

An Examination of a Growing Sector

2022 Life Sciences Report



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Key findings



Australia's ageing and growing population, thirst for research and development and government strategies to position Australia as a global leader in innovation and technology are already laying the foundations for major growth within this sector.



Growth in the life sciences sector is closely linked to global healthcare expenditure, and this is rising as populations age and as governments tackle rising chronic and infectious diseases.



The Healthcare and Biotechnology industries in Australia are in a substantial growth stage of their life cycle. This growth is being driven by higher overall public funding for health services and Australia's ageing population.



Australia's population growth has been one of the fastest in the developed world, mainly driven by skilled migrants flocking to our growing economy in search of employment opportunities, education, and a better quality of life.



The growth in the Life Sciences sector has created a growing and specialist real estate need. There are now many specialist buildings - mostly associated with hospitals or universities - and the size of the sector as an asset class is growing.



The diverse space requirements include traditional office, labs and production-based facilities and these requirements are often needed in different combinations and very specific ratios of each.



Like many alternative real estate asset classes, many life science companies look to lock in longer lease terms, given the more specialised nature of the space they occupy. Therefore, life sciences real estate offers a lower risk asset with a long-term cash flow and reduced levels of rental downtime.



The fundamentals supporting Life Sciences has spurred growth in the commercialisation of the industry and therefore has fuelled growing interest in the Life Sciences sector and growth in investment opportunities.

Introduction



Joanne Henderson

National Director | Research



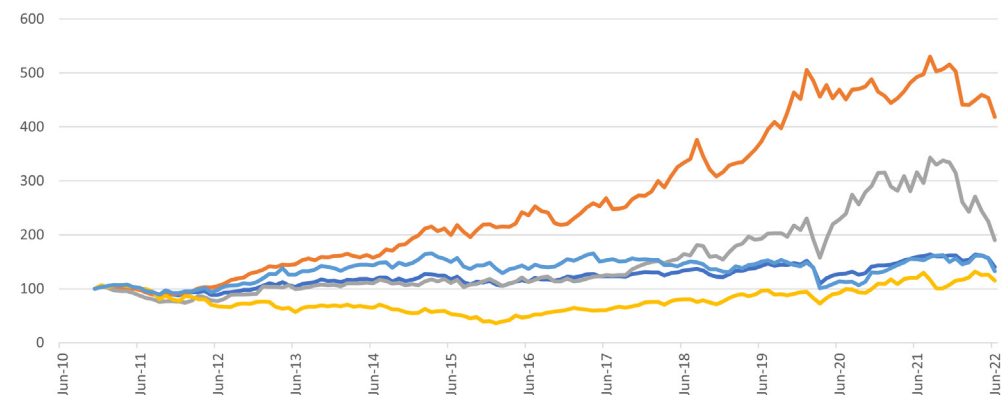
The Life Sciences sector has been in the spotlight over the last two years amidst a backdrop of a global pandemic.

However, the long-term fundamentals driving growth within this sector were prevalent pre-pandemic with Australia's ageing and growing population, thirst for research and development and government strategies to position Australia as a global leader in innovation and technology already laying the foundations for major growth within this sector. The emergence of COVID-19 and the global pandemic that ensued has further accelerated the need for research and development within the biomedical/ pharmaceutical industries.

The growth projections for Healthcare in general and the Life Sciences' sector is attracting growing interest from venture capitalists and institutional & commercial real estate investors, as the sector's strong fundamentals offer secure, reliable, and long-term income.

Index performance tracking from the ASX has shown that the listed health sector (which includes Life Sciences) has outperformed many other sectors. Over the period Nov-10 to Jun-22, the ASX 300 Healthcare sector grew by 319% - outperforming IT and other sectors such as Metals & Mining and Financials.

Chart 1: ASX Health Sector Index Performance Comparison (rebased to 100)



Source: ASX, Colliers Research

In this report we give an overview of the Life Sciences industry, some insights into key trends and demand drivers and the touch points on the real estate sector, as well as an overview of the current state of play in Australia.

Overview of the Sector

What encompasses Life Sciences? The Life Sciences sector can be diverse in nature, but mainly encompasses the fields of biotechnology, pharmaceuticals, biomedical technologies, healthcare technologies and medical equipment, botanical science, and environmental sciences. Life sciences companies and organisations in Australia are not just directly engaged in the fields of the sciences listed above, but include industry organisations (medical technologies, pharmaceuticals, digital health, food and agriculture), research institutions, government and regulation, funding bodies and support services. Growth in the life sciences sector is closely linked to global healthcare expenditure, and this is rising as populations age and as governments tackle chronic and infectious diseases.

The global pandemic has resulted in renewed attention to this sector, particularly around developing vaccines and eradicating disease and infection, however, growth within the industry was prevalent before the arrival of COVID-19.

According to AusBiotech's report 'Australia's Life Sciences Sector Snapshot 2022' there has been 43% growth in the life sciences sector since 2019. The report highlights:

- More than 192 life sciences companies are listed on the ASX (up 19% from 161 in 2019) and represents a market capitalisation of approximately \$233 billion, up from \$170 billion in 2019.
- There are 2,654 organisations in the life sciences sector, up 43% from 1,852 in 2019.
- There are approximately 263,693 people employed in the life sciences sector, up 21% since 2019.
- The life sciences sector has grown 60% since 2017.

The AusBiotech report also highlights that the Australian life sciences industry is dominated by medical technologies and digital health companies.

Biomedical research, including the fields of genomics, epigenetics, the microbiome, neuroscience, immunology, and cellular and molecular biology, are constantly improving our understanding of the human body and how it works in health, sickness, and ageing.



“ Technology and digital health underpinning growth within the Life Sciences Sector ”



Life Sciences in Australia – current state of play

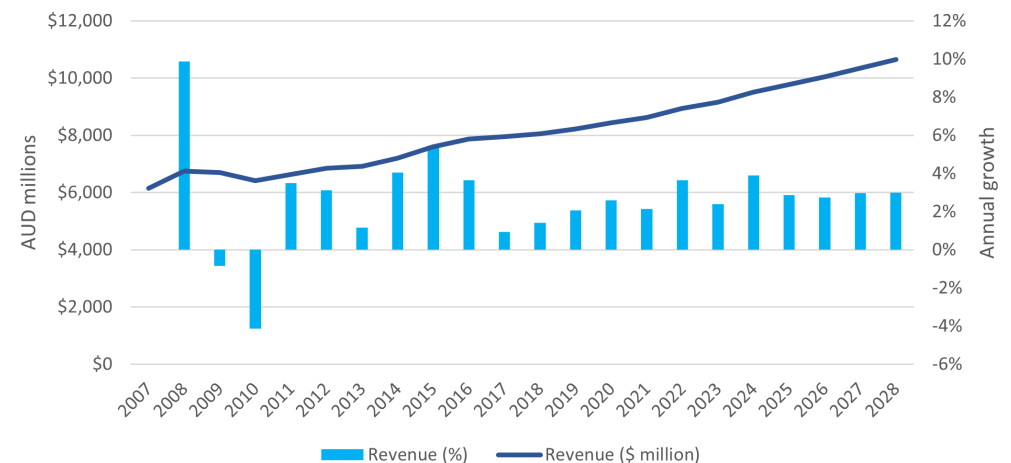


Australia – a key global player in the life sciences sector. As mentioned previously in this report, AusBiotech has reported that the life sciences industry has grown 60% since 2017 – adding approximately \$170 billion in gross value to the Australian economy and attracting a record level of capital raising in 2021 of \$8 billion, compared to \$1.7 billion in 2020 and \$1.08 billion in 2019. According to Global Australia (Federal Governments Global Business & Talent Attraction Workforce), Australia is ranked 8th globally in life sciences research and ranked top 6 in the fields of optometry, ophthalmology, paediatrics, and reproductive medicine.

Revenue on the rise. The Healthcare and Biotechnology industries in Australia are in a substantial growth stage of their life cycle. This growth is being driven by higher overall public funding for Health Services, particularly since the onset of the pandemic, (see section Government support) and also Australia's ageing population.

Industry revenue is forecast to grow at an annualised 3.0% over the five years through 2026-27, to \$10.3 billion. In the wake of the COVID-19 pandemic, industry operators stand to benefit from government-led efforts to enhance Australia's sovereign capabilities in the manufacturing of essential medical supplies, including vaccines.

Chart 2: Australian Biotechnology Revenue



Source: IBISWorld (Feb-22), Colliers Research



Government support. The life sciences sector has been identified by the federal government as one of the sectors of strategic priority in Australia for the future and as a result, a strong commitment has been made by the government, in terms of both financial and infrastructural support to further nurture growth in this area.

The life sciences sector benefits indirectly from the government's broader health and innovation funding allocation (including spending from CSIRO - Commonwealth Scientific and Industrial Research) such as the A\$500 million Biomedical Translation Fund and the A\$20 billion Medical Research Future Fund under the Department of Health.

Overview of Government backed funding initiatives

Biomedical Translation Fund (BTF)

The Biomedical Translation Fund (BTF) is an equity co-investment venture capital program. It provides companies with venture capital through licensed private sector fund managers. A total of A\$501.25 million is available through the Biomedical Translation Fund - A\$250 million is from Commonwealth capital and A\$251.25 million is from private sector capital.

Medical Research Future Fund (MRFF)

The Medical Research Future Fund was set up in 2015 by the Australian Federal government and was created to support the long-term investment of Australian health initiatives. The net interest from the MRFF supports ongoing medical research initiatives. In July 2020, the size of the fund was A\$20 billion.

Medical Research Commercialisation Fund (MRCF)

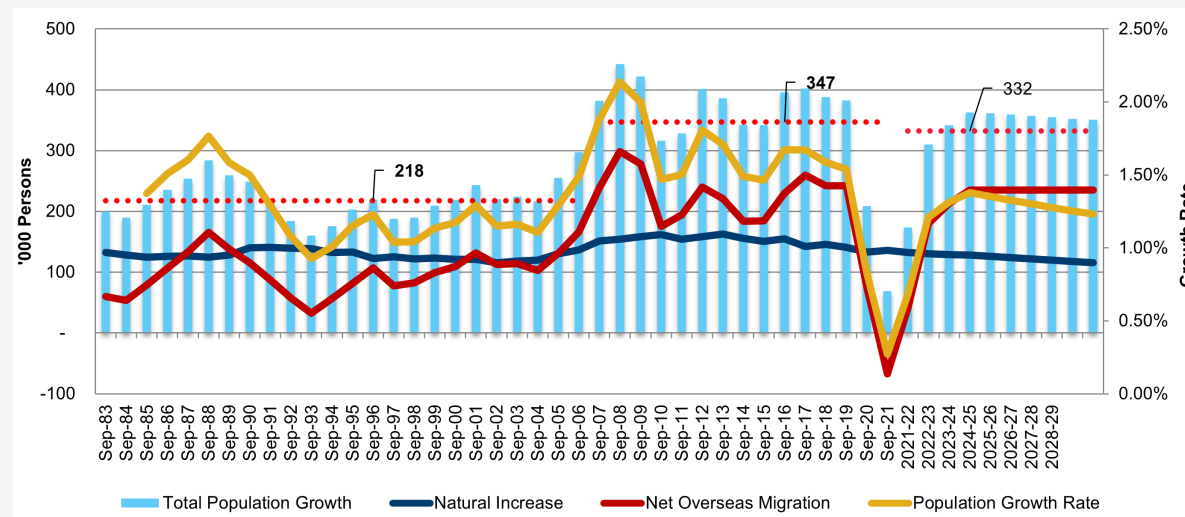
As well as purely government backed medical research funds, there is also a trend towards the collaboration of Government, private and institutional investment alongside specialist healthcare organisations. In 2007, the creation of the MRCF was established. The \$80 million fund is now the largest life science investment fund in Australia and New Zealand.

What is driving demand in the Life Sciences sector?

Growing and ageing population. Australia's population growth has been one of the fastest in the developed world, mainly driven by skilled migrants flocking to our growing economy in search of employment opportunities, education, and a better quality of life. Historically, international students have made up the largest category of temporary net migration and 39% of all Net Overseas Migration (NOM).

Australia will continue to be a top destination for migrants with many of Australia's cities still ranking top 10 on Global Liveability Indexes. Population forecasts from the Federal Government's 'Centre for Population' show the outlook for Australia's population growth to be on average 332,000 people per annum for the next 10-years. Although this is around half the population growth experienced over the previous 10-years, it is still an increase of 13% over the period and takes into consideration subdued NOM figures through to 2023.

Chart 3: Australia - Population Growth Outlook



Source: Colliers ABS 3101 (Sep-21)



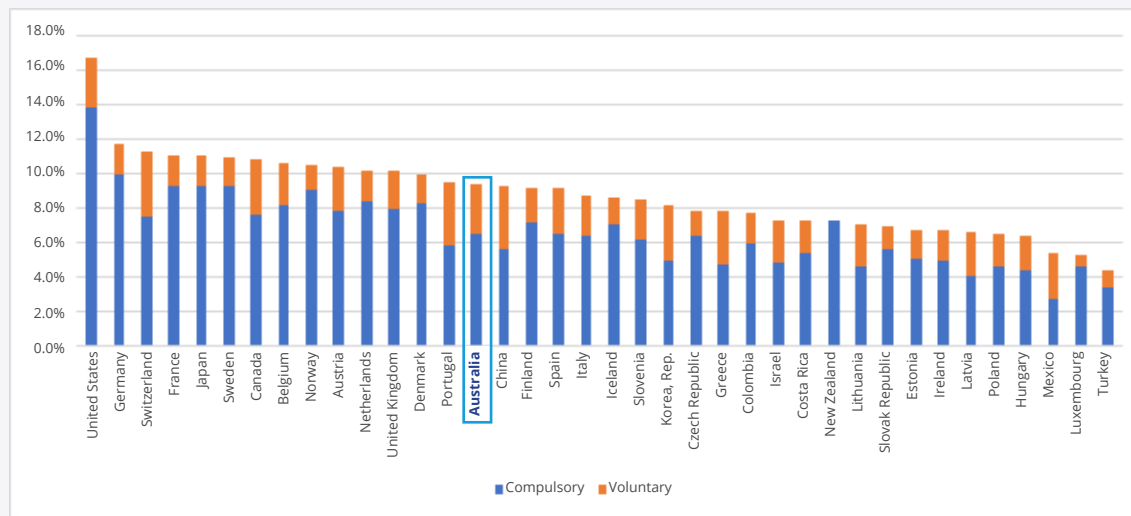
According to the World Health Organisation (WHO) life expectancy data (at birth), Australia is currently the 7th ranked country with the life expectancy of Australians at 83.04 years.

The business of ourselves – growing focus on health and wellbeing

Modern culture has seen the business of people looking after their bodies, health and wellbeing as a key focus and an increasing component of a person's everyday expenditure. Health expenditure is also rising as a result of the increasing prevalence of chronic and transferable diseases as well as increased life expectancy.

According to the Organisation for Economic Co-Operation and Development (OECD), Australia's health expenditure per person is higher than the OECD median (Organisation for Economic Co-operation and Development) based on data from 2019. It shows that among 38 OECD countries, Australia ranked 12th highest in both population and Gross Domestic product. In total health expenditure, Australia ranked 14th.

Chart 6: Health expenditure % to GDP, OECD countries, 2019



Source: OECD Database



Australia's health expenditure to GDP ratio has been above the OECD median throughout the period 2000 to 2019.

Life Sciences and Real Estate

The growth in the Life Sciences sector has created a growing and specialist real estate need. There are now many specialist buildings - mostly associated with hospitals or universities - and the size of the sector as an asset class is growing. Although it represents only 2% of the total securitised property market in Australia, the sector is growing and total assets under management are valued at approximately \$6.5 billion and the total market size is estimated at between \$150-\$250 billion (source: Preqin).

The requirements for real estate to house the multiple functionalities of the life sciences sector is vast and complex. The diverse space requirements needed include traditional office, labs and production-based facilities and these requirements are often needed in different combinations and very specific ratios of each, particularly at each stage of a life sciences company life cycle.

Outside of the specialised nature of life sciences space requirements, the real estate play is more akin to the general office sector, with typical space requirements being sub 750 sqm.

// Total assets under management are valued at approximately \$6.5 billion and the total market size is estimated at between \$150-\$250 billion. //

Key players

The past five years has seen the rapid deployment of capital from a variety of sources, these include, but are not limited to:

Company

Northwest

Australian Unity

Centuria

HomeCo

Charter Hall

Dexus

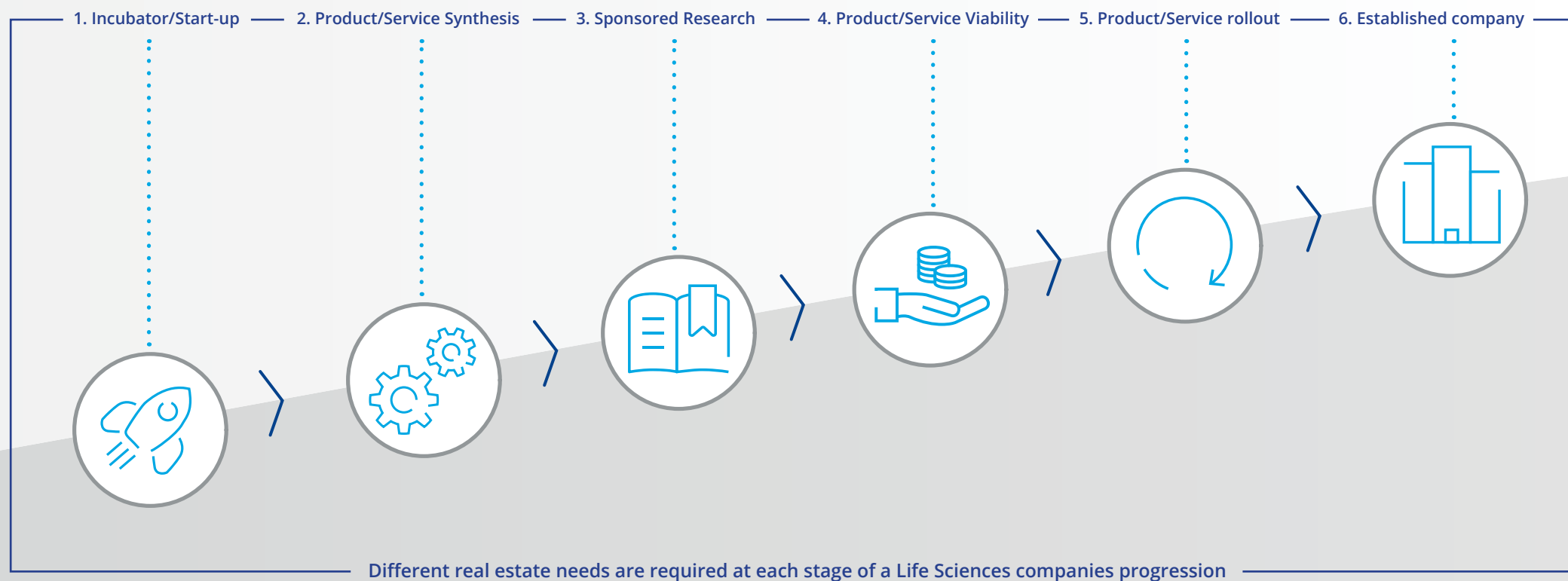
ISPT/HESTA

Barwon Investment Partners

Elanor Real Estate

Arena

Six stages of the Life Sciences company life cycle



Australia's Life Science Hubs

Australia has several existing Biomedical/Life Science hubs, with a number of institutions planning future development. The locations selected are generally chosen for their close proximity to major hospitals and significant academic research institutions/universities which has created an existing ecosystem of a skilled workforce and infrastructure. The clustering of businesses and institutions, particularly those that have a focus on research and development and innovation and technology, has been proven to successfully enhance and nurture businesses as it boosts knowledge sharing amongst like-minded companies to harvest synergy effects. Overall, countries with established clusters such as the UK, Germany, France and the US continue to attract large sums of capital from numerous global investors.

Victoria

Melbourne Biomedical Precinct

The Melbourne Biomedical Precinct (MBP) is among the top 10 medical hubs globally. The MBP is located in the Northern fringe suburb of Parkville which is only 4km outside of the Melbourne CBD. However, it is not only the precinct's inner-city location that has attracted many biomedical companies. Its close proximity to a number of leading hospitals, namely The Royal Melbourne Hospital, as well as one of Australia's highest ranked universities by global standings, The University of Melbourne, has made it a sought-after location for many biomedical and related organisations. The co-location of these companies within this area creates advantages and opportunities that attract entrepreneurs, research and educational institutions, government funding and start-ups that (by continuing to cluster) creates further opportunities. As a result of the ecosystem that has been created, the MBP consistently attracts around 23% of Australia's annual competitive research funding, more than any other cluster in Australia.

The success and global recognition of the MBP has gained interest from real estate investors. In May this year, the Dexus managed Healthcare Property Fund (DHPF) paid \$138.7 million for Building 404 at 399 Royal Parade and the neighbouring Manning Building which forms part of the Monash University Parkville campus and is occupied by its Pharmacy and Pharmaceutical Sciences faculty. The weighted average lease expiry was 12.4 years adding a large scale, long-term income producing asset to the fund.



Monash Technology Precinct

The Monash Technology Precinct is Victoria's largest employment hub outside of the Melbourne CBD and located only 23km South-East in the suburb of Clayton. The catalyst for the Monash Technology Precinct and the surrounding innovation cluster is Monash University, Australia's largest university and renowned for its science, technology, research and innovation faculties, particularly in the areas of health and medical research. The wider innovation precinct is also home to a number of leading research and development centres including:

- CSIRO
- The Australian Synchrotron
- The Melbourne Centre for Nanofabrication
- The Monash Clinical Trials Centre at Monash Health.

Although dubbed a 'Technology Precinct', the hub is becoming more focused on areas under the Life Sciences banner such as biomedical, MedTech, health science and pharmaceutical research and development with a vision to support the next-generation of pharmaceutical, biotech and medical therapeutics innovation. The precincts proximity to the new Victorian Heart Hospital, which is due to complete late 2022, further underpins the benefits of the clustering effect of educational facilities and globally renowned specialist hospitals alongside complimentary private sector businesses. Monash University also received \$5 million from the Victorian Government to manufacture the first Australian batch of the COVID-19 mRNA vaccine, using a vaccine developed by researchers from the Monash Institute of Pharmaceutical Sciences (MIPS).

The concentration of superior institutions and leading health and medical science companies is set to attract further organisations to the precinct, with the completion of the Victorian Heart Hospital expected to attract global players in this medical field to the precinct.



New South Wales

Although New South Wales is a well-established location for healthcare and life sciences companies, there is currently no major cluster or hub that is to the equivalent scale of the Melbourne Biomedical Precinct.

Key biotechnology precincts in NSW are located in:

- Randwick, Sydney (Prince of Wales Hospital/University of NSW)
- Westmead, Sydney (Westmead Children's Hospital)
- Camperdown, Sydney (Royal Prince Alfred Hospital)
- Darlinghurst, Sydney (St Vincent's Hospital)
- New Lambton, Hunter Valley (John Hunter Hospital/University of New England/Hunter Medical Research Institute HMRI).

MedTech Knowledge Hub

The medical technology (Medtech) industry makes a substantial contribution to the Australian economy, supporting 14,000 jobs, across nearly 3,000 businesses, generating \$12.7 billion in revenue per year.

The Medtech industry in New South Wales:

- supports 1,100 Medtech businesses
- employs around 7,000 people
- generates \$4.8 billion in revenue per year
- creates \$573 million in medical instruments and appliances exports

The MedTech Knowledge Hub is a vehicle for collaboration between academia, industry and government to improve the business environment for all facets of the medical technology industry.

UNSW Health Translation Hub (Randwick)

UNSW is a major leading Australian university, ranking 70 in the Times Higher Education World University Rankings 2022. Being adjacent to one of NSW's major teaching hospitals – the Prince of Wales Hospital – UNSW has developed a strong life sciences research focus. The UNSW Health Translation Hub is the latest addition to this campus, providing specialist facilities to replace existing ageing facilities and providing UNSW with significant expansion space.



South Australia

Adelaide BioMed City, Adelaide

Adelaide BioMed city is a world leading \$3.6 billion health and life sciences precinct located along the northern end of the Adelaide CBD and was formally launched in November 2018. It brings together capabilities in research, education, clinical care and industry to drive innovation and translation. The precinct is strategically located close to the Royal Adelaide Hospital and major universities (University of Adelaide, University of South Australia and Flinders University) and integrated partnerships exist between these institutions. The precinct is home to around 2000 medical researchers working across research and education, as well as the commercialisation of new technologies.

South Australian Health and Medical Research Institute (SAHMRI)

Adelaide BioMed City is also home to the South Australian Health and Medical Research Institute (SAHMRI) which is South Australia's first independent flagship health and medical research institute. SAHMRI's new building, the Australian Bragg Centre will include world-class facilities for cutting edge research by SAHMRI, and lab and office space for biomedical companies and educational institutions. The heart of the building, its bunker, will accommodate Australia's first proton therapy unit – known as the Australian Bragg Centre for Proton Therapy and Research. It will deliver the most technologically advanced, precision radiation therapy ever seen in the Southern Hemisphere, delivering cancer destroying protons to the tumour site of otherwise inoperable cancers, without affecting healthy tissues. This is a game-changer for this kind of treatment in Australia, with patients currently having to travel overseas for this kind of therapy. It is also expected that the facility will attract overseas patients, particularly from the southern hemisphere.

The facility has recently been sold on a fund-through basis to Dexu & the Healthcare Wholesale Property Fund (HWPF) on a 50/50 basis for \$436.2 million (based on approx. completion value), the largest deal of its kind for a life sciences asset. Designed by Woods Bagot, the Australian Bragg Centre has a total of 32,000 sqm across 15 levels, which includes three levels below ground and 11 levels of lab space, along with 10 clinical trial rooms. It is expected to be completed in late 2023 and once open it is estimated that between 600-700 patients could be treated there each year.



A global perspective - U.S. Life Sciences Market



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The U.S. life sciences sector consists of companies ranging in size from large, public multinational firms to start-ups and healthcare and research institutions. The continued need for the development of new drugs and medical therapies has created consistent demand for sophisticated life sciences facilities that can accommodate an ever-widening range of potential life sciences uses. This demand for facilities across markets has increased to all-time highs post-Covid.

These life sciences organizations exist at the confluence of education, healthcare, and research and often have established, synergistic relationships geared towards the pursuit of innovation. Each of these life sciences participants requires specific facility solutions ranging from lab to office to manufacturing space to assist in its daily operations.

Life sciences firms reside in markets throughout the U.S. However, life sciences companies and facilities have become “clustered” in several primary life sciences markets as the industry has evolved. These regional clusters include greater Boston, greater San Francisco, San Diego, New York and New Jersey, the North Carolina research Triangle Park and Seattle. An emerging opportunity has begun to appear in some secondary cities as well as in university towns anchored by leading health systems or research institutions.



The life sciences sector has played a crucial role amid the COVID-19 pandemic. To overcome the global crisis, industry competitors partnered to accelerate research efforts, ultimately developing the fastest novel vaccine in history.¹ In total, the U.S. Food and Drug Administration (“FDA”) approved 50 new drugs and biologics in 2021 and more than 300 since 2015. While the pandemic illuminated the proficiencies of the life science sector, technological advancements and the emergence of artificial intelligence and machine learning techniques have significantly lowered the cost of genetic sequencing and clinical trials, affording a larger band of researchers to seek novel discoveries.

Life science companies strive to develop next-generation treatment methods to meet the needs of a worldwide aging demographic as well as reducing the cost of treating and/or curing chronic diseases through targeted research. However, the discovery of innovative biologic therapeutics is characterized by greater complexity and risk. As such, large pharmaceutical companies have adapted their drug product research budgets to reduce the aggregate financial risks of drug discovery. Consequently, large pharmaceuticals now focus less on in-house development and deploy a significant share of their research capital across smaller biotech firms via joint venture agreements or outright acquisition to gain access to new drugs and therapies.

The shift in the investment philosophy of big pharmaceutical companies has provided biotech companies with a growing amount of capital, fueling real estate demand. Such capital funding is primarily funneled to “cluster” markets that share crucial attributes: proximity to and/or affiliation with a prominent healthcare system, research or educational institution, the prevalence and steady pipeline of a deep technical and scientific talent pool, existing life sciences companies, and available capital to fund R&D.

Demand for life sciences real estate is no more apparent than leasing activity within the three premier life sciences cluster markets of Boston, San Francisco, and San Diego. For example, in the Boston life science cluster market, average triple-net asking rents for sophisticated lab/R&D inventory have increased 92 percent over the last three years while inventory increased 46 percent and vacancy rates declined to 1.1

percent over the same period.² While leasing velocity accelerated in the wake of the pandemic, the intersection of technological advancements and lower research and development costs fueled investor appetite for exposure to biotech and pharmaceuticals for years before Covid. The U.S. life sciences sector benefitted from a 13.8 percent average annual increase in venture capital funding over the ten years preceding the global crisis. From 2019 to 2021, venture capital funding more than doubled from \$17.5 billion to \$37.3 billion with aggregate funding to the sector exceeding \$100 billion³ with low vacancy rates in the premier markets, preleasing activity on new developments and conversion activity was running in excess of 50 percent as of the third quarter of 2021 for buildings that are not scheduled to deliver until 2023 and beyond.⁴

While venture capital funding has increased nationally for all cluster markets over time, the premier cluster markets have consistently garnered approximately 60 – 70 percent of the financing for biotech and pharmaceutical companies each year. The persistent and steady share of funding notably distinguishes these premier life sciences markets from other U.S. clusters due to unmatched market maturity and depth of talent.

Historically, returns on life sciences real estate have been insulated from macroeconomic risks, owing to their demographic and quality of life demand factors. The life sciences sector benefits from aging U.S. and worldwide population demographics and the recurring demand for the latest drug therapies, procedures, and discoveries emerging from life sciences industry participants. Continued and growing funding facilitates the start-up, development, and eventual commercialization of new drugs, therapies, and other healthcare solutions. The combination of all these factors has led to strong real estate performance in the life sciences sector as well as favorable conditions in the capital markets as investors seek these assets. As these trends are expected to continue, the life sciences is an increasingly compelling institutional real estate investment category with ample room for growth in the coming years.

**END NOTE**

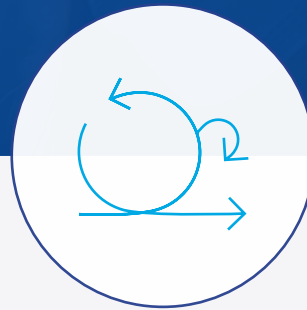
1 Novel Drug Approvals, FDA, as of February 28, 2022

2 CBRE 2021

3 PitchBook, as of February 28, 2022, and Harrison Street Research

4 CBRE 2021 and Harrison Street Research

Investment Trends that will benefit the Life Sciences Sector



- 1. Weight of capital.** The weight of capital looking to be invested into the property sector continues to increase. This has primarily been driven from superannuation funds which continue to see retirement savings grow annually, as well as an increase in interest from offshore capital into the Australian market. Superannuation money tends to be 'patient' or long-term capital, with many superfund managers looking for long-term stable returns for their members or clients.
- 2. Diversification and demand for lower risk assets.** Like many Alternative real estate asset classes, many life science companies look to lock in longer lease terms, given the more specialised nature of the space they occupy. Therefore, life science real estate offers a lower risk asset offering a long-term cash flow with reduced levels of rental downtime. The rise in demand for long weighted average lease expiry (WALE) assets has been apparent over the last two years through the pandemic. Investor interest in long WALE assets is not a new trend, however the current uncertainty has increased focus and therefore competition for these assets. Yields have been driven downwards as a result.
- 3. The commercialisation of the healthcare and life sciences sector.** Commercialisation has led to further investment in research over the past five years. The fundamentals supporting Life Sciences has spurred growth in the commercialisation of the industry and therefore has fuelled growing interest in the Life Sciences sector.



Why are investors choosing the Life Sciences sector?



The potential for significant capital growth



Supports both financial and social objectives

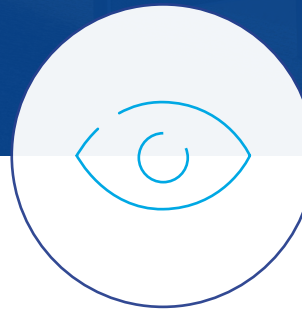


Diversification of investment portfolios



Insulation from broader economic conditions

Outlook



The life sciences industry is clearly entering a significant stage of growth, accelerated by a renewed focus on health and biotechnology as a result of the COVID-19 pandemic, but also underpinned by solid fundamentals such as population growth, an increase in aged population and a rise in health expenditure.

We expect that both the Federal and local governments will continue to invest further in the health and life sciences sector, in addition to an increase in private investment and PPP's.

Due to the specialised requirements needed for both the location (close to hospitals, health institutes and universities) and type of building (laboratories, R&D space, specialised storage requirements etc) for a life sciences occupier, new purpose-built developments will in many cases be the only option and therefore provide opportunities for real estate investors and developers to capitalise on the growth outlook for this industry, whether through direct development opportunities or fund-through development transactions.

A health and life sciences asset offers a unique investment proposition that provides exposure to a growth industry, alternative asset class for portfolio diversification and a lower risk asset offering a long-term cash flow with reduced levels of rental downtime.



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