

UK Life Science Expansion:

Building for the
Next Generation

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Knowledge clusters change the world. It is the ability to share knowledge between talented people that has driven the development of human society, in science more than anywhere else. And real estate today can enable this process, and benefit from it.

As density increases in areas around Cambridge and Oxford, demand will turn to new emerging areas. And with advances in technology and the new climate we find ourselves in, the needs of tenants are changing. The success of future developments will not only depend on the quality, type, and location of the facilities but how they generate a sustainable environment for work, collaboration, life, and leisure.

Key Findings

- A successful science hub generally requires three main factors, a strong research base, a talent pool, and investment. But they also need time to organically grow and this requires a long-term and subtle approach to investment from the Government.
- Whilst traditionally there may have been a 50-50 split between office and laboratory space, Covid has resulted in increased demand for laboratory space compared to office space for research businesses and institutions.
- In the US, the life sciences industry is competing for real estate space to manufacture their products with the likes of Amazon and other direct-to-consumer sales businesses who desire the space for distribution centres. This is an issue that the UK could face as the industry matures.
- New investors into the industry will require an understanding of the science, and how technological advances affect the real estate side of the business, to truly flourish in the sector.

1. We know about the Golden Triangle, but are we seeing any other locations in the UK emerge as Science Hubs?

The Golden Triangle of Oxford, Cambridge and London is undoubtedly the focal point of the life sciences sector in the UK, but our panellists were posed the question of whether we are seeing any other locations in the country emerging.

Matt Smith, Director of Leasing at BioMed Realty believes the foundation for a life science cluster is the triple helix of academic institutions and the surrounding

innovation and talent pool; government funding for research and development; and the industry players who invest, commercialize and acquire. BioMed has discovered that these three groups are vital for a thriving life science ecosystem. Of the £1.1bn invested in life science companies in the UK in 2020, 77% was invested in companies located in the Golden Triangle of Cambridge, Oxford and London because of the very compelling characteristics of this ecosystem.”

Anna Strongman, CEO of Oxford University Development Ltd (a joint venture between the University of Oxford and Legal and General) added that despite the focus on the Golden Triangle, there are other very successful pockets in the UK, such as Manchester and Birmingham.

2. So what then does it take to create a successful science hub?

In response to this question **Anna Strongman** supposes that “in the components that sit behind innovation districts there is often a core research anchor, either a research institution, a university or a well-established research business who sits as a core driver. And from this spin-off businesses emerge and develop independently.” She also outlined the importance of asset managers to provide amenities, alongside commercial, residential, and public realm offerings in attracting the required talent for these science hubs.

“Interestingly I see similarities with the retail sector and the trends emerging there. You have an anchor tenant, smaller businesses alongside the anchor, the emergence of more flexible leases, and the importance of asset and property management.”

Matthew Powers, CEO of Nan Fung Life Sciences Real Estate based in Boston, US, was able to add a perspective on whether the same could be said for the United States. He believes it changes over time, acknowledging that in addition to the important elements that Matt and Anna spoke about, there are parts that evolve naturally.

“For a successful cluster you need to have the elements and get to a level of maturity whereby you have a self-sustaining cycle. In Boston, Cambridge, you have a confluence of very mature multi-national pharmaceutical companies, these become the strategic exit for many early-stage companies and new companies formed out of universities. You also have entrepreneurs and successful venture

Introducing our experts:

Chair: Emily Slupek
Buro Four, Project Director

Anna Strongman
Oxford University Development Ltd, CEO

Matthew Powers
Nan Fung Life Sciences Real Estate, CEO

Matt Smith
Biomed Realty, Director of Leasing

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capital firms, and all of those together are augmented by a supportive government and regulatory environment that allows the industry to flourish. All the amenities and transport infrastructure get built up around this, making the hub a kind of centre of gravity.”

3. Could science be the key to reducing the ‘North-South divide?’

There are already great research universities and research-based businesses in the North of the country, as well as a rich history of industrial innovation. But with government impetus in creating innovation zones, could science be the key sector that bridges that divide?

Anna Strongman acknowledges that whilst there are already established areas and others with a lot of potential, she does not believe it is as simple as just pouring concrete to create new innovation districts. **Matthew Powers** added “there is a potent mix of lots of factors to drive success and they all need to be thought about and carefully managed, as well as allowing serendipity to organically happen. This isn’t always straightforward when you’re writing government policy – it’s about a subtle, long-term approach to developing them and realising their potential.”

4. With advancements in Cell and Gene Therapy affecting requirements for space, how has this affected more a more mature market like the US?’

According to **Matthew Powers**, as an industry, Life Sciences is in a relatively nascent stage, and so what the industry is witnessing is the speed and value of different technological advancements that benefit the science and are creating additional opportunities. Cell and Gene Therapy is one of the significant growth drivers in the industry due to the technological advancements in recent years. Around five years’ ago we saw a lot of new companies forming to utilise the advancements in technology. Now these companies have advanced their drug and biological products and are starting to get into the batch production and manufacturing of their products.

So, what does this mean from a real estate point of view? **Matthew Powers** pointed out “there is now a confluence in this growth of the technology as well as personalised medicine becoming a big trend globally, which shifts the dynamic of life sciences manufacturing. In the past the industry used to see large manufacturing facilities geographically distant from the R&D, but now we are seeing small batch manufacturing for smaller regions and they want this to happen closer to the R&D”

This is a challenge in the US. Alongside the Life Sciences sector growth there is the growth of direct-to-consumer sales like Amazon who want last mile distribution to these urban cores. The types of space Amazon would use is similar to that a Life Sciences company would use so we are seeing two successful industries competing for the same types of space. This in turn is driving up the cost of the real estate and consequently the cost of cell and gene therapy products. As we develop a global network and technology matures this issue will hopefully solve itself.

On whether this was reflected in the UK market, **Matt Smith** elaborated “to underline Matthew’s point, in the US this side of the industry is in a more mature stage, we are probably five to ten years behind the more established sector in the states. Regarding the manufacturing side, I haven’t seen this first-hand with our tenants yet, but I’m sure it’s something that will definitely be a consideration for them. Supplementing Matthew’s point, scientists and life sciences companies want to be in a collaborative and amenity rich environment, and industrial locations tend to lack that.”

5. With predictions for the ‘new normal’ do you think working from home is a trend that could continue in this sector?

The whole real estate sector is grappling with the working from home conundrum and how it will affect the sector going forward. **Anna Strongman** believes that whilst there might be slightly less demand for the office space, all the research that has come out of the pandemic has fuelled the demand for more laboratory space.

Matt Smith added, “throughout the pandemic 100% of our assets remained open. And that’s because the cutting-edge research can’t be done from the kitchen table.” Both also agreed that they’re seeing a trend of companies asking for flexible space that they can grow into, and also the need for the space to be good enough to attract and retain talent.

6. Is the increase in private investor-led building impacting the type of buildings being developed?

There is a current trend in the market whereby we are seeing more private investor-led buildings as opposed to previous projects that were more often publicly funded. With increased demand for flexibility and more speculative buildings the question of whether this is impacting the type of buildings being developed was posed to our panellists.

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Life sciences has been brought to the forefront by the pandemic and **Matt Smith** noted that they have seen a number of new entrants into the market who have bid on a life science opportunity with no previous experience in the sector and he expects this number to rise. As Director of Leasing at Biomed Realty, **Matt** pointed out that with the large portfolio of space they manage, they can provide space for companies to grow whereas new investors with no experience or portfolio might not be able to provide that as easily.

With Oxford University Development Ltd being a hybrid between public and private investment, **Anna Strongman** was able to give a different perspective. She believes it is about combining space for university researchers alongside space and support for businesses. "With new investors entering the sector they'll have to evolve and develop their great abilities in asset and property management to respond to the unique demands of this sector. But the more we build, develop and manage great spaces, that can only be to the benefit of the research institutions, researchers, businesses, and the country."

Adding a perspective from the more mature US market, **Matthew Powers** stated that whilst there was significant organic growth in the US, there was a significant amount of private investment and conscious effort from the US Government to help grow the life sciences sector in light of the 2008 Financial Crash. "The localised government here created a ten-year plan with tax credits for private investors and infrastructure investment from the government itself. For example, a town like Framingham, Massachusetts which is 20 miles West of Boston saw significant infrastructure investment and this allowed life sciences companies to build manufacturing facilities there. Creating that type of government investment could be a critical component to the future success of the industry in the UK, and I know that the UK government is looking at this today."

7. What are the required skills that set apart investing in real estate in the science sector compared to, for example, the industrial or retail sectors?

Investing in life sciences real estate requires a certain level of technical acumen that cannot be achieved overnight. With experience first-hand in the US market, **Matthew Powers** believes it is about understanding which technological advances and therapeutic breakthroughs are going to drive growth in the industry. "You have to understand which

ones are going to be changing the real estate landscape, which ones change the business and be forward thinking about which way the industry is heading. People can extrapolate where we are today and where the industry is going and much of that is predicated on the knowledge of the science and being able to forecast from experience how these things impact future investments."

Adding to this point **Anna Strongman** stressed the importance of being close to your customers. "Ultimately, you have got to understand what they need from their workforce, what they need from their properties and what they need from their investors. You have to help them get one step ahead, and if you're not close with your customers you're always going to be a step behind."

8. With Start-up business growth outweighing construction growth significantly are we seeing adequate investment?

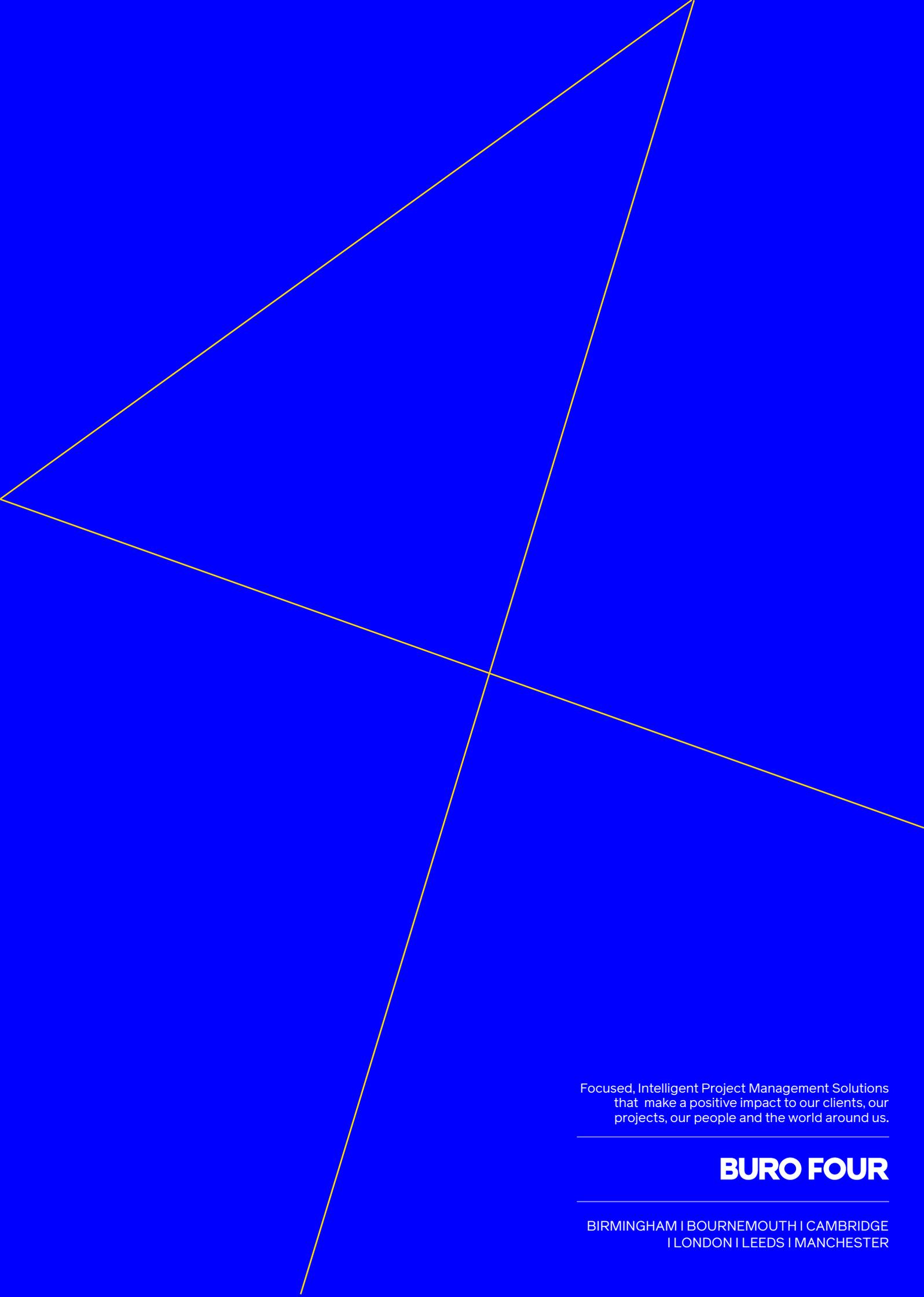
In the life sciences sector, you must understand what is driving demand, and one of those things is the significant venture capital flowing into the sector. **Matt Smith** considers that this weight of demand means more investors and developers will look at the sector as a viable alternative to more traditional sectors like office and retail. "It is less a question of if, and more a question of when. As the panellists have said we are in a nascent sector in its infancy, but if you look across the Atlantic and see the life sciences super clusters you see how good it could be, but that is just the benefit of time. The government is clearly backing a knowledge-led recovery and recognises the importance that the life sciences sector has to play in that. I have no doubt in due course there will be more equivalents in terms of the supply and demand as it were."

Have your say

You've heard what the experts predict for the future of the science, innovation and R&D sector. What do you think? Is there a specific point we raised you want to talk more about? Chat to us on LinkedIn, spark a discussion on Twitter or contact our team. We'd love to hear from you.



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