real estate assets to be located at inner-city locations, closer to urban amenities. The data also supports the principle that users and tenants are willing to pay higher rents for convenient locations, given the profitability of the sector and the need to compete for talent. This somewhat reverses the trend observed for older science parks that were often located in out-of-town locations and smaller cities.

## 4. BUILDING LIFE SCIENCES & TEC REAL ESTATE IS AN EXPERT DOMAIN

Our analysis shows that at present, the number of investors and developers active in Germany is relatively small, and the challenges of building dedicated spaces are often hard to overcome. The complexity of life sciences & tec real estate requires a high degree of sophistication, and this presents challenges, especially for smaller developers. Possible solutions include labs being run via central services or landowners offering additional services. This adds to the perceived difficulties of converting existing space into life sciences & tec real estate:

*“When developing newly-built properties before the tenant has been identified, it is critical to anticipate the futures uses and their requirements. Once the core and shell of the building has been completed, it is very hard to adjust to specific user requirements.”*

— Nils Essing, Senior Portfoliomanager  
BEOS AG

# 1. Defining the life sciences & tec industries, and explaining why they are attractive for real estate investment



According to the World Bank and other entrepreneurial research centres, there is currently a trend towards a knowledge-based economy relying on science and research.<sup>1</sup> The 'innovation economy' is gradually replacing the service-oriented model that has been prevalent since the 1990s.<sup>2</sup> While the details of this new paradigm remain open in academic and professional research, the following three subsectors of innovation-driven industries can be broadly defined.

## 1.1 LIFE SCIENCES AND MEDICAL TECHNOLOGY

The key focus of this report concerns the life sciences and medical technology sector, which can be defined as 'every technology or application that touches the human body or seeks to improve its condition'. Although this is a very broad concept, this does not include individual healthcare.<sup>3</sup>

The life sciences sector has seen strong growth over the last few years due to a unique combination of supply and demand. The ongoing evolution of treatments – driven by breakthroughs in medical research – is coupled with an ever-growing need for care, due to our ageing population and the rise of 'diseases of civilisation' such as diabetes, cancer and heart conditions.

The biotech industry is the source of many of the ground-breaking discoveries that have led to today's innovative medical drugs and therapies. Medical technology and e-health are other areas of exceptional growth.

## 1.2 CLIMATE CHANGE INVESTMENT AND CLEAN TECHNOLOGY

The second main research and development focus in today's science is 'climate change investment', 'clean tec' or 'climate tec'. This field is sector-agnostic and includes:<sup>4</sup>

- Applications that directly reduce or remove carbon emissions (net zero carbon impact)
- Any technology designed to help us adapt to the impacts of climate change
- Research that improves our understanding of the climate and its evolution

Climate change investment aims to use all resources more efficiently, optimising waste recycling and generally moving towards a circular economy. Clean tec is mostly found in industrial settings, and encompasses a variety of sectors, including transportation and logistics, energy and power, agriculture and food, materials and chemicals, and resources and the environment.<sup>5</sup> Investment in climate change initiatives also has many links with life sciences – including air purification strategies to reduce the human impact – and digitalisation.

## 1.3 DIGITAL TRANSFORMATION AND LIFELONG LEARNING

Digitalisation is the third pillar of research and development in Europe, outpacing healthcare since 2018.<sup>6</sup> According to McKinsey, embracing digital transformation is necessary to keep a competitive edge,<sup>7</sup> and this is also being recognised by investors, who are now seeking out ground-breaking information and communication technologies.<sup>8</sup> In Europe, most organisations have already recognised the value of digitalisation, with around 61 % of businesses encompassing digital technologies into their day-to-day operations. However, this number has barely increased since 2019, leaving room for stronger development in the years to come.<sup>9</sup>

1. World Bank. 2022. *Business Enabling Environment (BEE) Concept Note*  
 2. Innovation. OECD Centre for Entrepreneurship. [www.oecd.org/innovation](http://www.oecd.org/innovation)  
 3. Kafarski, P. 2012. Rainbow code of biotechnology. *Chemik*, 66(8), 811–816  
 4. PWC, *Climate Change Order of Play 2021*  
 5. Agarwal, N. 2022. *What really is Cleantech investing? Felix. Issue 1790* [www.felixonline.co.uk/issue/1790/investment/what-really-is-cleantech-investing](http://www.felixonline.co.uk/issue/1790/investment/what-really-is-cleantech-investing)  
 6. ULI. 2022. *Understanding the Life Sciences Sector*, page 32  
 7. Bérubé, V. et al. 2022. *It's time to become a digital investing organization. McKinsey & Company.* <https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/its-time-to-become-a-digital-investing-organization>  
 8. Caon, V. 2022. *FDI drivers in 2022: Digitalisation. Investment Monitor.* [www.investmentmonitor.ai/investment-promotion/fdi-drivers-2022-digitalisation-covid](http://www.investmentmonitor.ai/investment-promotion/fdi-drivers-2022-digitalisation-covid)  
 9. European Investment Bank. 2022. *Digitalisation in Europe 2021-2022: Evidence from the EIB Investment Survey.* [www.eib.org/attachments/publications/digitalisation\\_in\\_europe\\_2021\\_2022\\_en.pdf](http://www.eib.org/attachments/publications/digitalisation_in_europe_2021_2022_en.pdf)

## 2. What criteria define life sciences & tec real estate?

Life sciences & tec real estate is defined differently by consultants and researchers. Therefore, to identify this subsector, the findings of the ESPG Group's extensive research as well as the expert interviews conducted are used. These can be assigned to four thematic complexes and comprise different criteria - including location, specialised space, prevailing technologies and tenant retention. In this report, a property must meet three of these criteria, in particular the "dedicated spaces" requirement, to qualify as life sciences & tec real estate.



## 2.1 LOCATION CLOSE TO UNIVERSITY OR RESEARCH INSTITUTES

Competition for talent is the key driver when choosing the location. Most of today's experts in the scientific and technological fields are between 30–40 years old, and therefore they are often already settled, with family and friends binding them to a certain location. Given the dynamics of the labour market for these specialists, there is simply no need for them to move to find work, as their expertise is valued everywhere. As a result, the most desirable locations for life sciences & tec real estate are located near talent pools, ranging from major agglomerations to mid-market locations. In Germany, the hotspots of life sciences & tec real estate are major metropolitan areas, as well as mid-sized university cities – such as Heidelberg, Mainz, Augsburg and Potsdam – which combine the advantages of being close to world-leading research centres with the benefits of being part of an urban cluster.

Our interviews, as well as the leasing data, have confirmed this trend; major metropolitan cities like Munich, Berlin and Hamburg are presented as strong life sciences locations. It would also appear that tenants and users are willing – or forced – to absorb the higher cost of these locations, as they strive to win the competition for talent and access.

## 2.2 DEDICATED SPACES

Most research and innovation require dedicated, specialised facilities that are designed and fitted out to suit experimental requirements. Such laboratories come in different forms:

- **Chemical labs** – these labs mostly use inorganic substances and conduct all forms of procedures, including heating, cooling, distillation, etc.
- **Biological labs** – in these facilities, organic matter is analysed and modified, and research is conducted, often using a microscopic or biotech approach
- **Physical and engineering labs** – these labs often feature cleanrooms, testing chambers or tracks

### Typical features of dedicated life sciences & tec spaces

Examples:

Flexibility of floor plates, depending on the type of use. For example, research spaces range from 300 m<sup>2</sup> (lab office) to 800 m<sup>2</sup> (production), and can be even smaller for clean rooms or biotech applications

Floors with high load-bearing capacity (5 kN/m<sup>2</sup> to 10 kN/m<sup>2</sup>)

Ventilation (air to be exchanged at least eight times per hour for S2 labs)

Floor to ceiling height of between 3.5 m (lab office) and 6.0 m (production)

Large walk-in ventilation shafts with an axle grid of 1.25 m or more

Heavy-duty freight elevators (e.g., for transporting laboratory equipment)

Special connector and piping systems (e.g., for technical gases)

Delivery options (e.g., space for delivery vehicles)

Hazardous waste disposal facilities (e.g., for hazardous substances)

Please note that the specifications of a laboratory depend on its biological safety level (BSL 1 to 4), as well as adherence to safety standards defined for example by the Genetic Engineering Safety Ordinance (GenTSV) or the Hazardous Substances Ordinance (GefStoffV). For cleanrooms, ISO classifications define the amount of particles permitted per cubic metre of air, ranging from ISO 1 to ISO 9), as do US FED STD 209E and the EU GMP classification system. In addition, there are industry-specific standards in Germany, for example to define permitted radiation levels and regulate dust, smoke and noise emissions.

Dedicated spaces often serve different applications and can be shared between multiple departments of a company or university, or even across several entities. Sometimes these facilities are housed in a separate building at the

centre of the campus, where they can be easily accessed by the surrounding tenant businesses. The best example is the European Organisation for Nuclear Research (CERN) – located near Geneva in Switzerland – which is the birthplace of major innovations such as the Large Hadron Collider and the world wide web.<sup>10</sup>

According to findings from the interviews conducted for this report, what matters most to life sciences & tec real estate users, tenants and stakeholders is that the dedicated research space attracts and retains science companies and their industrial partners at that location, driven by the pool of human talent available.<sup>11</sup> In a sense, not unlike consumer stationary retail property, these dedicated spaces act as a 'functional anchor' for a life sciences & tec hub.

## 2.3 DOMINANT TECHNOLOGIES AND CAMPUS FEELING

Clustering companies that specialise in similar technologies or fields of research allows ideas to be shared and promotes collaboration, which can significantly speed up scientific breakthroughs.<sup>12</sup>

This concentration of inter-related industries within a science park can take various forms, with the most traditional layout being a campus of multiple buildings centred around a university, science institute, or private research facility.<sup>13</sup> This structure can be seen in the older science parks in Germany, such as the oldest science park in Adlershof.<sup>14</sup>

A second model is a cluster housing several companies dedicated to the same – or related – research or technological field. This could be a facility specialising in production of batteries for electric vehicles (EVs) next to a company where EV navigation is developed. An example for this can be found in Ulm, Bavaria where there are four thematic science "parks" located in a "City of Science".<sup>15</sup>

An individual building can even qualify as a science park if it exhibits a rich diversity of tenants and a spirit of cooperation. These are often a result of land or buildings being gifted to research by a sponsor, or a situation where innovative property developers offer accommodation to life sciences & tec tenants who cannot find space elsewhere.<sup>16</sup>

## 2.4 'STICKY' TENANTS

The final criteria for life sciences & tec real estate is 'sticky tenants'. This concept groups several other, qualitative criteria that cause tenants to become established and stay beyond their initial lease term, often keeping renewing their contracts.<sup>17</sup> This willingness to put down roots is, at least in part, due to the requirement to obtain local, specialist permits before experiments can begin – a time- and cost-intensive process that makes relocating less attractive.<sup>18</sup>

Supply chain security is another important factor that contributes to long-term tenants. Even before the disruptions caused by the lockdowns in response to the COVID-19 pandemic, establishing a supply chain and a suite of necessary services – such as remote testing of samples – could be complicated and made the relocation process less appealing.

Finally, access to local talent makes it beneficial for companies to stay close to the universities where graduates come from. This is often amplified by the business development networks established by local councils, cities, and communities.<sup>19</sup> Fundamentally, a lot of these considerations are signs of managing tight supplies of suitable spaces – making tenants "sticky".

10. McPherson, S.S. 2009. *Tim Berners-Lee: Inventor of the World Wide Web*. Twenty-First Century Books. ISBN 978-0-8225-7273-2.

11. Concrete examples can be found in ESPG's portfolio ([www.espg.space/science-parks](http://www.espg.space/science-parks)). E.g. 100m<sup>2</sup> cleanroom drives demands for 4,000 m<sup>2</sup> LST RE asset that forms an integrated ecosystem around the clean room.

12. European innovation ecosystems. European Innovation Council and SMEs Executive Agency (EISMEA). [www.eisMEA.ec.europa.eu/programmes/european-innovation-ecosystems\\_en](http://www.eisMEA.ec.europa.eu/programmes/european-innovation-ecosystems_en).

13. Fernández, C.R. 2022. Here are 10 of the hottest biotech hubs in Europe. [www.labiotech.eu/best-biotech/10-biotech-hubs-europe](http://www.labiotech.eu/best-biotech/10-biotech-hubs-europe).

14. Other examples are the four science parks in Ulm ([english.ulm.de/0/economy-and-science/science-city](http://english.ulm.de/0/economy-and-science/science-city)) and the Biotech Park Berlin-Buch ([www.campusberlinbuch.de/en/biotechpark-zahlen](http://www.campusberlinbuch.de/en/biotechpark-zahlen)).

15. See for example the Science Park II in Ulm Science City, Germany.

16. See for example the Gräfeljing Life Science Centre, which is literally an overflow facility of the Martinsried life sciences campus ([www.bi.mpg.de/campus](http://www.bi.mpg.de/campus)) with tenants coming from the IZB Innovation and Gründerzentrum Biotechnologie in the Munich area.

17. Thompson, C. 2014. *Designing for the life sciences: the epistemology of elite life sciences real estate*. *Tecnocienza: Italian Journal of Science & Technology Studies*, 5(2), 43–58. ISSN 2038–3460.

18. Examples are scientific permits under Federal Radiation law (BStrahSchG), Federal Disease Control laws (BSeuchSchG) and local operating permits that require a 'fit and proper' test of the manager in charge (*persoenliche Eignung nach GewO*).

19. Examples of local business development networks: BioRiver. 2022. *Biotechnology and life sciences in the Rhineland metropolitan region*. [www.bioriver.de/](http://www.bioriver.de/).

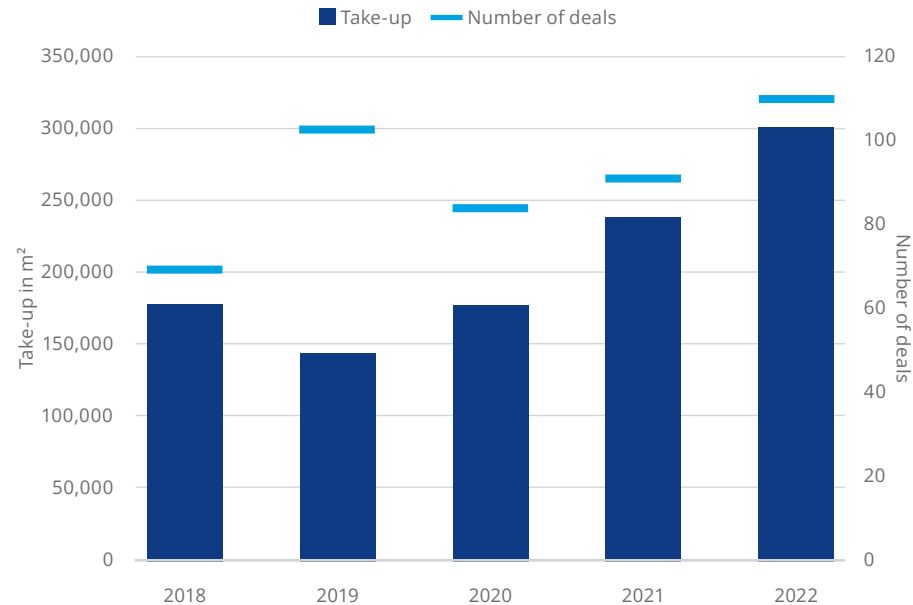
# 3. Analysing the life sciences & tec leasing and investment market

The data analysis of Colliers' proprietary database shows a strong increase in rental contracts in life sciences & tec real estate leases for the period between 2018 and 2022 (Figure 2). In the past five years, an average take-up of around 209,000 m<sup>2</sup> per year has been recorded in Germany – a total of more than 1,000,000 m<sup>2</sup> since 2018. In 2022 alone, 302,000 m<sup>2</sup> of take-up was recorded, an increase of 70 % compared to 2018, and the highest result in Germany to date.

Less than half of the leasing deals were in existing properties; the majority took place in project developments and recently completed or refurbished properties, indicating a strong excess demand (Figure 3). Based on this trend, project developments are forecast to be the primary driver of take-up in the coming years. In the three-year period from 2023 to 2025, around 330,000 m<sup>2</sup> of new life sciences & tec real estate is expected to be launched on the market and, if demand dynamics continue, supply shortages might arise.

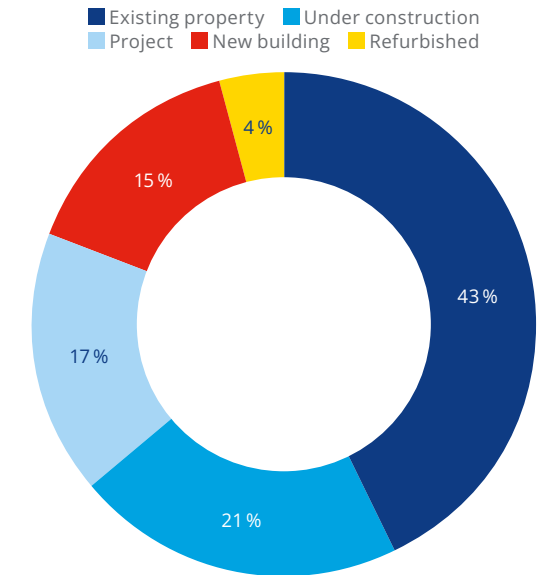
In Germany, the majority of life sciences & tec lease agreements are signed for properties located in the seven largest cities and their respective surrounding areas. The metropolitan areas of Munich, Berlin, Frankfurt and Hamburg are the prime areas for life sciences & tec real estate, while Düsseldorf, Cologne and Stuttgart have been recording notable rentals since 2021. In addition, university cities such as Leipzig, Heidelberg and Mainz are increasingly the focal points of leasing activities (Figure 3), while well-known research locations such as Aachen are not yet so strongly reflected by the statistics.

FIGURE 2  
TAKE-UP AND NUMBER OF LIFE SCIENCES & TEC DEALS IN GERMANY (2018 – 2022)



Source: Colliers Market Intelligence & Foresight

FIGURE 3  
ASSET TYPES FOR LIFE SCIENCES & TEC REAL ESTATE TAKE-UP IN GERMANY BY PROPERTY TYPE (2018 – 2022)



Source: Colliers Market Intelligence & Foresight

### 3.1 THE COMPLEXITY OF LIFE SCIENCES & TEC REAL ESTATE REQUIRES PLANNING AND FORESIGHT

#### Locations close to the city centre are more attractive than out of town regions

The geographical distribution of life sciences & tec agreements registered in Colliers' data base supports the assumption that proximity to research institutions and universities is decisive for the choice of location of life sciences & tec real estate (Figure 4). On the one hand, there are a larger number of start-ups and spin-offs here due to better networking opportunities and incubator programmes and, on the other hand, employee acquisition is essential, especially for this highly specialised industry. Accordingly, an existing cluster offers added value from the user's point of view but is not decisive due to the general shortage of space in this segment. While conventional business parks have, until now, often been found on greenfield sites outside the city, life sciences & tec users are signalling their desire for urbanisation and representativeness. In addition to a good transport and logistics infrastructure, good urban connections are also required.

*“Life sciences clusters are mostly located outside the city limits. But many users don't want a peripheral location – they actually want to be situated in the inner city.”*

— Toğrul Günden, Managing Director  
Driven Investment

#### Individual requirement profiles are characterised by the heterogeneity of the industry

Companies have a wide range of space requirements, due to the heterogeneity of the user group and the wide range of research and activities in the life sciences & tec sector. The ideal life sciences & tec real estate is a building that is as fundamentally designed and built to be as flexible as possible. Ideally, it can still be adjusted during ongoing operation, and even during the construction period itself. Speculative project developments in particular may see this as a challenge due to a lack of standardisation in construction. Therefore, “build-to-suit” (BTS) real estate is still the norm due to uncertainties in speculative construction.

A feature unique to the life sciences & tec sector is its growth dynamics. There is a comparatively high probability that a life sciences & tec company will be successful, and therefore need space for rapid expansion. In this case, the ability to develop and grow within a property or plot of land is an essential criterion for future project developments.

*“Unlike offices, the requirements for life science properties are changing frequently. As a result, developing life sciences & tec properties requires detailed planning and long-term foresight.”*

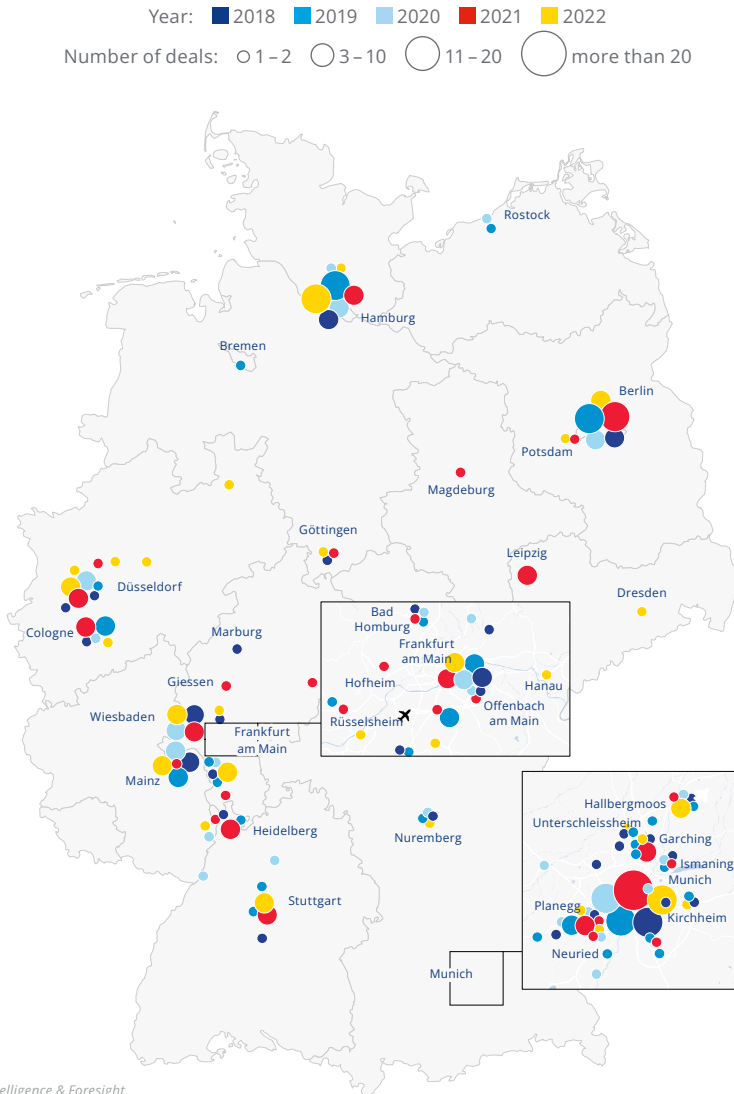
— Carsten Müller, Managing Director and Principal  
Karrié Projektentwicklung

To bridge these space requirements, which have a very short lead time, multi-tenant properties are ideal for co-working, co-lab and other collaboration purposes. Firstly, they satisfy the demand for small-scale space and, secondly, they offer proximity to an existing network. However, data protection is a risk factor that must be taken into account when it comes to collaborative working, especially with highly specialised products and patented research.



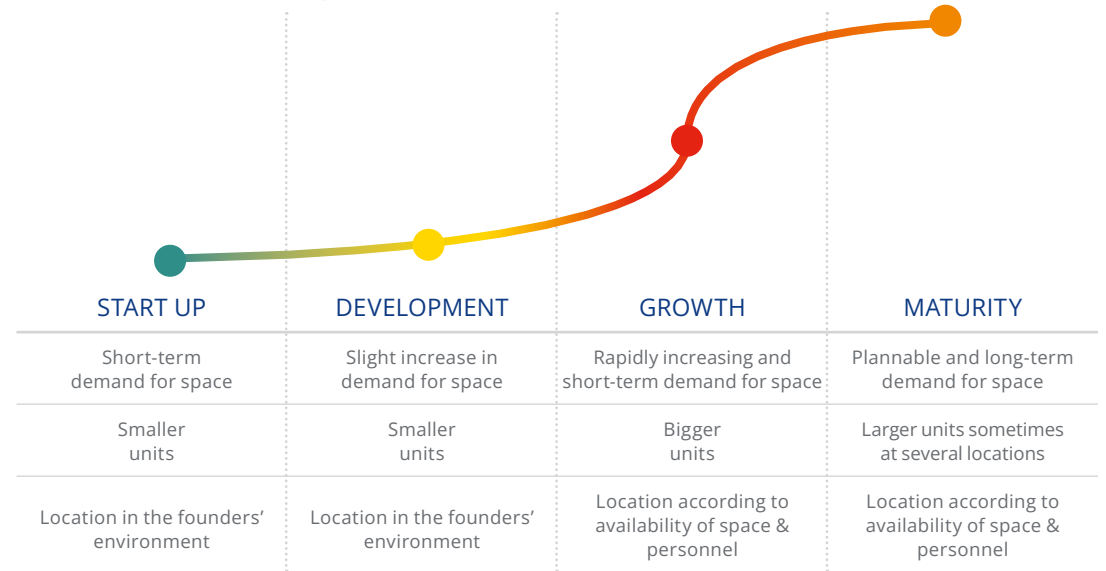


FIGURE 4  
**LOCATION MAP OF LIFE SCIENCES & TEC REAL ESTATE TAKE-UP IN GERMANY (2018–2022)**



Source: Colliers Market Intelligence & Foresight

FIGURE 5  
**SPACE REQUIREMENTS OF LIFE SCIENCES & TEC REAL ESTATE**



Source: Colliers Market Intelligence & Foresight

**Lease properties reflect the desire for maximum flexibility**

Rental price levels within the life sciences & tec segment reflect the high construction and investment costs, in addition to the value of the property. Here, it is important to distinguish between the standard real estate rent and surplus rents to pay for bespoke fit outs over the course of the contract. The latter come to play if the owner or developer considers tenant-specific fixtures beyond the basic fit-out, and it is often difficult to define these in advance. In addition, for a life sciences & tec tenant, service charge, utilities and operating costs are more significant due to the higher energy consumption. In this context, adherence to environmental, social and governance (ESG) approaches and the inclusion of smart building components are particularly attractive for this user group.

Lease terms in the life sciences & tec real estate sector are often dependent on the phase of development of

the respective company (Figure 5). While start-ups are increasingly demanding small spaces and short-term leases, lease terms for companies in the growth and maturity phase are often longer than average. This is mainly due to the high investment costs and the resulting immobility of the tenant (“sticky tenants”, as described in chapter 2.4), and this is additionally reinforced by the limited availability of labour.

Tenant incentives are comparatively rare in this segment, because – especially in the case of special purpose properties – the rule is that flexibility and incentives are mutually exclusive. In this segment, particular attention continues to be paid to space efficiency, i.e., a good ratio of net rental area to gross floor area. On the one hand, wider shafts and extended technical areas are not available as rental space, while, on the other hand, laboratory areas often have deeper floor plans and more favorable volumes of the built environment.

### 3.2 A NICHE MARKET WITH GREAT GROWTH POTENTIAL

#### Small and mid-scale market segment due immature asset class

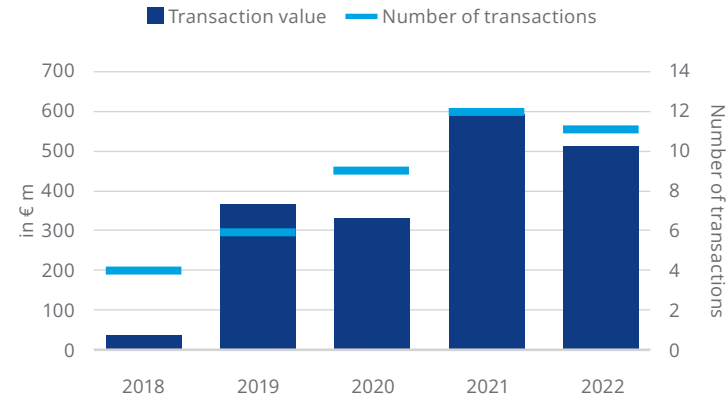
Positive trends in demand and capital raised during recent years suggests an increasing size of the life sciences & tec asset class in the near future. A similar development was observed in the logistics market in the early 2010s – when positive fundamental demand trends led to a steady increase in investor appetite – and the sector has since become firmly established in investment portfolios.

Germany is in an early stage of market development for life sciences & tec real estate investments. The cumulative value of investment transactions in this segment, including land purchases, amounted to more than € 1.8 billion over the last five years. The market share of the total German trade in commercial real estate has averaged 0.6% since 2018. It can be observed that this share has remained stable at 1% since the onset of a recognisable dynamic growth phase in 2020 and 2021 (Figure 6). Moreover, the high user-driven growth dynamics are limited by product shortages, a trend that is typical for special purpose properties in this early development phase. In fact, only 15% of identified land purchases fall within the life sciences & tec real estate market, indicating that only a small number of highly specialised project developers are driving professionalisation in this niche segment.

The value distribution of the life sciences & tec real estate assets traded so far highlights the fragmentation of the segment. More than two thirds of deals have a property valuation of less than € 50 million, and properties in the category from € 100 million upwards do not feature significantly. The largest transaction between 2018 and 2022 was the purchase of a property known as ‘The Rocks’ at Campus Boulevard 30, in Aachen, for € 124 million (Figure 7).

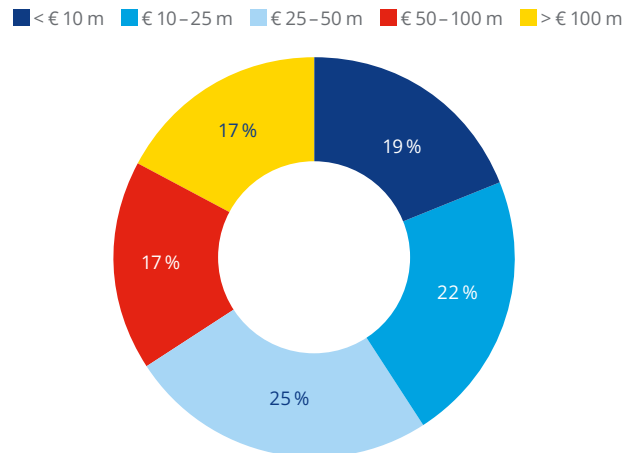
From a geographical point of view, the market for investors remains concentrated to the Big Three Science Cities (Munich, Berlin, Hamburg), despite an increase in transactions outside the three top markets over the last two years (Figure 8). The commitment to science clusters with proximity to relevant educational and research institutions also determines the allocation of current projects.

FIGURE 6  
LIFE SCIENCES & TEC INVESTMENT TRANSACTIONS IN GERMANY (2018 – 2022)



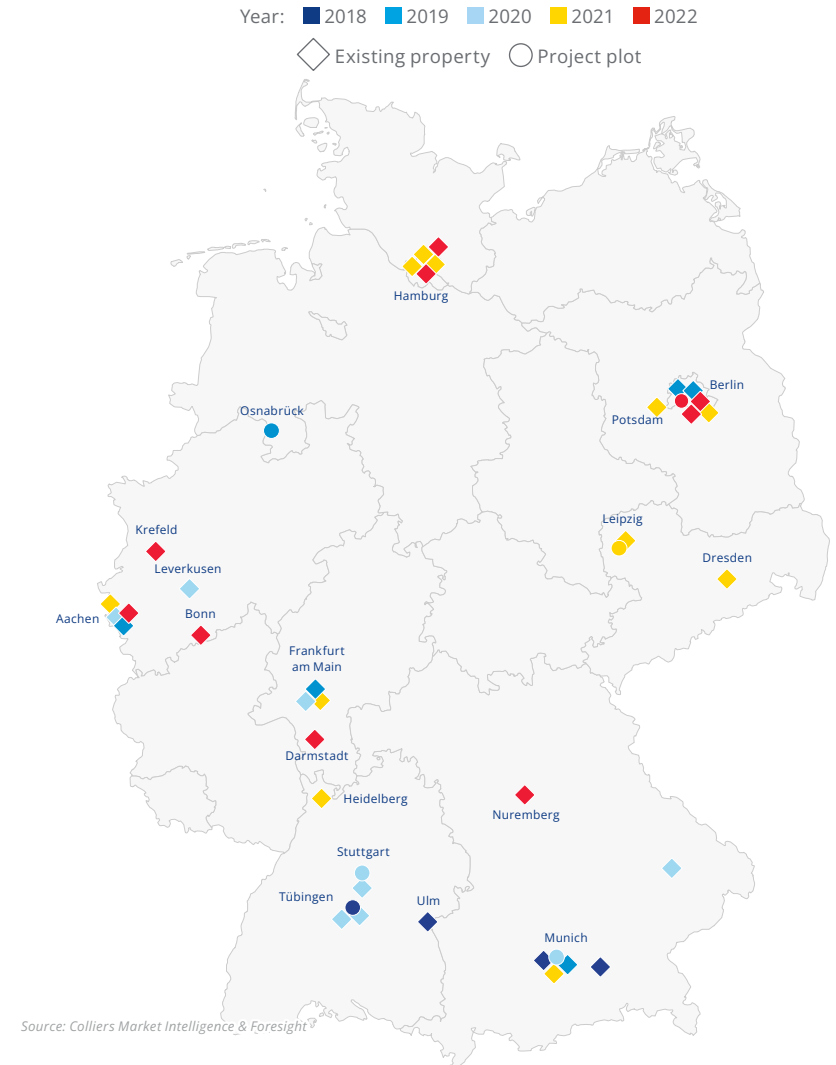
Source: Colliers Market Intelligence & Foresight

FIGURE 7  
LIFE SCIENCES & TEC INVESTMENT TRANSACTIONS BY VOLUME CATEGORY (2018 – 2022)



Source: Colliers Market Intelligence & Foresight

FIGURE 8  
LIFE SCIENCES & TEC REAL ESTATE TRANSACTIONS AND SELECTED LAND ACQUISITIONS (2018 – 2022)



Source: Colliers Market Intelligence & Foresight



### 3.3 ATTRACTIVE RISK-RETURN PROFILE FOR A BROAD SPECTRUM OF INVESTORS

#### Sustainable growth momentum outweighs the risk of project failure

In view of the specific user clientele, as well as the special building typology and its preferred location, life sciences & tec real estate is a new category of property that is attractive to institutional investors as a portfolio diversifier. Due to the limited product offering, the asset class is particularly suitable as an investment that complements other research-intensive tec properties. Conversely, the diversity of life sciences & tec real estate implies they offer an attractive risk-return profile for all types of investors.

The growing tendency of corporations to select renting over acquiring property increases demand in this market, progressively attracting specialised project developers and investors. The risk of individual tenants failing after a short time is reduced for the developer and owner due to the growth dynamics of the industry, the excess demand – especially within established clusters – and the high level of commitment of users to their space, which they have usually demonstrated out of pocket or with subsidy funds.

*“Over time, you can accompany the tenant through different stages. We do believe that we will achieve a very high level of tenant or customer loyalty.”*

— F. Albrecht Graf von Pfeil, Managing Director  
J. Molitor Immobilien

#### Core product with a favourable risk-return profile

Properties in the project development stage are characterised by high ESG and new work conformity markings. Many projects are well integrated into the urban development plans and have sound infrastructure, such as the FUHUB and HYBRICK developments in Berlin, the Life Science Centre in Gräfelfing – near Munich – and the Innovation Park in Mainz. In most cases, these buildings are integrated into campus or mixed-use district structures. These types of properties are usually only available in dynamically growing cities characterised by innovative research landscapes. The quality of the environment is key for attracting employees. Due to the real estate and location qualities, newer existing properties and projects in particular can be classified as core products.

The quality of a building – as well as its location – enables landlords to charge significantly higher rents to life science and tec companies, especially since the cost of occupation represents a relatively small part of the total expenses of fast-growing life science businesses. Due to the higher potential for risk, however, a higher return is to be expected, which strongly depends on the type of use of the property.

*“Life sciences & tec properties cover a wide range of building types and user applications. That’s why it is difficult to talk universally about rental values and capitalisation yields for this submarket.”*

— Nils Essing, Senior Portfolio Manager  
BEOS AG

#### Lab on demand – a catalyst for users, investors and financiers

Market development profiles from the USA show that shared lab spaces play an important catalytic role in the development of life sciences & tec properties that are attractive investments. Concepts similar to co-working spaces are still at the beginning of their market expansion in Germany and include the Life Science Factory in Göttingen as well as the BioLab in Heidelberg. Highly specialised developers who build these science parks used high initial investments to provide services tailored to research activities, generating rental income to cover their costs. Even extremely cost-sensitive start-ups can usually afford to rent these spaces, as co-labs close a supply gap in the segment below 300 m<sup>2</sup>. Further advantages of co-labs include flexible lease terms, which enable the user to quickly terminate the lease in the absence of research success or depending on short-term funding periods. Long-term rental by shared lab spaces on part of the space in life sciences & tec properties, on the other hand, ensure that the project developer or investor achieves the pre-letting quota or occupancy rate required to obtain debt financing, which is difficult to achieve due to the short lead times of typical rental applications in the industry.

*“For us, what co-lab suppliers do is a complementary building block for our concept. That’s another business, so you have to go extremely deep into laboratory operations.”*

— Moritz Kränkl, Manager Underwriting & Development  
Investa Real Estate

#### Redevelopment of obsolete commercial properties and locations – possible, but...

*“... a conversion does not always work; I would say that it works rarely, rather than frequently.”*

— Jurij Kuzema, Investment Analyst  
TSC Real Estate Germany

The functional mix of laboratory space with established types of use – particularly office and light industrial uses – raises the question of whether conversions of commercial real estate into life sciences & tec real estate are suitable, especially in secondary locations or business parks. The specific construction requirements of specialised laboratories – such as ceiling height, load capacity, room depth or the design of supply shafts – sometimes mean that the only way to integrate lab areas into existing buildings is through building new extensions or additional storeys. In terms of building law, the integration of production units could become problematic in purely commercial areas, and this would require at least a designation as a mixed-use area. Similarly, office uses become possible on a larger scale, which are otherwise not permitted in purely commercial or industrial areas. A successful conversion of a single use building to a mixed designation development can therefore achieve higher usage densities and rents than with the previous use. Factors limiting successful conversions include the location requirements for cluster proximity and an attractive urban environment, both of which are not usually present in many restructuring areas.

# 4. Perspectives beyond 2023 – is Germany catching up on the global growth trend?

The strong growth in life sciences & tec real estate transactions and leasing volumes in Germany since 2018 contrasts with the development in conventional office markets. This positive trend puts Germany on the map of more established life sciences & tec markets alongside the UK, France and even the US. Thanks to Germany's regional and decentralised structure, the high number of innovative engineering-focused companies have a good starting point to excel in areas such as medical technology, climate change solutions and digital healthcare. The importance of the life sciences & tec sector as an area for business growth and development has been recognised at local and regional levels since the COVID-19 pandemic, laying the framework for funding opportunities and expansion of companies in this sector. Real estate development is expected to continue to progress in the coming years to further support growth in this industry.

While the current market is still relatively small, our interviews have shown a strong drive by all players to innovate and grow the life sciences & tec sector. Life sciences & tec real estate offers a significant opportunity to diversify investment portfolios, and therefore this asset class can be expected to experience further growth in the years ahead. As a result, private market players will become increasingly active in a market segment that, until recently, was dominated to a large extent by local and regional economic development agencies and public institutions. The associated increase in market transparency, as well as standardisation of requirements and increased liquidity on the investment market, will further support this development, and may lead to a self-reinforcing cycle. In the medium term, the sector is expected to establish itself as a sought-after independent property type on the institutional investment market.



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## ABOUT ESPG AG

The European Science Park Group (ESPG) is a real estate company specialising in science parks. The company focuses on the development of science parks, predominantly characterised by tenants from future-oriented industries such as life sciences, green technologies or digital transformation, which benefit from the proximity to each other and the direct vicinity to universities, hospitals or research locations. ESPG's portfolio already includes 16 science parks across Europe with a total area of 126,000 m<sup>2</sup> and a balance sheet value of € 250 million. The sites are generally located outside the metropolises, in areas that are considered science clusters or have a high concentration of innovative companies.



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