

Industry Report

Labs and skyscrapers – its boom time in the golden triangle

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Lab Mate readers will be enjoying the trend for turning offices into laboratory space in the London, Cambridge, Oxford 'golden triangle'.



In January, information was released about a new project to overhaul a 1970s tower block in Euston. The construction plans, from British Land, are unusual. The core of the building will be retained, but the façade and floor slabs will be removed and the floorplates extended to provide 60% more space. Laboratories will be installed immediately above the ground floor retail area and will take up approximately one third of the building with the rest being offices. The target is for the building to be net zero in build and operation.

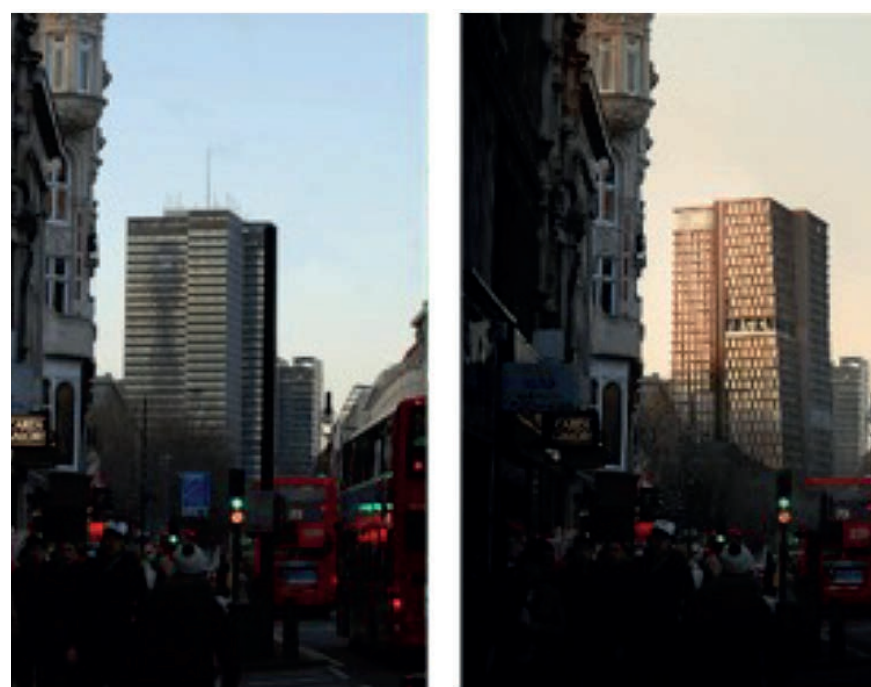
According to property agents, Knight Frank demand for lab space in London stands at 974,500 ft² following a total of £1.8 billion venture capital investment in life sciences in 2023, and a 61% increase year-on-year in new company incorporations. Even after major developments in Bloomsbury and King's Cross complete this year, there will still be a shortfall of more than 100,000 ft², they say.

British Land and Savills agree, together they launched a report in November 'Accelerating Innovation, a five point plan to boost life sciences real estate, saying:

"There is a severe shortage of real estate space to accommodate both current and predicted demand, with vacancy rates for fitted laboratory space in the Golden Triangle of just 1% in Cambridge and London and 7% in Oxford.

"If the life sciences markets within the Golden Triangle matched the growth seen in leading markets in the US, by 2035, it would generate 67,000 more jobs, £4 billion in additional GVA per year and an extra £1.1 billion per year in tax revenue to fund public services. Accelerating the growth of R&D facilities outside the Golden Triangle to match its growth rate would result in 14,500 more well paid jobs across the country by 2035, £870m per year in additional GVA and an extra £235 million per year in tax revenue."

Getting in ahead of the crowd they are urging the UK government to:



Planned refurbishment (right) of the existing Euston Tower (left)

- Set ambitious growth targets for the sector, including doubling the value of inward foreign direct investment by 2035
- Use the tax system to support life sciences real estate growth by expanding R&D tax credits to include relief for capital expenditure on laboratory space, and
- Align local skills with opportunities in life sciences to deliver inclusive growth.

Tom Mellows, head of Savills Science, said:

"We are continuing to see positive levels of demand across the golden triangle, particularly in Oxford and Cambridge where take-up remains at record highs. However, the UK will not be able to sustain this level of growth if we don't provide the right real estate.

"London is a great example of where the lack of purpose built lab space has impacted on occupiers' ability to expand. However, 2023/2024 will see the first delivery of a significant quantum of this type of space in the capital, which will no doubt lead to an uptick in activity moving forward. We have already seen demand for science related real estate increase considerably over the past five years and the potential to deliver growth quickly will accelerate this further still."

However, estate agents are in the business of selling, and it's clear they have to find new markets since covid and its impact on the demand for office space.

The world of construction is familiar with the 'Skyscraper Index', a concept postulating that the world's tallest buildings have risen on the eve of economic downturns. Business cycles and skyscraper construction correlate in such a way that investment in skyscrapers peaks when cyclical growth is exhausted and the economy is ready for recession.

It's true that as the boom in lab building peaks, some in life sciences have been having a rather tricky time.

Thermo Fisher global had to look for an additional \$450 million in cost savings in 2023, including job cuts. Their third quarter 2023 results showed revenue for the quarter declined 1% to \$10.57 billion in 2023, versus \$10.68 billion in 2022. Previous quarters had been down 3% and 9%. Thermo has announced another earnings call to take place at the end of January. Agilent also announced plans to lay off about 400 employees, or 2% of its global workforce in 2023 expecting that most of the workforce reduction would be completed in the first quarter of 2024, with the remaining restructuring activities expected to be finished by the end the 2024 financial year.

However, although some might want to sound a note of caution to the property sector, we do seem to have bounced back from the dog days of the worse-than-usual summer sales lull, so maybe we are due for a big construction-led lab boom. I certainly hope so, but there are other factors which will have a major impact on the demand for lab space. One major change is the role simulation will play in future research.

AI is clearly leading to a step change in the pace of research developments. One example is the recent success in using AI and supercomputers to identify a brand new substance, which could reduce lithium use in batteries. Scientists at Microsoft and the Pacific Northwest National Laboratory (part of the US Department of Energy) used the new technologies to narrow down 32 million potential inorganic materials to 18 promising candidates in less than a week. The screening would have taken more than two decades to carry out using traditional lab methods but the entire process from inception to the development of a working battery prototype took less than nine months.

The researchers say the material could potentially reduce lithium use by up to 70%. Lithium is one of the key components in rechargeable batteries (lithium-ion batteries) that power everything from electric vehicles to smartphones. Demand for lithium-ion batteries is expected increase up to tenfold by 2030, according to the US Department for Energy.

Executive vice president of Microsoft, Jason Zander, has been reported by the BBC as saying that one of the tech giant's missions is to "compress 250 years of scientific discovery into the next 25".

Will these changes lead to a reduction in the amount of 'wet research' being carried out, or will the faster pace of change and consequential rise in the number of opportunities actually increase the amount of laboratory experimentation in absolute terms? I don't know the answer, maybe no-one does, but what is clear is that the ambitions of scientists are growing all the time.

Nobel prize-winner, Didier Queloz predicted this month that laboratories could be creating life from scratch by the end of the century. "In my opinion it is only a matter of time before we succeed," he said. "The emergence of life is ultimately a chemical process. If the conditions are right, life will emerge. I see no need for an initial push from a creator god." Since 2021, he has been building a centre at the Swiss Federal Institute of Technology Zurich to research the origins of life. According to Queloz, this includes research into the solar system, the analysis of exoplanets and attempts to simulate the emergence of life in laboratory experiments.

So the indicators vary, but the direction of travel seems clear; there has never been a better time to be in the laboratory supply industry - and GAMBICA members are in pole position to take advantage!

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Photos courtesy of GXN architects



Detail of the planned laboratory floors of the Euston Tower



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