

Life Sciences: Trends & Outlook





Global & UK trends

What are the future prospects?

It would not be an understatement to say a lot has happened in this space since the previous report from last March. Even before the global pandemic, the level of interest in life science-related real estate was rising significantly. The global pandemic has increased this level and focussed attention on the role of life science companies. Real estate investors have been asking many more questions and requiring more data points and knowledge during the past nine months. Our clients want to understand who is doing what. Our 'company list' of 2,134 life science-related capital raises, above £10m, across the globe in 2020, gives us the answers. Additionally, the 444 transactions we've seen above the £100m level provides fascinating insight for us in terms of the key future 'major players'.

2020 saw just over US\$620 billion of life science-related corporate deals, including M&A, IPOs, Venture Capital (VC) and private equity injections. 63% of the 2020 total was for US-headquartered companies, which is in-line with the five-year average. Any change

in past share by country is being driven by China, which accounted for a 7% share in 2020, up from 4% during the past five years. Biotechnology IPOs in Hong Kong surged in 2020, and the city has the aspiration to be the world's largest biotech fundraising centre by 2025.

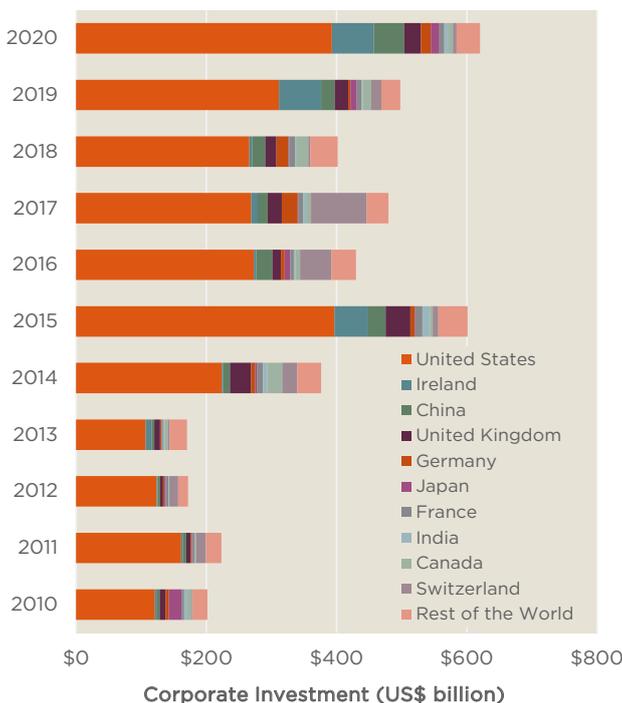
The message from Savills to all of the developers, investors and landlords during the past nine months is that the real estate impact is not just laboratories. In the US during the past five years, for example, inward foreign direct investment in the biotechnology sector is around a third 'sales, marketing & support', a quarter R&D and a fifth for both manufacturing and corporate headquarters. In terms of location, the Greater Boston Area dominates inward investment driven by the strength of its life science cluster. This strength is perpetuated by the need to be close to like-minded companies and the potential for collaboration and also being home to "the most innovative square mile on the planet". The West Coast is

also dominant and as covered in this report on page 9, San Diego is growing even faster supported by Southern California's Biotech Beach area.

There remain clear opportunities in Europe for investors. It is very difficult, in any real estate market, to have an exact idea of the size of the whole market in terms of physical space and also value. However, Savills have created a view for both the size and value of the life science (including technology parks) real estate market in the UK and Europe. In terms of physical size, there is approximately 425 million sq ft (39.5m sq m) of floorspace. In terms of value, using a blended rental level and capitalisation rate, Savills would estimate that the relevant real estate, to this sector, is worth £287bn (US\$386bn; €319bn). The life science real estate sector has certainly appeared on investors' 'radar screens' as the importance of life sciences came to the fore, but also the attraction of the ability for the life sciences-related occupiers to continue working during

The US continues to dominate life science corporate investment volumes

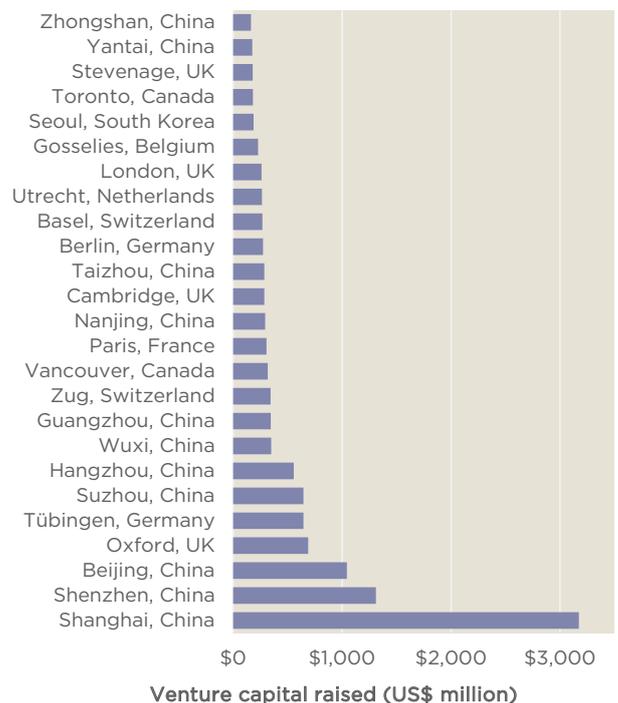
This includes M&A, IPO, venture capital and private equity deals (US\$bn)



Source PitchBook, Savills

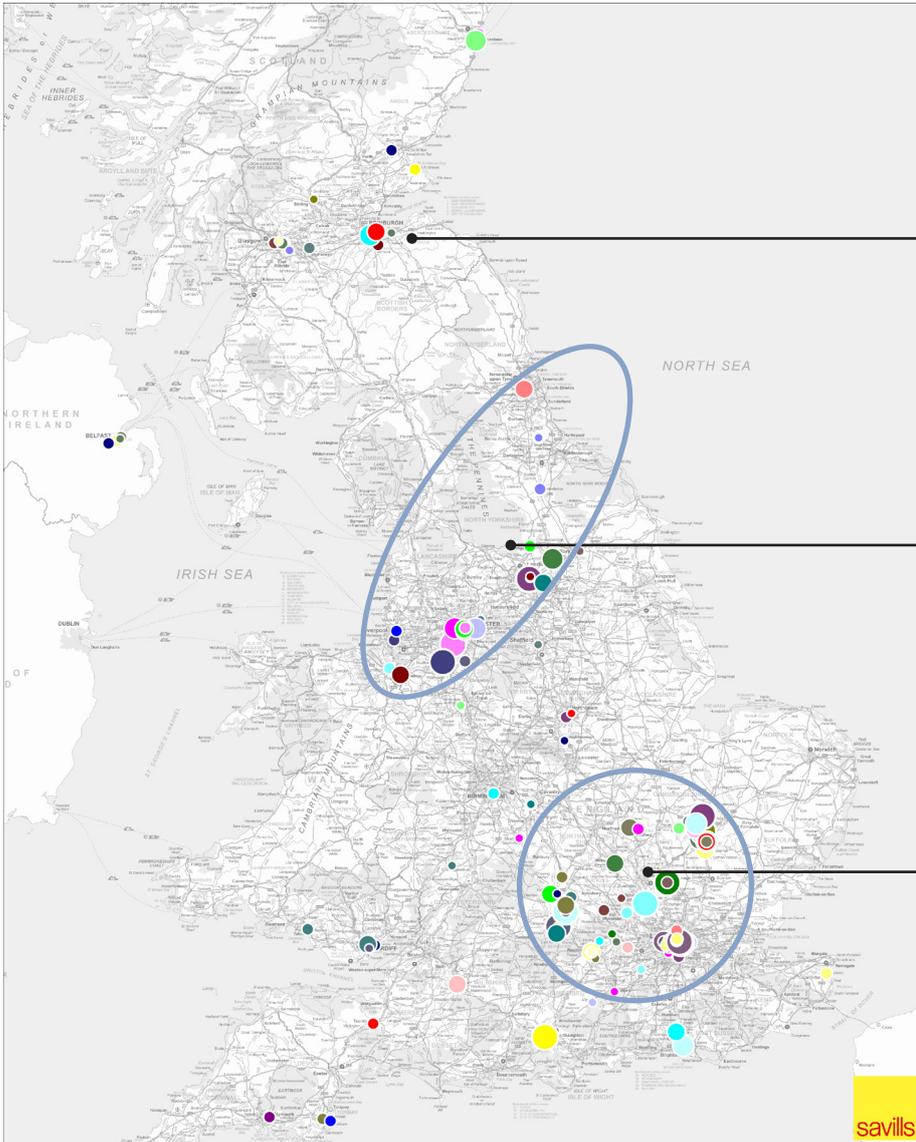
Top 25 cities

Excluding the US cities that dominate, companies in three Chinese cities has seen the most VC raised in 2020



Source PitchBook, Savills

2020 saw £19.9 billion of life science-related capital raised by companies headquartered in the UK This is 23% higher than 2019; two-thirds of the deals were announced/completed in Q4 2020



The last five years has seen companies headquartered in Scotland, in all sectors, raise around £1 billion of capital. For the life sciences sector, specifically, there were £170m of deals in 2020, the majority of which occurred in Q2 and Q3. This total is 31% higher than 2019 and the venture capital share of the total, by value, is 84%. This shows a future strengthening life science sector in Scotland across all the major cities.

2020 continues to show a geographical distribution of companies that have attracted some form of capital. The 'Northern Arc' stretching from Manchester, through Leeds and onto Newcastle is important for the UK to show the polycentric nature of the life sciences sector in the UK and provides evidence that the life science sector is prevalent in many locations of the UK, underwritten by strong universities.

London has been the dominant cluster in the UK and Europe in terms of capital raising. However, it does suffer from a shortage of appropriate science-related workspace, particularly laboratories, to accommodate company demand as a result of them raising capital and headcount growth increasing. We have seen a global occupier demand in city centre locations. London is no exception with the growth of White City and King's Cross/Euston Road cluster. The Oxford-Cambridge 'Arc' continues to show strength of fundraising, with the area 'bookended' by two of the leading universities in the world.

Source PitchBook, Savills

the pandemic, the need for laboratory floorspace and the higher security of rental income.

Assuming that the just 1% of this total value trades each year, there is an annual investment volume of £2.9bn (US\$3.9bn, €3.2bn) in the UK and Europe. This would be equivalent to three-quarters of recorded annual average transaction volumes, for the same type of real estate, in the United States during the past five years.

Away from offices and laboratories, the manufacturing sector is also providing some food for thought. As a global example, one life science developer in the US is starting work on a US\$500 million biomanufacturing complex with five buildings across 45 acres. Most drug manufacturing plants are custom-built by drug

makers themselves, however, this facility is being designed so that it can be leased and occupied by almost any company, giving smaller and mid-sized drug makers quicker access to manufacturing they might not be able to finance themselves. It is estimated that 95 percent of users could walk in the door and save 20 to 24 months on the process of getting up and running, something that is financially unviable for many smaller and medium-sized companies. Such a facility could become more mainstream as an offering in life science ecosystems across the globe.

The UK is also seeing growth in the manufacturing sector with the VMIC at Harwell well underway, as covered in the previous paper, but also the Manufacturing Medicines Innovation

Centre (MMIC) in Glasgow, which will complete this year and allow academia, healthcare and corporates to work together collaboratively and create new opportunities.

On the ground, in terms of rents, key centres around the UK saw rents move higher in 2020. Cambridge prime rents are now high-£40 per sq ft per annum, with Oxford very close to this level. This shows the highest rents levels outside of London. Also within the two historic cities, laboratory rents in their out-of-town markets are between £40-45 per sq ft per annum and are forecast to grow up to 4% during the next five years, per annum. The vacancy rate of laboratories remain exceptionally low at 4% in Oxford and 1% in Cambridge.

“ The science ecosystem is very well connected globally; digital technology has allowed this to bring areas of the world together to work on common projects and shared goals ”

Digital solutions driving life science property needs

The topic of digital healthcare is an extremely broad one to cover. New technology is being deployed daily to solve the world's scientific challenges. What I have tried to touch on in this article are some examples of where we see these advances being implemented and what effect they may have on the property market.

The World Health Organization recently set out in their draft publication “Draft Global Strategy on Digital Health 2020-25” what they see the digital vision being and how healthcare solutions are enabled in the digital world.

Significant advances are being made in a number of scientific areas, from biotech organisations who specialise in targeted therapeutics with precision medicine, to big pharma collaborating to develop novel vaccine solutions. Driving and enabling this to happen is digitisation of the research and development processes, culminating in advanced manufacturing techniques, machine learning and automation.

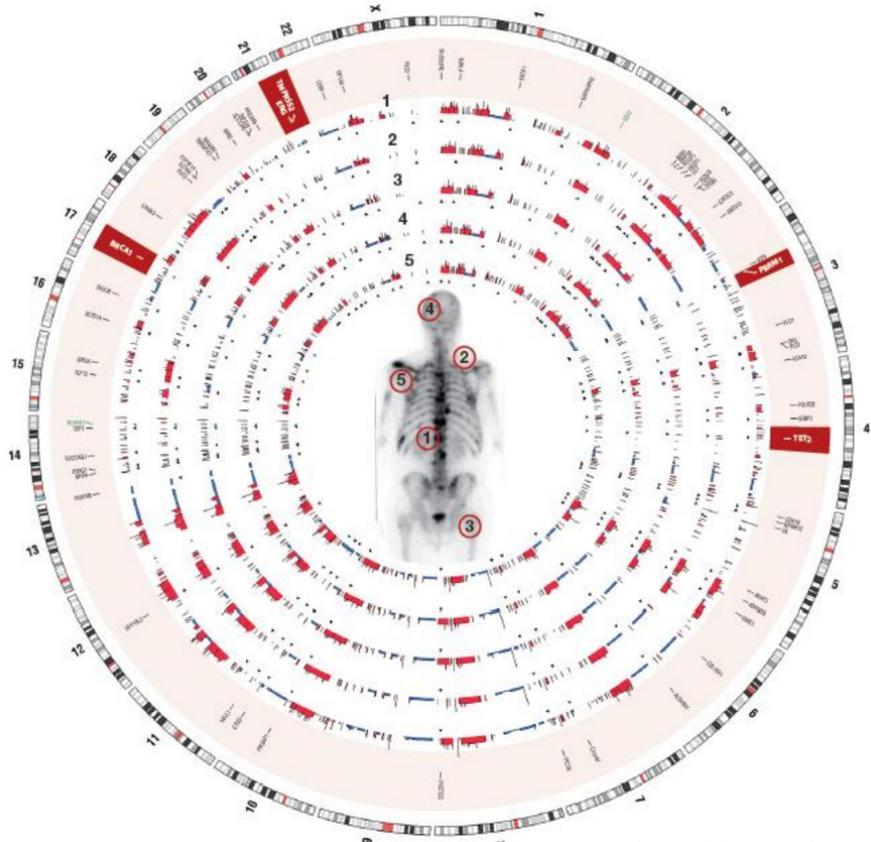
Organisations are now able to access, process and analyse huge data sets by running outcome scenarios in the digital environment before any significant capital investment in property is made in the physical world.

We are seeing more and more companies deploying digital technology and techniques to gain healthcare and commercial advantages for drug development. Bioinformatics is being used to support focused therapeutics, coupled with increased connectivity of real data between the patients, clinicians, scientists and manufacturers, the opportunities to explore are seemingly endless.

The breakthrough in mapping of the human genome in April 2003 has enabled us to understand the human body better than ever before, and has unlocked biological solutions which were not previously available but we are now seeing these being explored.

These digital advances inevitably drive a different real estate footprint requirement, coupled with an enhanced data processing capacity requirement and workplace environment. The use of computational biology, informatics, AI and machine learning means that increasingly the research, development, process development, translational, scale-up and manufacturing processes no longer need to be in the same location.

We are also seeing discussions about the digital blockchain advantages of a distributed ledger technology being considered as a



Source Nickerson et al., *Human Mutation*

potential solution to protect against IP, validated data sets, cross-contamination avoidance (due to the autologous nature of some science) and drug development efficacy fraud, although these considerations are in their early stages.

One could argue that it makes better business sense to limit real estate exposure by having the more expensive processes delivered in the most economic areas of the country. The science ecosystem is very well connected globally; digital technology has allowed this to bring areas of the world together to work on common projects and shared goals. Start-ups, spin-outs, emerging and pre-revenue biotech organisations all want to deliver maximum results for limited cost exposure to their investors, to ultimately provide better drug prices at the end of the journey. They want the first to market position and speed to market delivery which the technology is supporting.

Flexible, adaptable and expandable facilities located where the talent is will be critical. This is where digital platforms have a distinct advantage over more traditional fixed assets (however they are still required). One thing COVID-19 has taught us is that leveraging digital capacity can be part of an overall strategy and not an either-or scenario.

Those companies that deploy multiple solutions will protect themselves in the future from cost exposure in any one area.

By taking advantage of these advances, there will be huge opportunity to deploy a property strategy that brings together the skillsets of the entire country, which can simulate outcomes in advance in real time, which will ultimately drive a more efficient and productive property need.

Global collaborations such as the recent vaccine work by Pfizer and BioNTech have proven that pan-discovery platforms can be effectively delivered from multiple global locations enabled by digital collaboration.

One thing for certain is that property solutions need to adapt to this changing climate and embrace the opportunity to think of solutions that are broader than one building in one location for one client. Digitisation allows for so much more.



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“ Last year, the global level of venture capital in vaccines-related companies was 294% above the preceding ten-year average ”

Raising the response in the UK

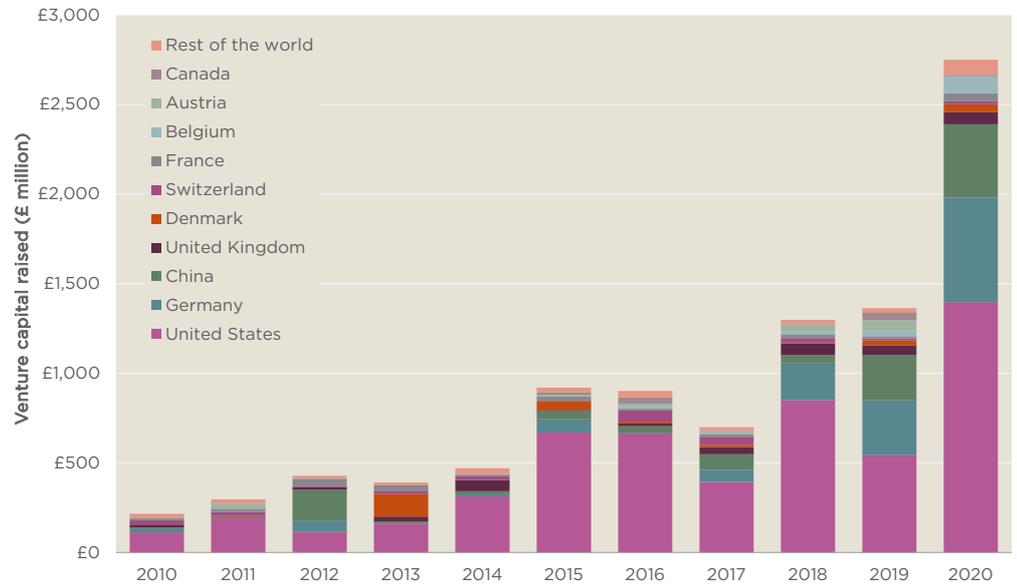
An immediate real estate response to COVID-19 in the UK was the fast-tracking of building the Vaccines Manufacturing and Innovation Centre (VMIC) at Harwell in Oxfordshire. This part of the UK was already leading the way, globally, in vaccine research and manufacture and this new 7,400 sq m (footprint) facility will increase the manufacturing capability by 20 times and can provide 70 million doses within four to six months of opening – enough for everyone in the UK. VMIC has been working with the Oxford/AstraZeneca vaccine since day one.

VMIC was founded in 2019 by academia (University of Oxford, Imperial College London and London School of Hygiene and Tropical Medicine) with support from industrial partners (Merck Sharp and Dohme, Johnson and Johnson and GE Healthcare). Very soon after the UK's first lockdown, the centre was sped-up significantly for delivery and will be fully operational in 2022.



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Company growth a certainty It is not surprising to see the substantial increase in venture capital during 2020



Source PitchBook, Savills

Vaccine boost

A positive outlook for the vaccines sector, of course

The vaccines that are being rolled out for this current global pandemic are probably one of the most important scientific discoveries to happen. The world was in a coronavirus emergency looking for a vaccine. Most successful vaccines, for any virus, on normal trajectories, usually take up to a couple of decades to discover. The deadline for COVID-19 was clearly “yesterday”. The symptoms known as the “common cold” are caused by coronaviruses, and as we are fully aware, there is still no cure. This made the discovery of a COVID-19 vaccine, in a relatively short time period, with high efficacy all the more impressive. The world looked expectantly at the life science community to find the vaccine, and it delivered. This section looks at the scale of capital raising by companies involved in vaccines.

Before the COVID-19 pandemic, there were real estate investors putting life science real estate under their microscope. It had always been an alternative subsector that was developed, in the majority of cases, by more specialist investors/developers but, during the past nine months, there has seen an explosion of interest from all types of investors looking to diversify their portfolios to capture the expected increase in demand from life science companies.

The question is which global measure reveals the future direction of travel for the life science real estate sector? The pandemic emergency has seen increased level of funding into vaccine research, which in the earlier stages of company growth, is usually in the form of venture capital (VC). Growth in this type of

corporate funding will result in employee headcount growth. More employees needing to be accommodated in the office and/or laboratory results in a larger footprint in terms of real estate.

The chart above shows the growing level of VC going into companies involved with vaccines over time. The strength of 2020 is no surprise with around £2.7 billion recorded globally. This was more than double the total for 2019 and 294% above the ten-year average. Compared to all sectors, the five-year period, 2015-2019, had seen vaccine-related VC account for 0.6% of the total global VC spend; in 2020, this rose to a 1.2% share. Both the US and Germany have been dominant countries in the vaccine market – faster growth in the smaller companies VC raising bodes well for developing a strong life science ecosystems, which attracts the global larger corporates. This is positive for the real estate demand prospects.

So what does real estate demand from vaccine companies look like? Overall, it’s difficult to determine the global real estate impact at the moment. However, in occupational terms, as shown during the lockdown, scientists will always get into the laboratory to work. This more consistent level of occupation, compared to office-based companies, suggests that life science companies, on the whole, will have a much higher willingness to maintain or increase their office and laboratory real estate footprint. As shown with a substantial rise in the level of funding, this will have a positive impact on the demand for the relevant real estate.



16%
Annualised growth in life science VC fundraising during the past five years in Europe (exc. UK)

Life Sciences in Europe

European Clusters: Key Drivers

The UK is at the forefront of life sciences in Europe. As a nation, the UK has two of the top five global universities and attracts the lion's share of venture capital (VC) and private equity (PE) funding on a European basis. As a result, the UK is home to some major life science clusters and research hubs. However, an element of disruption to life science organisations' operations is expected if a mutual agreement is not found between the UK and Europe post-Brexit. According to KPMG, one large pharma company has calculated the cash flow hit to be c. £200m per annum. What's more, with the increasing allocation of VC targeting operations in Europe, we believe that continental life science clusters will see significant growth in the near term, creating increased demand for life science real estate.

Knowledge

Academia, research and brain power is undeniably a key driver for life science clusters. Proximity to best in class research universities and hospitals is paramount and dictates the location strategy of large life science occupiers. These academic institutions also produce 'spin out' start-up

companies which require real estate (an incubator or established space) in proximity to larger organisations or research hubs.

A key indicator for academia is the major universities in Europe. Of the top 10 universities in Europe, seven are located in the UK. However, ETH Zurich, LMU Munich and Karolinska Institute (Sweden) all feature in the top ten.

Funding

VC and PE funding are key indicators to identify the key life science clusters throughout Europe. VC funding for life science companies in Europe (excluding the UK) has reached €15.5bn over the past five years, marking annualised growth of 16% per annum over the same period. The BioValley region of France (€1bn), Switzerland (€895m) and Germany (€1.1bn) has led the way in 2020 as investors are committing further capital to growth companies.

Looking more closely at PE flows, €66.7bn of capital has been raised since 2015 (annualised growth of 24% pa), and it is these companies where we have traditionally observed rapid growth in company headcount. Germany (€13.8bn),

Switzerland (€12.8bn) and France (€10.0bn) headquartered companies have been the main contributors, and outside the BioValley region, Italy (€6.0bn) and Netherlands (€4.8bn) are among the most active countries for PE during the last five years.

Looking at the research and development (R&D) spend of the ten largest European pharmaceutical companies, R&D spend for these institutions is greater than 14% of revenue on average (latest data is 2019). Sanofi, Boehringer Sohn, Merck and Allergan all increased their R&D budget on 2018 levels. On a global basis, five of the top 10 are located in Europe, with three continental HQs.

Government Support

Government support is key to establishing a life science cluster. A strong life science campus requires engagement from both public and private stakeholders in order to ensure sufficient local support and funding. COVID-19 has placed healthcare, research and, in turn, the life science sector at the forefront of every European government's agenda. Any stigma attached to big pharma has been dismantled in the

The Times Life Sciences University Rankings 2021

World University Rank 2021	Europe Rank 2021	University	Country
14	4	ETH Zurich	Switzerland
32	8	LMU Munich	Germany
=36	10	Karolinska Institute	Sweden
41	11	Technical University of Munich	Germany
42	12	Heidelberg University	Germany
43	13	École Polytechnique Fédérale de Lausanne	Switzerland
45	14	KU Leuven	Belgium
46	15	Paris Sciences et Lettres - PSL Research University Paris	France
=62	17	Wageningen University & Research	Netherlands
66	18	University of Amsterdam	Netherlands
=70	19	Leiden University	Netherlands
72	20	Erasmus University Rotterdam	Netherlands

Source The Times Higher Education

* The remainder of the Top 20 is made up of UK Universities (1 - University of Oxford, 2 - University of Cambridge, 3 - Imperial College London, 5 - UCL, 6 - London School of Economics and Political Science, 7 - University of Edinburgh, 9 - King's College London, 16 - University of Manchester)

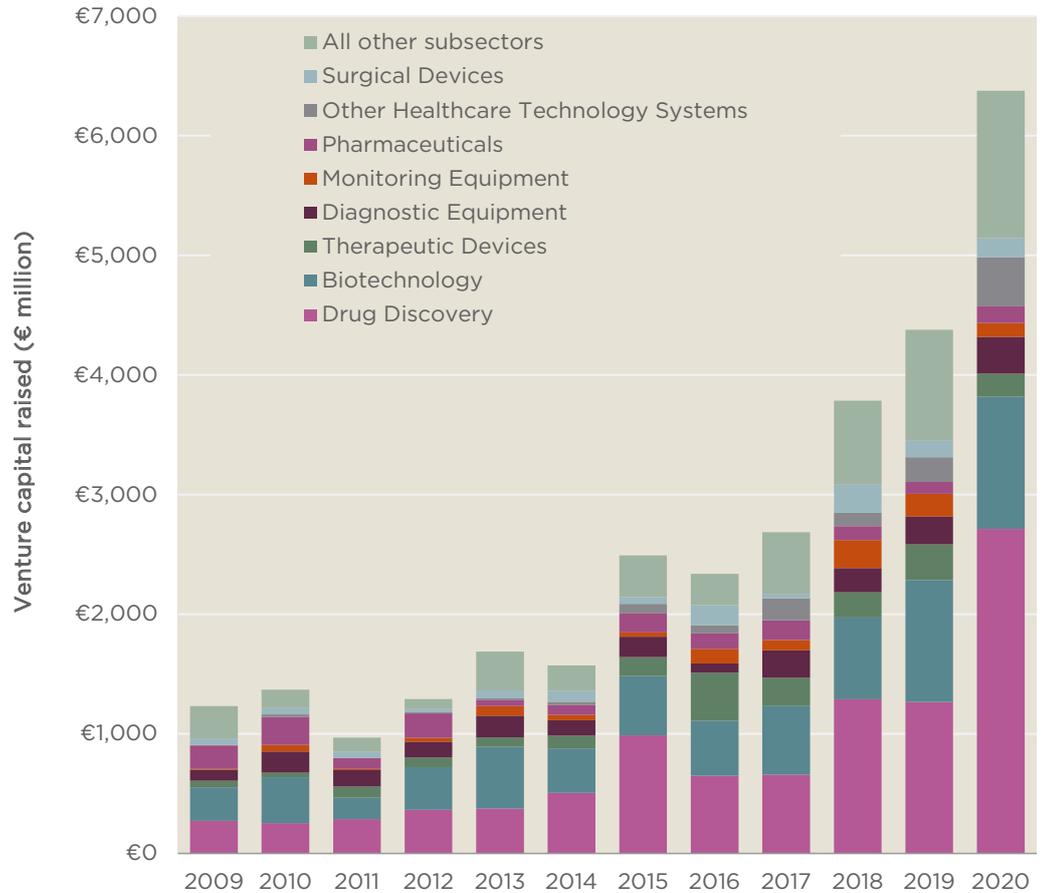
Occupier activity

Corporate investment is creating new occupier demand within the bioscience industry. Roche Pharmaceuticals signed for 11,000 sq m in 2019 in Paris IDF, while medical technology Medtronic leased 4,610 sq m in Paris IDF in 2020. As a trend, we expect to see increased leasing activity on the continent from US companies due to a comparatively cheaper labour force. Increased PE & VC activity and potential re-locations or satellite offices as a result of Brexit will also drive take-up. Central Eastern Europe (CEE) has observed comparatively lower levels of corporate investment compared to the BioValley, although higher levels of pharmaceutical production take place in the region. For example, pharmaceutical giant Bayer committed to 3,200 sq m in Budapest earlier this year, after signing for 3,350 sq m in City West B1, Prague and a further 3,000 sq m in Solna, Stockholm in 2019.

Investment activity

Investor demand has intensified for long, secure income streams during 2020, which has pushed the European life science sector to the forefront of buyers' wish-lists. Investment into European Research and Development (R&D) facilities reached €889m during the first three quarters of 2020, in line with the 10-year annual average. A dip in investment activity during the second and third quarters of 2020 can be attributed to an inability to view assets due to travel restrictions as well as a shortage of willing vendors. Nevertheless, cross border investors are taking an increasing proportion of the market, accounting for 56% of total volumes in 2020, up from 51% in 2019, and we are observing yield compression for prime assets in the search for long-dated income.

European life science VC (exc. UK) has risen sharply during the past five years



Source PitchBook, Savills

wake of COVID-19 and governments will show increasing support of bioscience advancement. This is a welcome development.

With a focus on BioValley, we examine three major European life science nations' government support for the sector.

Switzerland

In 2019, Switzerland topped the Global Innovation Index. It is a country founded on a stable political and economic environment, strong academic institutions and optimum collaboration between the public and private sector. The Swiss government has spent an average of 3% of GDP on R&D over the past five years. The Swiss National Science Foundation (SNSF) allocates research funding and supports the domestic life science sector. The budget for 2021-2024 is c.CHF4.60bn (€4.29bn), an increase of €500m on the last period.

Germany

In 2019, Germany ranked 9th in the Global Innovation Index. Germany's federal government has long supported scientific innovation and research, both domestically and in association with other nations. There are more than 1,000 publicly

financed research institutions and 240 higher education institutions with eight universities in the Top 100 list, two of which are in Munich. Germany's R&D spend has more than doubled in the last 20 years and aims to reach 3.5% of GDP by 2025.

France

In 2019, France ranked 16th in the Global Innovation Index. France is a highly collaborative nation in terms of science programs with its largest partners being the US and EU. Whilst domestically, over 2% of GDP is spent on R&D. Through the Future Investments Programme (PIA), France has invested €45bn since 2010 into higher education and research to harness innovation.



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“ Australia’s geographical positioning in the Asia-Pacific region provides good synergies for research and diversified clinical trials with its Asian neighbours ”



Innovation Quarter (iQ), Sydney

Source Charter Hall

Upward trajectory in Australia

A positive outlook for the life science sector

The Australian life science sector is on an upward trajectory. There is significant interest from institutional funds and property developers looking to diversify their real estate portfolios.

The growth of the sector and associated commercialisation is creating greater demand for bespoke research facilities. It has also been heightened by the COVID-19 pandemic which has accelerated public funding in this sector for both research and ancillary infrastructure.

The level of demand varies from city to city in Australia, however, tends to be concentrated on the eastern seaboard capital cities of Melbourne, Sydney and Brisbane. These cities provide the concentration of population and advanced skills capability to resource this rapidly emerging sector.

Australia’s geographical positioning in the Asia Pacific region provides good synergies for research and diversified clinical trials with its Asian neighbours. Australia’s leading digital medical database is another catalyst for attracting research.

Some recent life sciences market trends include:

The Translational Research Institute (TRI)

The TRI is proposing an Australia first hybrid facility to complement its existing 34,000 sq m research facility (TRI2). The proposed TRI2 is a purpose-built scale-up and advanced manufacturing facility that will provide the means for start-up companies to move to the scale-up stage while also providing practical training in advanced manufacturing – an Australian first.

Vaxxas is one of TRI’s most successful start-ups. It has a focus on enhancing performance of existing and next-generation vaccines through development and commercialisation of the company’s novel vaccine delivery technology - the Nanopatch™. Vaxxas is progressing into ‘Phase II’ small-scale manufacturing, which will require a pilot facility for pilot-scale manufacturing. This multi-million dollar facility at Hamilton Northshore is in procurement stage with funding from the Queensland State Government.

The combination of the TRI2, Hamilton Northshore plant and the progressing Boggo Rd Innovation Precinct will position

Brisbane as a rapidly expanding and competitive innovation ecosystem that also provides bespoke national capabilities in areas such as practical cGMP training.

The Victorian Comprehensive Cancer Centre (VCCC)

Melbourne is home to Australia’s largest research facility and collaboration. The Victorian Comprehensive Cancer Centre (VCCC) is a AUS\$1 billion (capital expenditure) world-class Comprehensive Cancer Centre. The VCCC is a powerful alliance of eight successful Victorian organisations committed to “prevention, detection and treatment of cancer.”

Most recently, what is reported to be the largest biotech and vaccine manufacturing plant in the southern hemisphere at 118,000sqm has been proposed by CSL Group. Construction of the AUS\$800m facility will commence in early 2021. The project is in collaboration with the Federal Government to “provide rapid response to future pandemics and provide the nation’s first mass-scale sovereign capability to defend against global health security threats.”

Private investment

We are seeing a trend with the larger property investment funds leading the charge in privately funded medical research facilities. Various ‘fund-through’, ‘sale-and-lease-back’ and other hybrid financial models, they are emerging in particular with universities and large government research agencies that can provide strong covenants.

Charter Hall’s AUS \$350million ‘Innovation Quarter’ precinct, co-located with Westmead Hospital in western Sydney - a collaboration with Western Sydney University is a good example of this (see image above). Across two towers and 28,000 sq m, the facility will provide health, research, education and commercial space, facilitating significant opportunities for collaboration across the public and private sectors.

Research is very much a supply-led model due to the bespoke nature and intensive capital spend with a longer return rate. The sector is helped in part by federal and state government funding which allows tenants to commit to long term leases that provide investors with greater revenue stability and strong covenants.



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“ The sector is helped in part by federal and state government funding which allows tenants to commit to long term leases that provide investors with greater revenue stability and strong covenants ”

“ The region has proven its ability to seed start-ups which can develop into multi-billion dollar companies ”

View from the US

Reviewing the trends in capital raised, in terms of type of deals and the volume, presents a great indication of the type of companies that will grow in the future and the type of real estate required.

Four sub-sectors of life sciences accounted for two-thirds of all capital raised in the past five years. 'Drug Discovery' accounted for 29% of the total capital raised in this period (US\$5 billion total). The other sub-sectors include, in order 'Biotechnology', 'Diagnostic Equipment' and 'Therapeutic Devices'.

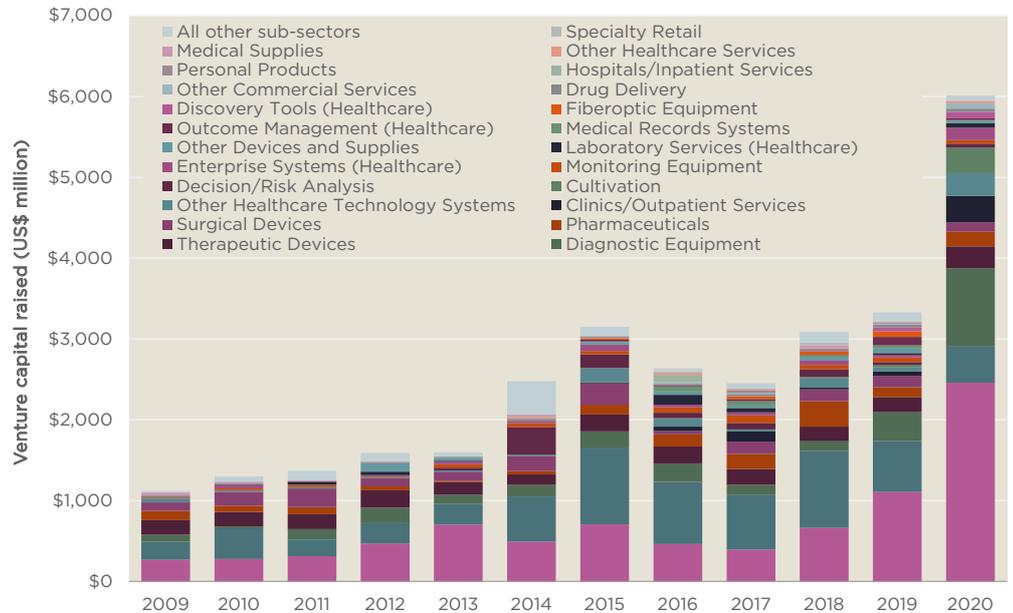
The 'Drug Discovery' sub-sector saw a 40% share in 2020 with annual growth of 122%. Key deals include VelosBio being acquired by Merck for US\$2.75 billion and Erasca raising US\$236 million of Series B venture capital. Both companies are located north of San Diego, in the Torrey Pines area.

At nearly US\$1 billion in 2020 alone, showing a 171% increase on 2019, the 'Diagnostic Equipment' sector saw a 16% share of the 2020 capital raising total. Cue Health received a US\$481 million grant from the US Government to boost production to deliver six million COVID-19 tests by March 2021.



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Life science venture capital raised in Southern California The level of capital raised has grown by 81% in 2020 compared to 2019



Source PitchBook, Savills

Southern California strengthening

A key and growing life science market in the US

The Southern California life sciences industry has been one of the most active for venture capital and specialized real estate demand in the US. Since COVID-19, billions of dollars have been raised by emerging biotechnology and pharmaceutical companies, with the majority being located in San Diego. San Diego has long been seen by many industry watchers as an elite cluster for life sciences due to the region's long association with world-renowned research institutions such as the University of California-San Diego, Salk Institute, and Scripps Institute, as well as the local know-how by academic research scientists on how to start their own companies in the private sector. While well-known biotech and pharmaceutical companies such as Genentech, Pfizer, and Eli Lilly have long had a presence

in San Diego, newer home-grown companies such as Illumina, Fate Therapeutics and Ambrx have shown the region's ability to seed start-ups which can develop into multi-billion dollar companies. As a result, the traditional life sciences submarkets of San Diego such as University Towne Center (UTC), Torrey Pines, and La Jolla have seen hundreds of thousands of square feet of new life sciences real estate development and increasingly, conversions from general office to life sciences/R&D use.

More recently, this occupier demand has spilt over to neighboring submarkets such as Sorrento Mesa as developers seek out functionally obsolete office and industrial buildings to convert to life sciences use. In addition, developers have even begun doing the same in Downtown

San Diego hoping that new fully amenitised properties built for life sciences users can attract some of San Diego's booming life science real estate demand to a more urban environment. Looking into 2021 and beyond, we expect no slowdown in life science real estate demand in San Diego while emerging clusters elsewhere in Southern California such as Irvine in Orange County, as well as Santa Monica, El Segundo, and the Conejo Valley in Los Angeles will be watched very closely as venture capital aggressively seeks out the next big thing in a booming sector.

“ Looking through 2021 and beyond, we expect no slowdown in life science real estate demand in San Diego ”

“ Around 100 units amounting to as much as 1.8 million sq ft that could be suitable in London alone ”



Repurposing retail*

Even before the global pandemic, the level of investor and developer interest in the life science commercial property sector has increased dramatically. The scale of capital raised via private equity, venture capital and Initial Public Offerings (IPO) has reached a staggering £1.9 trillion in the past five years alone.

Now, with demand for lab space growing from both new and existing life science firms, the problem the UK faces is a significant lack of supply, but could vacant retail units provide an answer?

Currently, in the UK, the key life science hotspots remain Oxford, Cambridge and London. While the former are constrained by their historic nature and the size and strength of competing uses, in London the quantum of commercially-let laboratory floor space is still relatively small for a city of its size and reputation.

What's more, with a fierce war for talent location matters more than ever when it comes to attracting and retaining scientists.

Consequently, occupiers, landlords and developers have had to find creative solutions, office to lab conversions being one of them. However, not all buildings are viable, and it can be a complex undertaking. In comparison, vacant retail units and department stores offer a relatively large amount of space in prominent, often city-centre locations ripe for repurposing.

The generous floor-to-ceiling height provides

the opportunity to accommodate the necessary air handling plant needed to service laboratory space. Also, existing features such as goods/service lifts can be kept and utilised by occupiers. With this in mind, Savills has identified around 100 units amounting to as much as 1.8 million sq ft that could be suitable in London alone.

This possibility has been bolstered further still by new planning regulations, which mean that planning permission is no longer required for the conversion of commercial property to Class E uses. This includes retail to laboratory space.

It is not just London that can benefit from this, in fact, there are already examples in Oxford where serious consideration is being given to using high street retail space in this way. The very nature of the retail market, with its good visibility in high footfall areas means there is the possibility of greater transparency and wider community engagement.

This solution isn't a catch-all and won't be appropriate for all life science occupiers, but it does present a real opportunity for both investors and developers who are eager to capitalise on the burgeoning growth of the sector. Having had an incredibly hard time, particularly over 2020, this may just be the key to injecting new life into some of our high streets.

* department stores, shopping centres, retail warehouses, high street.



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Outlook

What are the top five takeaways from this report?

1 We expect 2021 to see a continued strong interest in the life science sector in the UK. Delivering a successful UK, outside of the European Union, will depend upon its ability to build on the science and research base. This includes establishing research facilities across the whole of the UK.

2 The level of venture capital (VC) raising in Europe provides a snapshot of the overall strength of mainland Europe in the life science sector. The past five years have seen this VC increase by 16% per annum, on average. As well as the 'earlier money' as VC, there are also significant corporate deals happening. This includes M&A, which would be expected in the mature markets in Germany, Switzerland and France. There will be more investment opportunities emerging in the European market over the next few years.

3 Regardless of the scale of the ecosystem, there are developments happening in cities, of all sizes, across the world that will make a difference in delivering improvements in human health. Away from the dominant US east and west coasts, in particular, there are private- and public sector-driven developments to deliver this improvement. The Australian examples highlighted on page 8 provides strong evidence of this and shows Savills global reach and involvement in all life science markets.

4 The digitisation aspect, as discussed on page 4, is going to become more dominant in real estate discussions within the life science sector. The traditional/recognised 'wet laboratory', containing gases and liquids, will see increasing co-existence with 'dry laboratories', where data, AI/machine learning and computational drug discovery grow in importance. Coupled with this digitisation at a corporate and discovery level, there is also the rise of digital health with vast sums of investment going into the sector.

5 Savills global reach also takes our analysis to the most established areas of the globe within the life science sector. The West Coast and Southern California, specifically, saw a substantial increase in VC raising in 2020 that will further increase the strength of their ecosystems as jobs are created and real estate demand increases.



Savills Science

Science, R&D and technology sectors all demand specific types of real estate. Savills, using data and expertise across all markets and disciplines will help clients make the best real estate decisions. Savills have established offices, with life science capability, within the key markets across the UK. Savills also has significant expertise in dealing with all aspects of life science real estate, particularly for occupiers, within the key markets in North America and Asia. Having a global understanding of these international markets, with experts 'on the ground', means that Savills can provide an enhanced offering to all types of clients, including occupiers, investors and landlords.

For more information on Savills Science and the research capability, in the first instance, please contact:

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Page 4 image source:

Human Mutation: Somatic alterations contributing to metastasis of a castration resistant prostate cancer

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