

Big Shed Briefing - topic response - issue two, mid-tech industrial



Mid-tech industrial units provide R&D firms with everything they need to succeed



Source Cambridge Research Park now offers 75,000 sq ft of flexible research and production / assembly space

Covid-19 to stimulate a rise in R&D firms and mid-tech industrial units could provide the answer

The whole world is now eagerly watching the race for a Covid-19 vaccine as it becomes increasingly clear that it is the only true exit strategy for the current pandemic. Historically, the UK has not been the centre of vaccine production, however, the 'golden triangle' for research and development (R&D) of Cambridge, Oxford and London is now playing a key global role and is providing some market-leading results. The rising global interest over the past few months, due to Covid-19, has stimulated a much larger real estate interest in the R&D and life science sector than any time during the past 20 years.

Savills recent *Life Sciences* report demonstrates the importance of the R&D sector to the UK. The latest data shows that it contributes £81 billion annually to the economy. The report also uncovered that the amount of traditional R&D real estate available throughout the UK is minimal compared to other global locations. London has c. 200,000 sq ft of commercially lettable R&D space and Manchester 360,000 sq ft whilst Boston and New York had 14.6 million sq ft and 1.36 million sq ft available respectively. The sheer lack of available space paired with increasingly unaffordable office rents has led R&D occupiers to seek new, more viable alternatives, including mid-tech industrial space.

When you think of steel portal frame buildings, very rarely do workers in white coats spring to mind however mid-tech industrial space has started to evolve in strong knowledge based locations as R&D occupiers are becoming increasingly desperate to find affordable, flexible accommodation that they

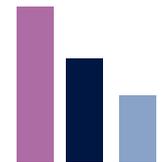
can reconfigure in any way they see fit.

However, in order to be desirable, the quality of construction of the industrial unit, cladding, glazing and internal finishes must be comparable to contemporary office buildings. Also, R&D occupiers generally require a large office fit-out of around 20% as opposed to traditional industrial units that have around 5 to 10%. Fortunately, in mid-tech units, the percentage of office fit-out is often designed to be easily expanded with window apertures and services allowing for the type of flexibility these businesses need. Also, the units offer floor-to-ceiling heights or a larger volume of (cheaper) space to install a contained lab inside of them.

R&D occupiers often have very high power demands along with requirements for advanced air handling technology and the supply of special gases, water and often steam. Luckily, most mid-tech industrial units provide both high levels of reliable power and most come with substantial storage options, unlike the traditional R&D real estate.

Flexibility aside, there are also significant financial drivers to tempt occupiers to industrial space. For example, at present, rents for office accommodation on the long-established Cambridge Science Park now exceed £34 per sq ft, therefore it is no surprise that Enterprise Business Park, which was only completed in 2018, is already more than 75% full at £12.50 per sq ft. Once business rates and service charges are factored in, the potential for an extensive fit-out is a very attractive prospect for many R&D firms.

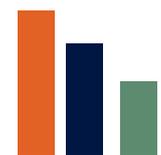
Key points
from the research and development sector



c.41,850 sq ft
of commercially available R&D real estate stock in Cambridge market.



There are 25,725 knowledge-intensive firms in Cambridge.

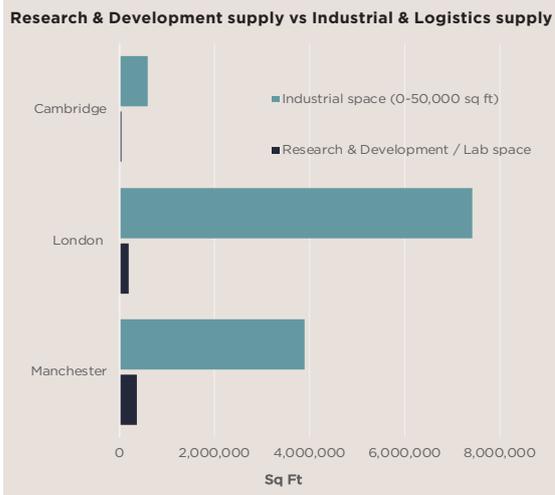


345,360 new 'Professional, Scientific, Tech and Other' jobs forecast between now and 2030.



£12.50 psf
for mid-tech accommodation in Cambridge, 63% lower than contemporary R&D real estate.

“ Life science experts believe that a further US\$10 billion-plus needs to be spent globally in order to fund the immediate research, treatments and vaccines that will ensure the world has the capacity to manufacture and deliver multiple responses to the virus. ” - Rob Sadler, Director, Savills Cambridge



There are many successful schemes highlighting the benefits of mid-tech industrial space for R&D use

A successful example of this shift towards using industrial space for research and development is the Royal London and XLB Property Enterprise scheme at Cambridge Research Park. It was once a traditional business park, but now the new Enterprise scheme offers 75,000 sq ft of flexible research and production space across nine units with seven now let exclusively to R&D occupiers. The affordability, flexibility and fit-out potential of industrial space provides R&D and life sciences businesses with everything they need to succeed.

Recently, the park has secured two further pharmaceutical tenants for more than 20,000 sq ft as the life science and biotech sector continues to be notably resilient during the pandemic. One of the tenants, Grifols, a global healthcare company has committed to Units 8 & 9 comprising 14,000 sq ft on a 10-year lease.

Savills is closely monitoring this rising trend and we are beginning to see a huge uptick for deals involving traditional industrial and logistics space for R&D use. Recently, Oxford BioMedica has taken an 84,000 sq ft warehouse in Oxford Business Park for R&D use. Furthermore, TTP's Melbourn

Science Park continues to attract high levels of demand from R&D occupiers for basic shed space for testing and developing activities.

Covid-19 is likely to amplify the demand for Industrial & Logistics real estate

Relating this back to the current pandemic, once a vaccine has been developed, it will likely be manufactured on a global scale, which will require more manufacturing and storage/logistics capacity.

Furthering this, there is clear benefit to outsourcing vaccine supply chain and logistics to the private sector as outlined by the World Health Organisation (WHO). They note that the private sector often use highly efficient processes that make best use of available resources and technologies; minimise wastage; exploit economies of scale; and keep pace with changes in policy, new technologies, and management best practices.

Using the written WHO example which looks at the distribution of the measles vaccine, the UK would require a large amount of cold storage in order to immunise the whole population in a year. Assuming the Covid-19 vaccine has a similar packed volume to the measles vaccine of 2.1 cm³ and a diluent dose of 3.1 cm³, a total of 5.2 cm³ of cold storage space will be required per vaccine. The packed vaccine volume dose of 5.2 cm³ can then be multiplied by the total amount of required (latest figures show the UK gov has ordered 340 million) to estimate the total vaccine volume of c.62,450 cubic feet. It should be noted, however, that different vaccines need to be stored at various temperatures and consequently may require more advanced facilities. Furthermore, the average cold storage unit can hold just 40% of its total volume which should be taken into account when working out the total warehouse space required.

In short, property is clearly not the solution to the Covid-19 pandemic but it does have a key role to play. The renewed global interest has acted as a catalyst for extra government investment to help R&D firms operate within the UK enabling it to become a global hotspot for top tier companies. The increased activity from R&D occupiers paired with the sheer lack of space available has led to a rising interest in mid-tech industrial space which has been intensified through the incontestable benefits of flexibility and affordability. Landlord and developers of 'mid box' industrial units could start to make minor amends in both marketing strategy and offering to attract the influx of R&D occupiers seeking to locate throughout the UK.

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Employment growth forecasts

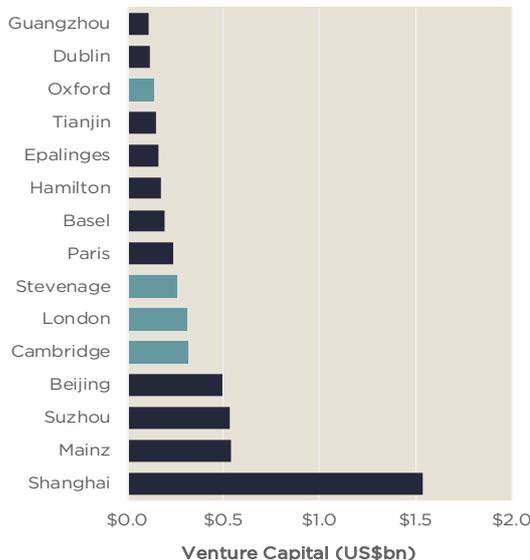
Using Oxford Economics employment forecasts for the UK, we have been able to calculate that the UK requires significant additional allocated land to meet the anticipated space demand needs from future job growth around the sector.

Oxford Economics forecasts using industry-standard IC codes, we have therefore chosen the 'Professional, Scientific, Technology and Other' code which is reflective of the demand of the type of tenants in research & development. There will be an additional 345,360 employees jobs between now and 2030.

Using the 3rd edition of the *Employment Densities Guide* published in November 2015 by the Homes & Communities Agency we have assumed a density of 40 sq m per job. Using this metric c.148.7 million sq ft of real estate, or assuming a site cover of 45%, 7,435 acres of industrial land will be required to meet the future demand from the life sciences sector by 2030.

Global venture capital volumes in to life sciences

Four UK markets are in the top 15 (excluding US) for the last two years (2018-2019; US\$bn; annual average)



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