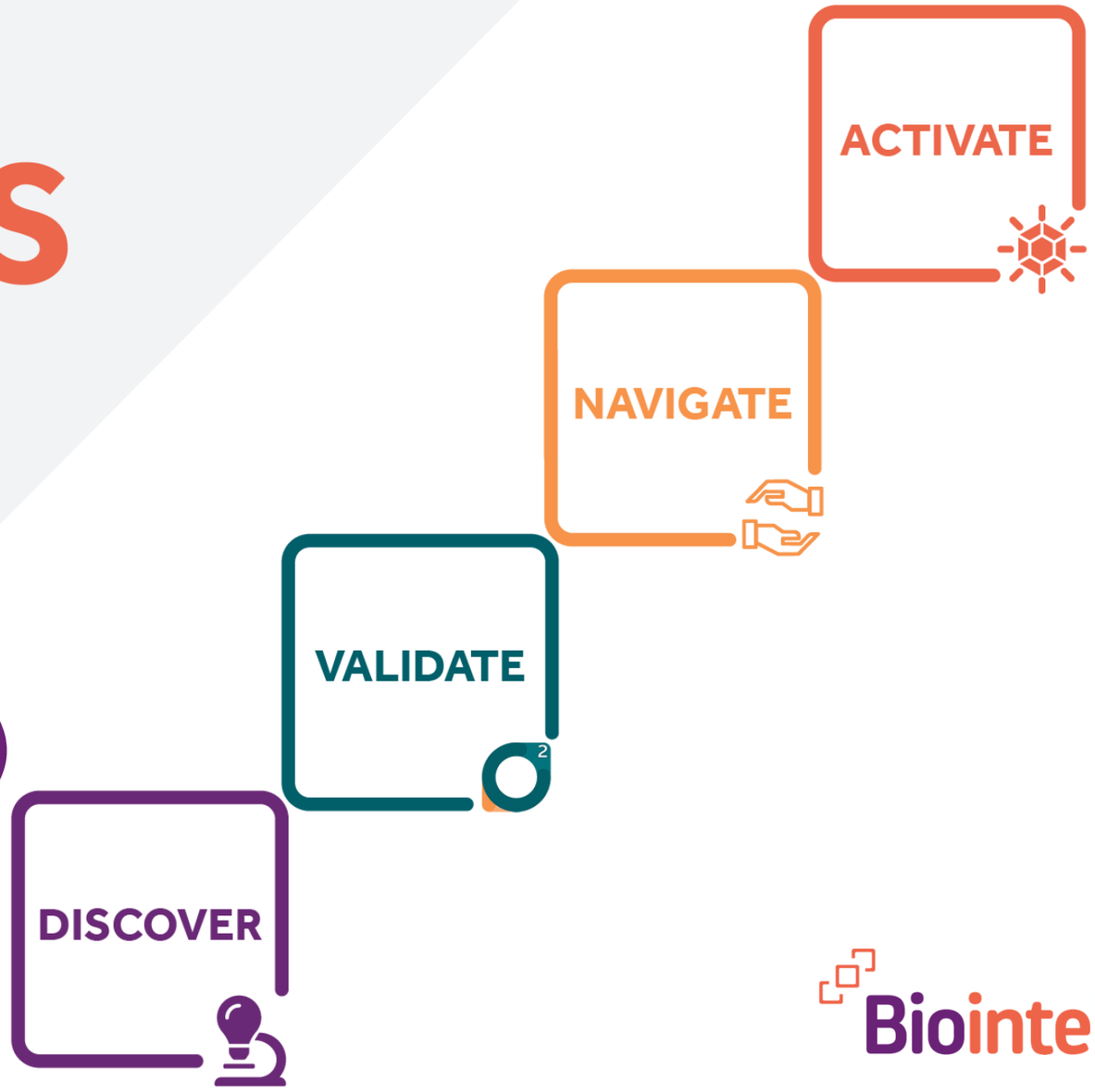
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Macroeconomic market analysis report

BRINGING INNOVATIONS TO LIFE



STEP BY STEP

Wentworth Capital
Life Sciences Hub (Camperdown)

Final Macroeconomic Market Analysis Report

Version 4

13 June 2025

Biointelect

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Purpose of this report

Wentworth Capital is seeking to position the development opportunity at the Life Sciences Hub (Camperdown) to key stakeholders, including City of Sydney, NSW Government and investors. *Investment in life sciences precincts requires a sustained and detailed engagement with stakeholders, including the University of Sydney, City of Sydney and NSW Government.*

1. Provide a comprehensive overview of the life sciences industry in Australia (and NSW)

- Provide detailed advice and analysis regarding the current state of the Australian life sciences sector, in international context, organisational structures and existing hubs where life sciences organisations are located (highlighting areas of comparative advantage and potential gaps in the market)
- Identify opportunities to enhance the competitiveness of the Australian (and NSW) life sciences sector
- This analysis will consider the biotechnology, pharmaceutical, medical technology (medtech) and digital health subsectors of the life sciences field

2. Assess macroeconomic factors and government policy affecting the life sciences sector in Australia (and NSW), in international context

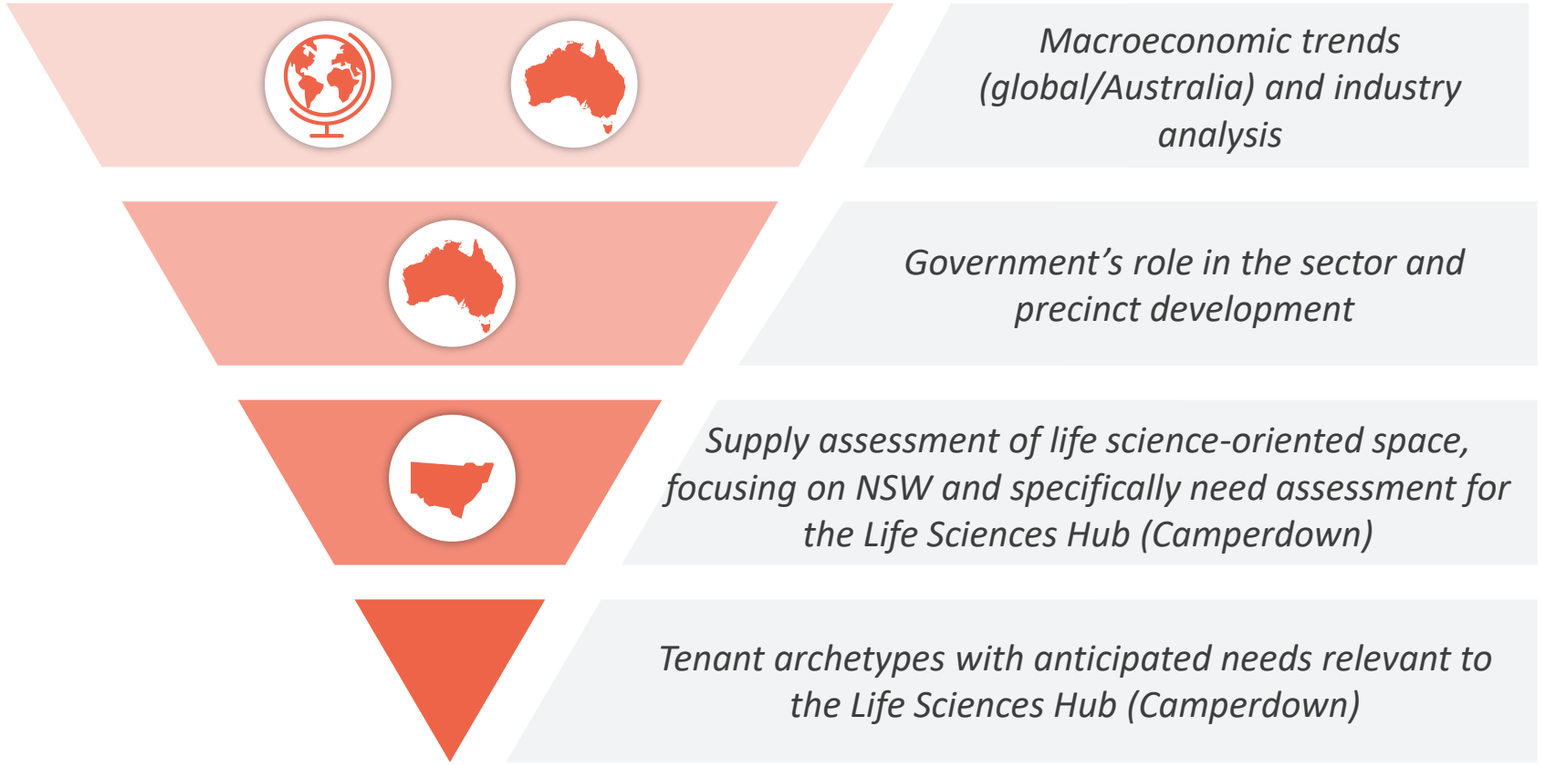
- Assess economic factors affecting the life sciences sector in Australia and investment trends
- Conduct an analysis of investment trends in major global markets (US, EU, UK, Japan, China), considering the anticipated impacts of technological advancements affecting the life sciences sector, and implications for investing in Australian projects (opportunities and threats)
- Review macroeconomic and policy (state and federal) factors affecting the life sciences sector in Australia, in international context

3. Develop a strategic partnership to guide Wentworth Capital's investments in the Life Sciences Hub (Camperdown) and broader life sciences strategy

- Provide a concise report detailing strategic considerations and recommendations based on the current state of the NSW and Australian life sciences sector, international trends, macroeconomic and policy factors – to guide Wentworth Capital's investment in the Life Sciences Hub (Camperdown)
- [Optional, to be further scoped] Develop a roadmap and provide ongoing advisory support to Wentworth Capital as the investment strategy progresses for both the Life Sciences Hub (Camperdown) and broader investments in life sciences in NSW and Australia

Informing Wentworth's strategic priorities for Australian life sciences investments

This report provides an overview of the macroeconomic environment and trends in the Australian life sciences sector, to inform strategic positioning with government and target identification for the Life Sciences Hub (Camperdown), as well as Wentworth's broader life sciences strategy



Key Recommendation: *Market research is recommended as a next step to support a detailed demand assessment and inform decision-making on strategic positioning and the Life Sciences Hub (Camperdown) proposed activity mix. This would seek to validate:*

1) *Current and future demand for life sciences infrastructure,*
2) *Infrastructure needs and success factors, and*
3) *Existing strengths and perceptions of Camperdown/Tech Central for life sciences companies.*

Key Findings

Camperdown is positioned at the nexus of world-leading institutions and businesses

Dedicated life sciences spaces are required to accommodate this growing sector, which has the backing of state and federal governments

Sydney Biomedical Accelerator

- Start-up hub for biomedical spinouts
- Integrated with University of Sydney

- Innovation Blueprint, Industry Policy and Industry Development Framework that promote life sciences and adjacent sectors
- NSW Health & Medical Research Strategy
- Support for biomedical translation and commercialisation
- Major life sciences infrastructure developments in Viral Vector Manufacturing and RNA Pilot facilities

TechCentral Precinct

- Leading Australian tech businesses
- Scale-up hub for technology businesses, including medtech and digital health focus

Life Sciences Hub (Camperdown)

- *Core clinical research facility*
- *Scale-up hub for biomedical businesses*

- Demand for lab space in NSW is expected to be driven primarily by the growth of biotech, medtech, and research and clinical service companies requiring affordable and scalable PC1 and PC2 labs, shared facilities with specialist equipment, and fitted out prototyping and fabrication labs
- Adjacent subsectors, such as quantum and digital health, are likely to seek co-location opportunities through shared office spaces that foster collaboration and knowledge exchange

KEY OPPORTUNITIES

- Australia has an expanding biomedical sector, which has seen growth of more than double the number of life sciences organisations between 2017 and 2024
- Australia is an important global market to commercialise new biomedical technologies and Sydney is home to a majority of multinational affiliate companies operating in Australia
- Foreign direct investment (FDI) in the Australian life sciences sector focuses on contract services, in particular for early phase clinical trials, which is encouraged by the federal R&D Tax Incentive
- Investments in the life sciences sector generate wider economic benefits for the City of Sydney and NSW, through job creation and multiplier effects across the economy

Life sciences is a global growth sector that is generating strong growth in NSW

The global life sciences sector is a high-value, growth industry

The value of the global pharmaceutical market is projected to grow 38% from 2023-28

Pharmaceutical trade flows primarily from EU, US, China and Japan; FDI and deal flows focus on US, Europe and China

Investment in life sciences grew steadily over the last decade, with a rapid increase during the pandemic and slowing since

With reduced risk appetite, investors are focusing on defined/ proven products, and biotechs increasingly rely on partners to support development and commercialisation activities

Global and Australian growth is driven by new technologies

These are shifting treatment modalities and R&D, altering infrastructure needs and highlighting gaps in Australia

Regenerative Medicine

Therapies to manipulate or modify a patient's cells or genes to treat disease

Personalised & Precision Medicine

Omics technologies increasingly applied, enhancing efficiency and reducing costs

Medical Technology

Evolving with patient-specific orthopaedics and bioprinting for regenerative medicine

Advanced Technology & Computing

Convergence of AI, quantum computing and digital health transforming life sciences

The NSW life sciences sector has grown and is well-positioned for further expansion

Digital Health
45.6%
CAGR 2017-22‡

Research & Clinical Services¥
19.3%
CAGR 2017-22‡

Medtech¥
12.5%
CAGR 2017-22‡

Biotech
11.9%
CAGR 2017-22‡

*NSW led Australia's expansion in the number of **digital health companies**, with the greatest increase of between 2020 to 2022.*

*NSW is Australia's leading hub for **medtech**, accounting for 57.3% of all companies in the sector.*

*NSW has the highest density of **multi-national (MNC) pharmaceutical companies** at 61.7%, compared to VIC at 30.9%.*

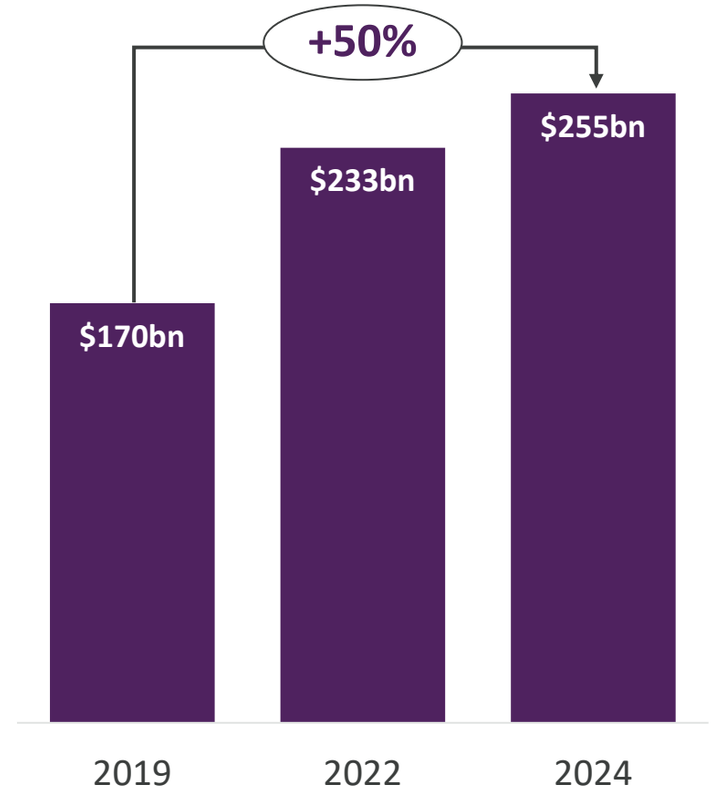
‡CAGR for digital health was calculated based on 2020-2022 figures; ¥ Medtech represents medtech & digital health figures from AusBiotech; Support services were used as an indicative measure of research & clinical services (CRO/CDMO) – there is potential this growth is also driven by consultancies.

Source: IQVIA Institute, The Global Use of Medicines 2024: Outlook to 2028; AusBiotech Sector Snapshot (2022;) ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022)

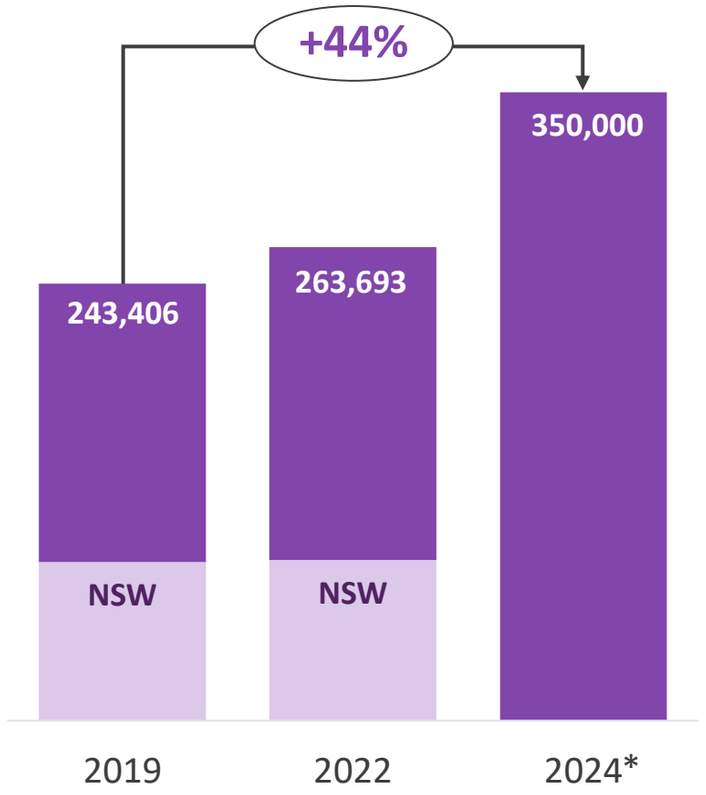
Sustained growth reflects the expanding nature of the sector in Australia

These growth fundamentals are expected to fuel demand for specialised life sciences commercial property

Growth in market capitalisation of ASX-listed biotechnology industry



Growth in number of employees in the life science sector



Growth in number of life science organisations



**NSW number of employees in 2024 not available.*

Source: AusBiotech Australian Biotechnology Sector Snapshot (2022), AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025)

Australia is an important market for biomedical products and an R&D destination

Australia is a relatively small market (globally), but has a sophisticated healthcare system and strong government support for R&D

Indicators influencing Australia's attractiveness:

Market for Biomedical Products

Population Growth: Population aged over 65 is set to almost double by 2060, driving health expenditure.

Health Spending as a Percentage of GDP: Australia is among the top 15 countries in the world in health expenditure.

Spend on Innovation: Australia is ranked 15th in OECD for the proportion of new drugs reimbursed.

Respected Regulatory System: Recognition of TGA approvals and work-sharing arrangements can enable streamlined submission across countries.

R&D Destination

R&D Expenditure and Funding: Australia has had consistent growth in health R&D expenditure, >$7bn in 2022-23. 73 biotech IPOs raised $1.55bn between 2010-2022. Biotech/medtech are among the top 3 sectors attracting VC funding.

Government Support: Over $14bn in government R&D expenditure in 2024-25 including $4.2bn in R&D Tax Incentive.

World-Leading Institutions and Clinical Trial Capabilities: Leading universities (40) and medical research institutions (55), supporting a thriving clinical trial sector.

Clinical Trials: Growing sector which attracts $1.25bn in industry expenditure.

Skilled Workforce: Australia has 109K STEM and Health graduates (2022), and 350,000 employed in life sciences (2024).

IP Protection: Perceived as a market with strong IP protection for innovations.

Research Infrastructure & Precincts: Health and innovation precincts across every major city, enabling collaboration across industry, research institutes, and universities.

TGA = Therapeutic Goods Administration

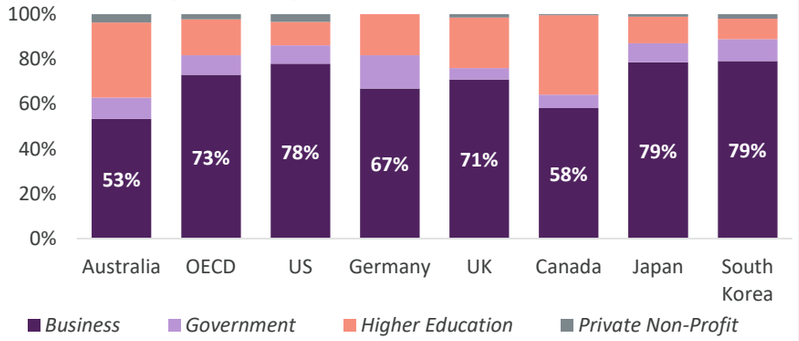
Source: AIHW, Health expenditure (2023;OECD Data Health Spending (2023); PhRMA Global Access to New Medicine Report (2023); Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25; DISR, STEM Equity Monitor (2025)

Barriers to commercialisation and translation limit Australia's ability to capitalise on investments in health and medical research

Private investment and partnerships are required to develop the life science ecosystem

Australia remains heavily reliant on public sector funding, with business investment in R&D (BERD) significantly lower than key competitors:

Components of Gross Expenditure on R&D in 2021



- Expanding private sector investment, such as the Life Sciences Hub (Camperdown), will be essential in developing self-sustaining innovation precincts.
- This can attract additional capital, enable collaboration, and fund specialised infrastructure otherwise cost-prohibitive, ultimately supporting commercialisation, strengthening Australia's global competitiveness and driving economic outcomes.

While gaps remain, there have been recent developments across three areas that are associated with commercialisation…

1 Access to private capital

- Australia's industry structure is dominated by small businesses (93%), many of which operate with limited cash flow, restricting the ability to invest in R&D and scale.
- Australia lags behind major global markets in access to venture capital and attracts just 3% of global life sciences FDI, which predominantly goes to contract services.
- Recent expansion of Australian life sciences-focused funds include: Brandon Capital over $1.25bn across six funds; Uniseed over $200m; Breakthrough Victoria $2bn (across multiple sectors); Tenmile estimated $250m; Tin Alley Ventures $100m; ANDHealth; Proto Axiom and One Ventures

2 Specialised infrastructure

- Access to affordable laboratory space and essential infrastructure (e.g., biobanks and advanced manufacturing) remains a key challenge.
- Recent developments include the Jumar Bioincubator (VIC), UNSW Health Translation Hub and UoS Sydney Biomedical Accelerator.
- Major investments from NSW Government intended to stimulate further activity include NSW Health Statewide Biobank, the RNA Pilot Manufacturing Facility and Viral Vector Manufacturing Facility.

3 Skilled workforce

- Australia has historically seen a steady "brain drain" of highly-skilled workers to larger, better-funded life sciences hubs in the US, Europe and Singapore.
- Development of the local life science ecosystem, including through private investment and researcher-industry partnerships, is important.
- Recent partnerships between Sanofi and QLD's Translational Research Hub and Moderna and Monash University provide opportunities to retain talent in Australia – similar partnerships in NSW are required.

Source: Strategic Examination of R&D discussion paper; UK Life Sciences Competitiveness Dashboard (2024);

NSW Govt supports precincts to stimulate economic growth and R&D commercialisation

The Australian and NSW Governments have demonstrated commitments to life sciences through sustained policies and investments

Australia's innovative life sciences industry delivers significant value to the economy

- Life sciences has a high R&D intensity which fuels economic growth from activities across the value chain
- The return on investment from medical research to the economy has been estimated at $3.90 per dollar invested (2018)
- State-based analysis conducted in WA and VIC suggests this may vary on a state-by-state basis

The Australian Government has demonstrated enduring cross-party commitment to life sciences over the past 100 years

1985
Research & Development Tax Incentive (RDTI)

1990
Cooperative Research Centre Grants (CRC)

1992
National Health & Medical Research Council (NHMRC) Act

2004
National Collaborative Research Infrastructure Strategy (NCRIS)

2015
Medical Research Future Fund (MRFF)

NSW Government's focus for life sciences is driving economic growth, leadership in innovation and healthcare advancement

- NSW continues to invest significantly in health/research infrastructure
- Government is currently driven to improve NSW's relative innovation performance
- NSW Health Research and Innovation Strategy 2025-2030 highlights precincts and place-based initiatives as a key focus

>$5bn
in life sciences infrastructure

$3.4bn
for capital works in 2024-25 budget

Health and innovation precincts have been identified as an opportunity to address Australia's commercialisation challenges

- Precincts generate economic and social returns
- Private investment makes critical contributions to life sciences and precinct developments, contributing to precinct maturity

sanofi — *Translational Research Institute (QLD)*

moderna — *mRNA Manufacturing facility & Regional Research Centre for Respiratory Medicines and Tropical Diseases (VIC)*

Plenary — *UNSW Health Translation Hub (NSW)*

AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020), https://www.nrf.gov.au/; https://www.industry.gov.au/publications/medical-science-co-investment-plan; Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25;

Camperdown is positioned to promote research commercialisation and translation

This includes access to critical funding to develop infrastructure that attracts capital, retains IP, and supports talent retention

Support needed	*Camperdown's key strengths*	
1 Access to capital	**Industry Tenants which can support crowding in of capital** *Atlassian, SpeedDx, Quantium, Harrison.ai, Clarity Pharmaceuticals, SpeeDx, Anthrocell*	Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and talent. ***Examples in Tech Central**: USYD, UTS, Notre Dame University, SBA, CSIRO Data61, Centenary Institute of Cancer Medicine and Cell Biology, Chris O'Brien Lifehouse, Woolcock Institute of Medical Research.*
	Existing incubators to support a pipeline of companies *Cicada Innovations, SBA Incubator*	
2 Specialised infrastructure	**Strong commitment and support from government** *$48.2 million from NSW government into Tech Central precinct*	Colocation with hospitals and clinical research provide the necessary expertise and patient settings to support successful life sciences product development (and delivery). For example, the advantage of proximity to the Department of Cell and Molecular Therapies (CMT) at RPAH. ***Examples in Tech Central:** RPAH, I-MED, National Research Cyclotron, George Clinical, Professor Marie Bashir Centre, The Boden Initiative Clinical Trials; NHMRC Clinical Trials Centre University of Sydney.*
	World-leading universities & MRIs to leverage existing infrastructure and collaboration	
3 Expertise and knowledge sharing	**Availability and access to talent** *There are over 160,000 STEM graduates in NSW, and Tech Central is projected to have 25,000 jobs by 2036 with a focus on STEM and life sciences*	Proximity to the CBD is a key strength of Tech Central over other health and innovation precincts in NSW. Benefits include a large population and high connectivity from public transport, supporting talent attraction. ***Examples in Tech Central:** Lightrail, Metro, Train, Central Station, Buses along Parramatta Road.*
	Proximity to CBD	

MRIs = Medical Research Institutes; RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator
Source: NSW Government Sydney Innovation and Technology Precinct

Life Sciences Hub (Camperdown), adjacent to Tech Central

Section 1

The proposed development envisions a world-class Life Sciences Hub

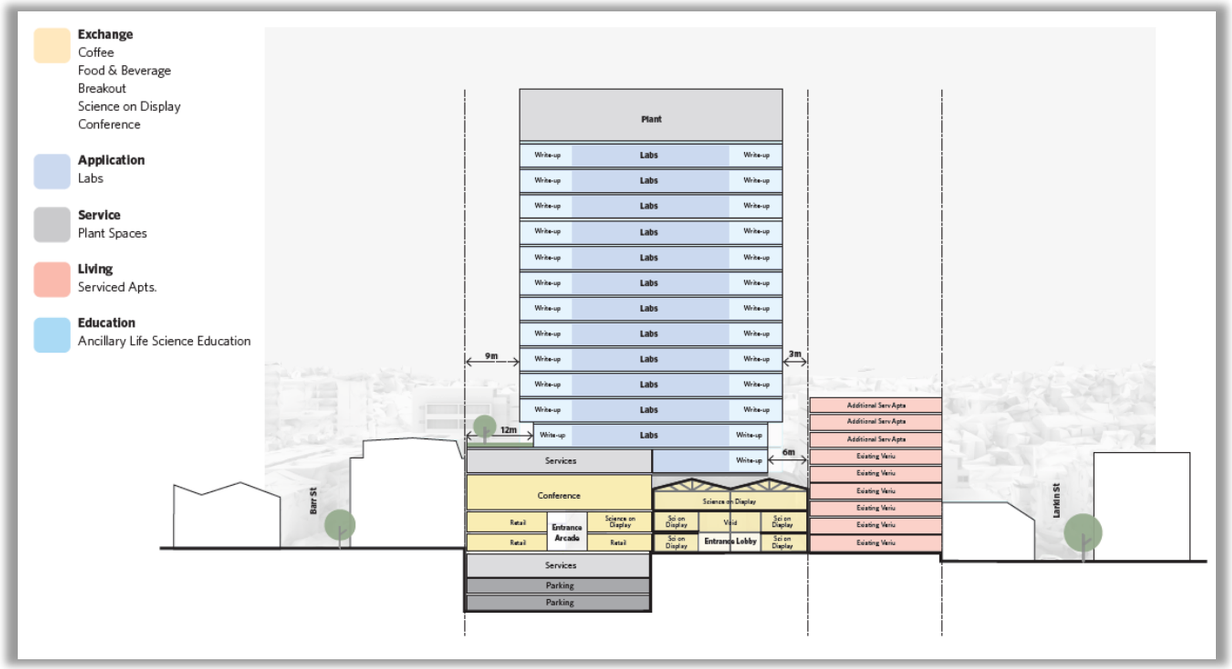
University of Sydney and Wentworth Capital, aim to establish Camperdown as a premier Life Sciences Hub (Camperdown), through a life sciences research facility at 84-94 Parramatta Road, Camperdown

The proposed site will be tailored to the specific needs of the life sciences industry to address the critical need for laboratory infrastructure in NSW and to support translation and commercialisation.

The proposal includes a total gross floor area (GFA) of 38,802m² including a Life Science Tower Block across 15 Storeys and 2 Plant Levels. Economic modelling indicates the proposal will generate approximately 1,200 FTE jobs, including researchers and support staff. This will support the creation of new life science jobs and wider economic benefits for the city.

Leveraging the location within the Camperdown node of the Tech Central precinct, this site will aim to attract domestic and international life sciences companies to Sydney.

This new campus will be adjacent to the **University of Sydney** and **Sydney Biomedical Accelerator** and will be integrated to complement the existing life science and innovation ecosystem. This proposal provides critical space for the translation and commercialisation of biomedical and life sciences research, growing the precinct to **~190,000m² of life sciences floor space**.



Atlas Economics Market Demand & Economic Impact (2025); HDR Analysis, Life Sciences Hub (2025)

Biointelect

Camperdown is adjacent to Tech Central, a precinct focused on tech and life sciences

Tech Central is a 6km^2 precinct bordered by Haymarket, Camperdown, and South Eveleigh in Sydney's CBD. The precinct currently has the highest concentration of tech industry businesses in Australia, including Atlassian, Afterpay, Canva, Safety Culture and Rokt, as well as 150 research institutes/centres of excellence.

The precinct **directly** and **indirectly** stimulates the **NSW economy** via:

- **Capital investment** (buildings for office, labs and healthcare)
- **R&D expenditure**
- Labour force **skills** development
- Research **translation**
- Labour force **productivity**
- **Service delivery expenditures** (health and education)
- **Commercial tenant income** generation

The Tech Central Strategy seeks to grow the precinct to deliver:

- **25,000 jobs** by 2036 with a focus on STEM and life sciences
- **250,000m^2 of net lettable** floorspace for tech companies
- **50,000m^2 of lettable** affordable workspace for start-ups
- **100 new scale-up** companies

A number of existing strategic planning documents and policies demonstrate commitment to the precinct:

Draft Central Sydney planning strategy (2016) *City of Sydney*	**The Sydney Innovation and Technology Precinct Panel Report** (2018) *NSW Government*	**Camperdown-Ultimo Place Strategy** (2019) *GSC*	**Draft Local Strategic Planning Statement City of Sydney** (2019) *City of Sydney*	**Tech Central Strategy** (est 2025) *Investment NSW*
20-year growth strategy	Recommendations to position the precinct as globally competitive	Establishes a vision and priorities for the area	20-year vision priorities for City of Sydney land use planning	Empower innovation in Tech Central and support housing and growth industries

https://www.investment.nsw.gov.au/innovation/precincts/tech-central/; https://www.theurbandeveloper.com/articles/sydney-central-precinct-tech-central; https://www.nsw.gov.au/ministerial-releases/nsw-government-to-unleash-full-potential-of-tech-central; https://www.planning.nsw.gov.au/sites/default/files/2023-03/central-precinct-strategic-framework.pdf

Tech Central has attracted major industry anchors across tech and life sciences

Tech Central's focus on digital technologies and medtech differentiates it from other precincts, providing a distinct value proposition

	Tech Central	Westmead Health and Innovation Precinct	Randwick Health and Innovation Precinct	Macquarie Park Innovation District	Melbourne Biomedical Precinct
Life Sciences Focus	Biomedical research including **brain and mind centre, cancer, nanoscience, advanced therapies and medical devices**	Advanced therapeutics, translational cancer, infectious diseases, immunology and vaccinology, clinical research and digital health and big data	Genomics and genetics, children's cancer, neuroscience, mental health, drug and addiction, virtual health	Biotech and pharma, as well as medtech, healthcare, advanced manufacturing and digital technologies	Biotech and clinical research focus including Infectious diseases, neurosciences, cancer, children's health and ageing
World-Leading Universities & MRIs and Hospitals & Clinical Research	RPAH, USYD, UTS, SBA, University of Notre Dame, Sydney Manufacturing Hub, Sydney Nanoscience Hub, CSIRO Data 61, Centenary Institute	Western Sydney University, Westmead Hospital, largest research-intensive pathology service in NSW, Sydney Children's Hospital Network, WIMR	UNSW, Prince of Wales Hospital, Sydney Children's Hospital, Royal Hospital for Women, nine MRIs	Macquarie University, Woolcock Institute of Medical Research, Australian Genome Foundry	University of Melbourne, WEHI, Doherty Institute, VCCC, Royal Children's Hospital, Monash Institute of Pharmacology, Florey Institute
Collaboration with Industry	Atlassian, Cicada Innovations, SBA Incubator, SpeeDx, Quantium, Harrison.ai, Ab-initio Pharma, Anthrocell	Sydney Cell and Gene Therapy, Viral Vector Manufacturing Facility, HealthTech Hub Innovation Quarter	Scientia Clinical Research, Omico	Macquarie University Deep Tech Incubator, Cochlear, GlyTherix, AstraZeneca, Sanofi, Abbott, Nanosonics, Oncosil Medical, Smith & Nephew	CSL, Telix Pharmaceuticals, Rhythm Biosciences
Access to Talent & Government Support	• 12,000 jobs across SLHD • $48.2m committed from NSW government	• 18,000 specialised jobs • 11,096 hospital staff • $3bn committed by government, university & private sector	• 22,000 workforce • $1bn infrastructure investment by UNSW, NSW Government and Federal government	• 63,000 jobs in the precinct • 20,000 health professionals and researchers • $13.6bn in GDP in 2023	• 49,000 employed • $2.8bn investment capital in infrastructure between 2008-18

***Green shading indicates key strength**; WIMR = Westmead Institute for Medical Research; VCCC = Victorian Comprehensive Cancer Centre; RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator; UNSW = University of New South Wales*

Adapted from https://sgsep.com.au/assets/main/SGS-Economics-and-Planning_Randwick-Health-and-Innovation.pdf; https://www.ausbiotech.org/biotechnology-industry/australian-life-science-and-innovation-directory; https://www.westmeadhealthprecinct.com/ArticleDocuments/210/WHP%20Industry%20Prospectus%20ENDORSED%20March%202022.PDF.aspx?Embed=Y; https://www.connectmpid.com.au/about-macquarie-park

Recent developments and proposals in the precinct reflect its growth and maturity

Both private and public infrastructure projects are well progressed at Tech Central



Atlassian Headquarters
Central Place Sydney

Led by Private Sector *(Atlassian)*

- Commercial office space and tech hub for Atlassian's new headquarters (anchor tenant).
- Affordable space for startups and scaleups.



The Central on Thomas
Thomas Street

Led by Private Sector *(Greaton)*

- Vertically integrated tech village with a hotel, commercial space and technology hub including laboratories.



Greenhouse
Circular Quay*

Led by Public *(City of Sydney)* ***and Private Sector*** *(Investible)*

- $31 million innovation hub for clean-tech/climate change over 3,800m^2.
- Located in the Salesforce Tower at 180 George Street, and closely aligned with Tech Central.



Prince Alfred Substation

Led by Public Sector *(Transport for NSW)*

- Adaptive reuse project for an unused heritage asset as a potential space for tech and creative industries or startups.

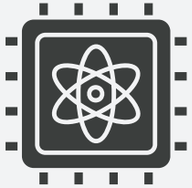
**Not strictly within Tech Central precinct*
https://meetings.cityofsydney.nsw.gov.au/documents/s59828/Tech%20Central%20Innovation%20Precinct%20-%20Progress%20Update.pdf

Tech Central focuses on seven key growth industries, including medtech

These industries have high impact and propensity to drive economic growth, leveraging the expertise and assets in the precinct



Medtech



Quantum Technologies



Artificial Intelligence



Digital Creatives



Connected & Autonomous Vehicles



Applied Robotics



Cyber Security

https://meetings.cityofsydney.nsw.gov.au/documents/s59828/Tech%20Central%20Innovation%20Precinct%20-%20Progress%20Update.pdf

For life sciences companies, Tech Central has existing strengths and value attributes

These six value attributes offer strategic opportunities for the Life Sciences Hub (Camperdown)

World-Leading Universities & MRIs



Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and source of talent.

***Examples in Tech Central**: USYD, UTS, Notre Dame University, SBA, CSIRO Data61, Centenary Institute of Cancer Medicine and Cell Biology, Chris O'Brien Lifehouse, Woolcock Institute of Medical Research.*

Hospitals & Clinical Research



Co-location with hospitals and clinical research provide the necessary expertise and clinical settings to support successful life sciences product development (and delivery). For example, proximity to the Department of Cell and Molecular Therapies (CMT) at RPAH is an advantage.

***Examples in Tech Central:** RPAH, I-MED, National Research Cyclotron, George Clinical, Professor Marie Bashir Centre, The Boden Initiative Clinical Trials; NHMRC Clinical Trials Centre University of Sydney.*

Industry & Incubators



Industry are critical additions to successful precincts as they create job opportunities, collaborative networks and partnerships. Incubators provide important support for entrepreneurship and innovation, which have a particularly strong case in life sciences given the specialised expertise required and capital intensity.

***Examples in Tech Central:** Atlassian, Quantium, Clarity Pharmaceuticals, Cicada Innovations, SBA Incubator, SpeeDx, Anthrocell.*

Talent



Availability and access to talent is critical to supporting the core research and innovation undertaken in a precinct, as well as supporting services and amenities.

***Examples in Tech Central**: There are over 160,000 STEM graduates in NSW, many of which will come from University of Sydney and University of Technology Sydney.*

Connectivity & Proximity to CBD



Proximity to the CBD is attractive to companies, particularly international companies. Benefits include a large population and high connectivity to public transport, supporting talent attraction.

***Examples in Tech Central:** Lightrail, Metro, Train, Central Station, Buses along Parramatta Road.*

Amenity



Amenities in Tech Central support a thriving destination and enjoyable atmosphere for people to live and work. This includes retail, parklands, restaurants and bars, and sporting facilities.

***Examples in Tech Central**: Broadway Shopping Centre, Bars and Restaurants along King Street Newtown, Crown Street Surry Hills, Victoria Park, Carriageworks.*

RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator
https://www.investment.nsw.gov.au/assets/Global-NSW/Tech-Central-Precinct-Brochure.pdf

The proposed Life Sciences Hub will promote research commercialisation & translation

This includes access to critical funding to develop infrastructure that attracts capital, retains IP, and supports talent retention

Support needed	*Camperdown's key strengths*	
1 Access to capital	**Industry tenants, which can support crowding in of capital** *Atlassian, SpeedDx, Quantium, Harrison.ai, Clarity Pharmaceuticals, SpeeDx, Anthrocell*	Existing universities and research institutes are central to health and research precincts as they create an environment of innovation and provide a baseline research infrastructure and talent. ***Examples in Tech Central**: USYD, UTS, Notre Dame University, SBA, CSIRO Data61, Centenary Institute of Cancer Medicine and Cell Biology, Chris O'Brien Lifehouse, Woolcock Institute of Medical Research.*
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2 Specialised infrastructure	**Strong commitment and support from government** *$48.2 million from NSW government into Tech Central precinct*	Colocation with hospitals and clinical research provide the necessary expertise and patient settings to support successful life sciences product development (and delivery). For example, the advantage of proximity to the Department of Cell and Molecular Therapies (CMT) at RPAH. ***Examples in Tech Central:** RPAH, I-MED, National Research Cyclotron, George Clinical, Professor Marie Bashir Centre, The Boden Initiative Clinical Trials; NHMRC Clinical Trials Centre University of Sydney.*
	World-leading universities & MRIs to leverage existing infrastructure and collaboration	
3 Expertise and knowledge sharing	**Availability and access to talent** *There are over 160,000 STEM graduates in NSW, and Tech Central is projected to have 25,000 jobs by 2036 with a focus on STEM and life sciences*	Proximity to the CBD is a key strength of Tech Central over other health and innovation precincts in NSW. Benefits include a large population and high connectivity from public transport, supporting talent attraction. ***Examples in Tech Central:** Lightrail, Metro, Train, Central Station, Buses along Parramatta Road.*
	Proximity to CBD	

MRIs = Medical Research Institutes; RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator
Source: NSW Government Sydney Innovation and Technology Precinct

Global Life Sciences Industry Trends

Section 2

Life sciences is a global growth sector with significant opportunity for NSW

The global life sciences sector is a high-value, growth industry

The value of the global pharmaceutical market is projected to grow 38% from 2023-28

Pharmaceutical trade flows primarily from EU, US, China and Japan; FDI and deal flows focus on US, Europe and China

Investment in life sciences grew steadily over the last decade, with a rapid increase during the pandemic and slowing since

With reduced risk appetite, investors are focusing on defined/ proven products, and biotechs increasingly rely on partners to support development and commercialisation activities

Global growth is driven by new technologies and modalities

These are shifting treatment modalities and R&D, altering infrastructure needs and highlighting gaps in Australia

Regenerative Medicine

Therapies to manipulate or modify a patient's cells or genes to treat disease

Personalised & Precision Medicine

Omics technologies increasingly applied, enhancing efficiency and reducing costs

Medical Technology

Evolving with patient-specific orthopaedics and bioprinting for regenerative medicine

Advanced Technology & Computing

Convergence of AI, quantum computing and digital health transforming life sciences

There are opportunities to benefit from substantial global growth projections, focusing on new technologies and modalities, and on contract services to the life sciences industry.

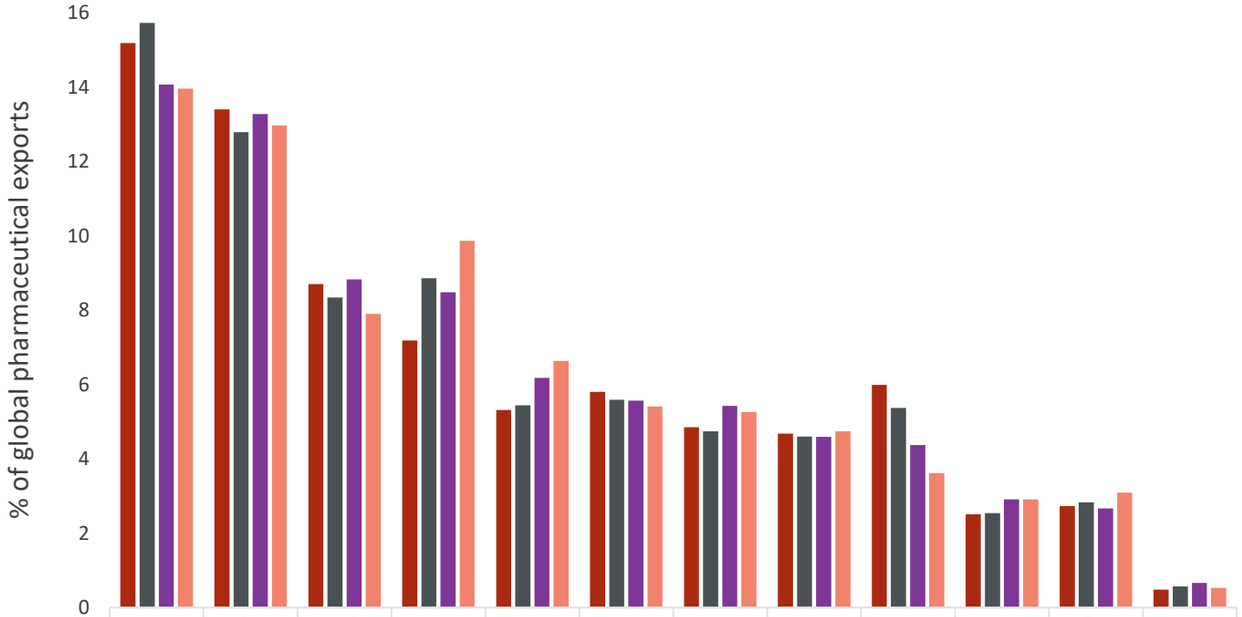
Source: IQVIA Institute, The Global Use of Medicines 2024: Outlook to 2028; AusBiotech Sector Snapshot (2022;) ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022)

Pharmaceutical trade flows primarily from EU/US to EU, US, China and Japan

Australia is a net importer of pharmaceuticals

Country shares of global pharmaceutical exports (% by value)

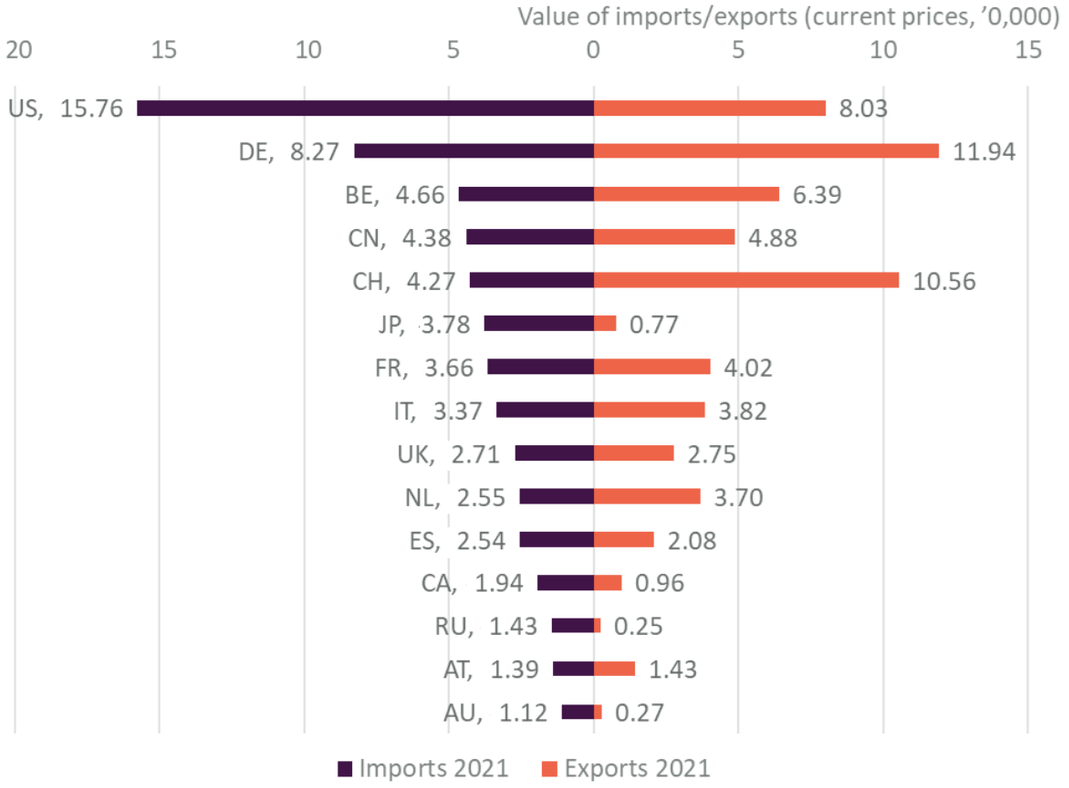
Top 10 exporters in 2019 plus China and Australia



	DE	CH	US	IE	BE	FR	IT	NL	UK	DK	CN	AU
2017	15.19	13.4	8.7	7.19	5.32	5.8	4.85	4.68	5.99	2.51	2.73	0.48
2018	15.73	12.79	8.34	8.86	5.44	5.59	4.74	4.6	5.37	2.54	2.83	0.57
2019	14.07	13.28	8.83	8.48	6.18	5.57	5.43	4.59	4.37	2.91	2.67	0.66
2020	13.96	12.97	7.9	9.87	6.64	5.41	5.26	4.74	3.62	2.91	3.09	0.53

Country shares of global pharmaceutical trade (value)

Top 15 importers in 2021

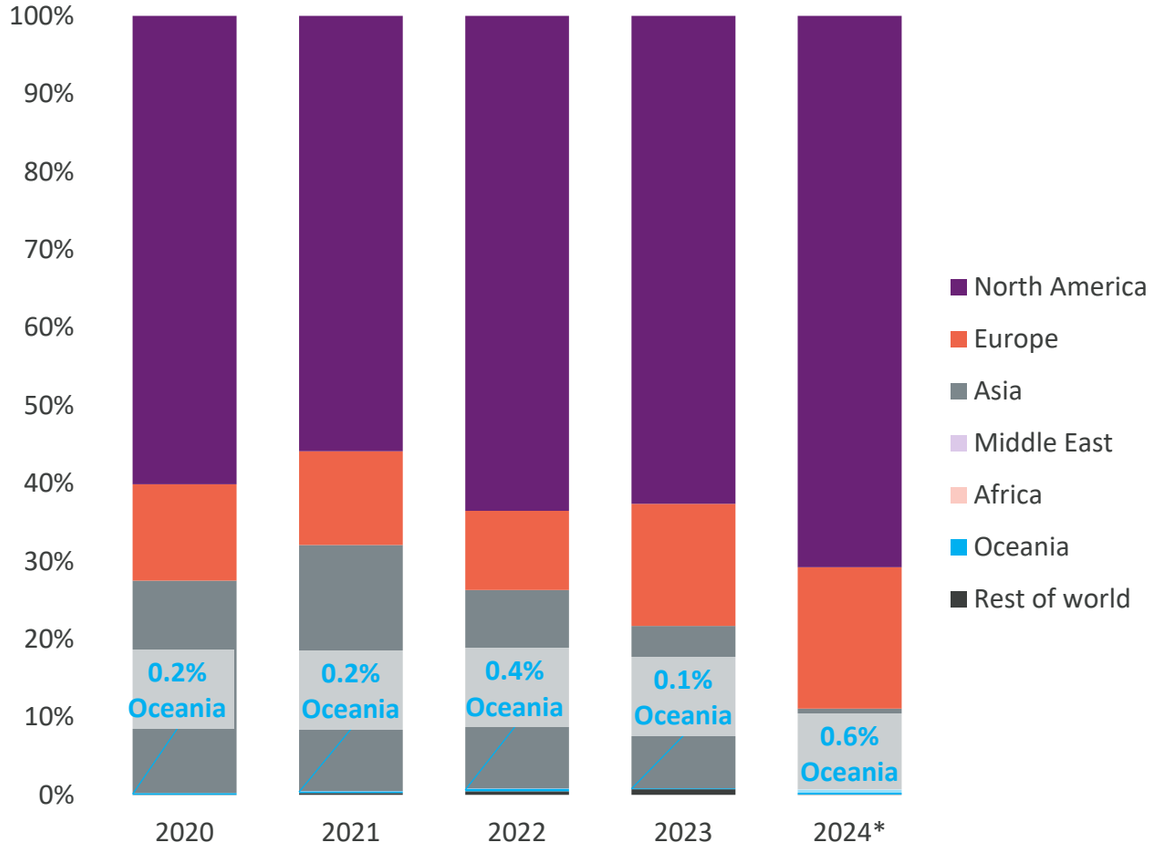


OECD MSTI Data. Note potential impact of pandemic on pharmaceutical trade in 2020/2021

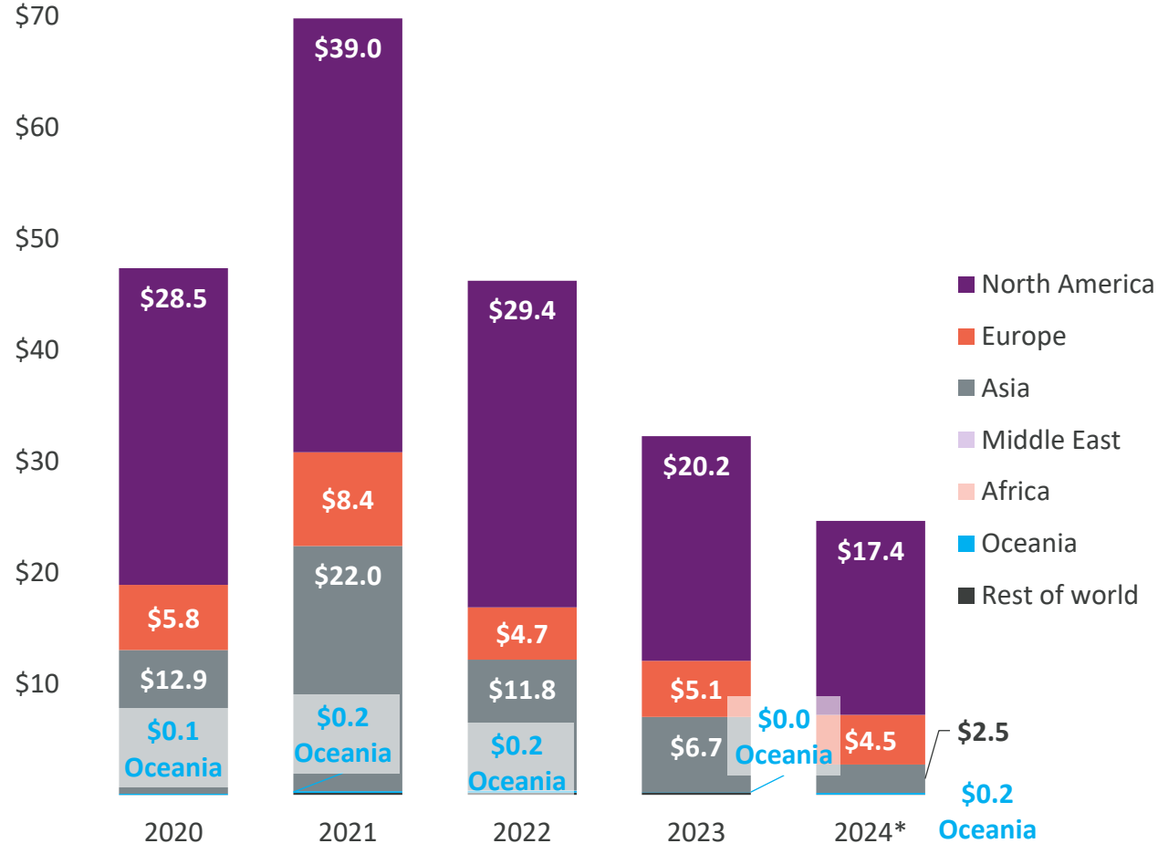
A majority of pharma VC deals occur in North America, followed by Asia

Pharma VC deals by region are generally indicative of the VC spread across the broader life sciences sector

Share of pharma VC deals value by region



Pharma VC deals value (USD$bn) by region



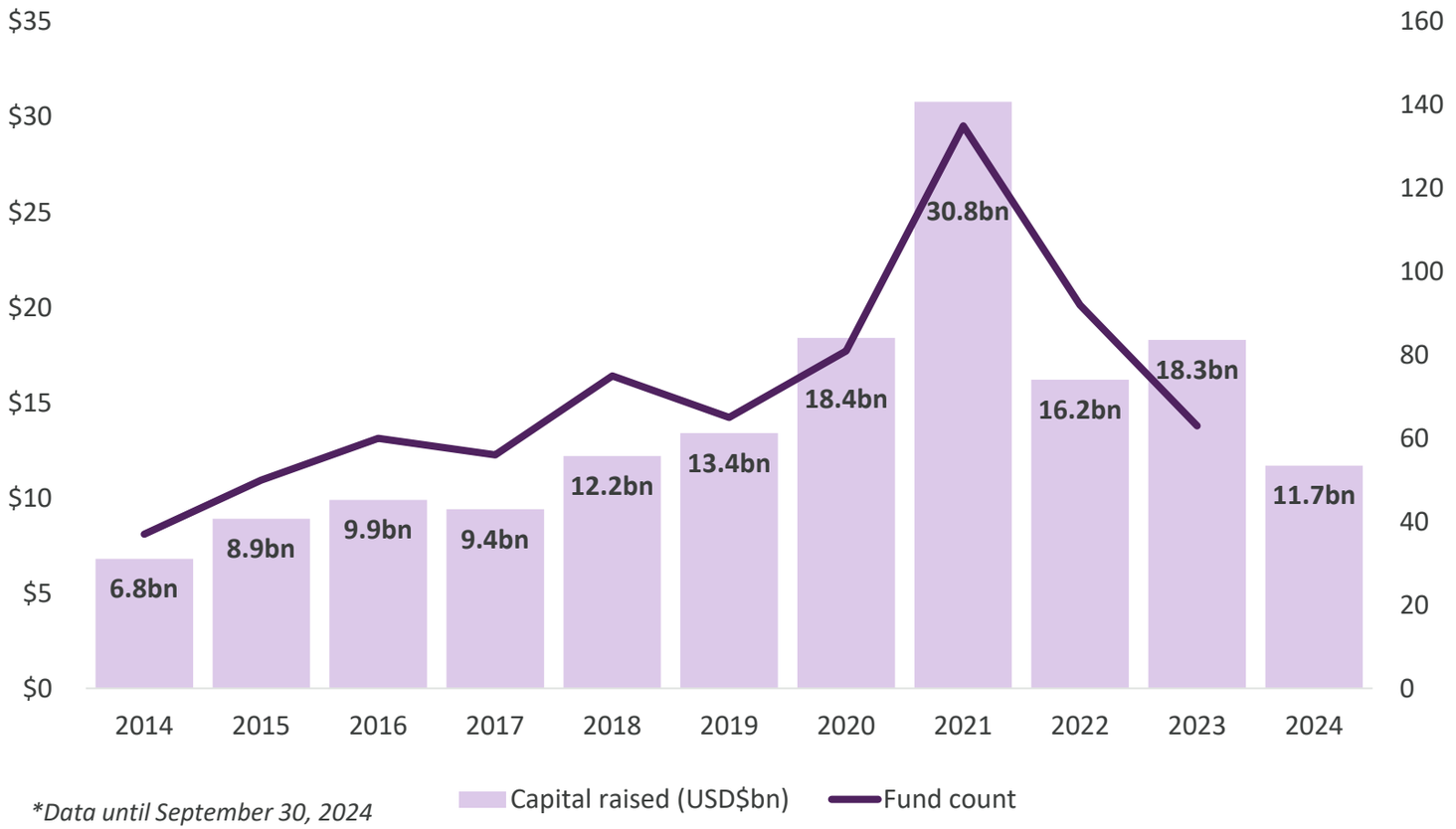
**Data until September 30, 2024*

Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Investment in life sciences grew rapidly during the pandemic, and has since slowed

Increased competition from other high-growth sectors and macroeconomic pressures have constrained investments in life sciences

Global life sciences VC fundraising activity



**Data until September 30, 2024*

Globally, the sector experienced steady growth in VC activity prior to the pandemic.

Life sciences had unprecedented investment during COVID-19, driven by increased interest in vaccines, diagnostics and therapies. The sector peaked at 17.7% of all VC deals by value.

In Q3 2024, the sector's share of total deals declined to 13%, reflecting **increased competition from other sectors including AI and fintech**.

Macroeconomic pressures have driven the trend towards fewer but larger deals.

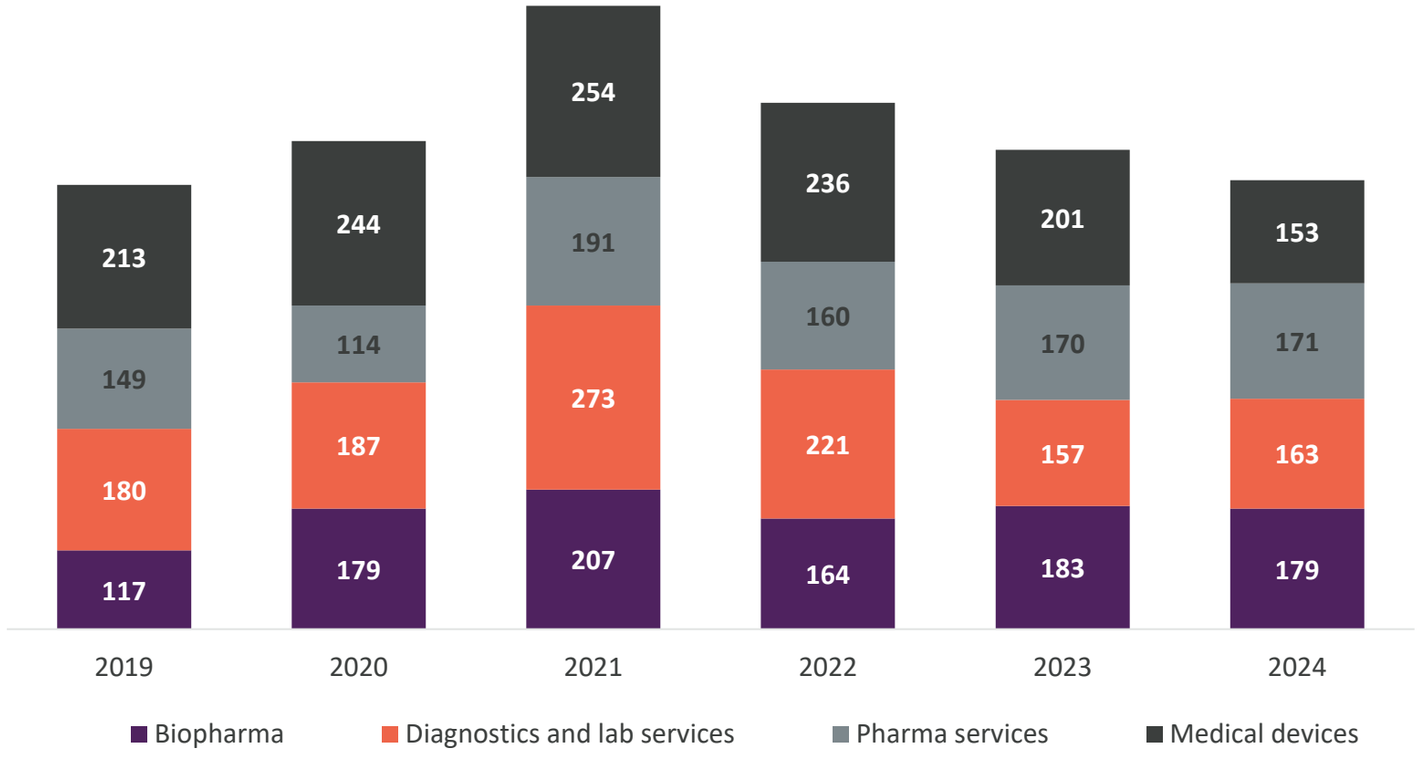
The relatively consistent high value of deals in life sciences reflects the capital intensity of research, clinical trials and manufacturing.

Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Macroeconomic pressures have shifted investor preferences within life sciences

Globally, increasing costs and more conservative risk have driven investment away from early-stage biotech and medtech, towards pharma services, and other industries

Global life sciences strategic investments by subsector



Globally, ***high interest rates & inflation*** and ***slow economic growth…***

have impacted capital markets, including in life sciences by…

Increasing the cost of capital (therefore reducing investment) and *increasing development costs* (and risk of these speculative long-term investments).

Following growth in biopharma, diagnostics and medical devices during the pandemic, investors are increasingly favouring **pharma services.** Pharma services include CROs, and CDMOs as well as companies providing conmercialisation and consulting services.

Reflecting the rising costs and development challenges in biotech and medtech, investors have shifted toward late-stage opportunities

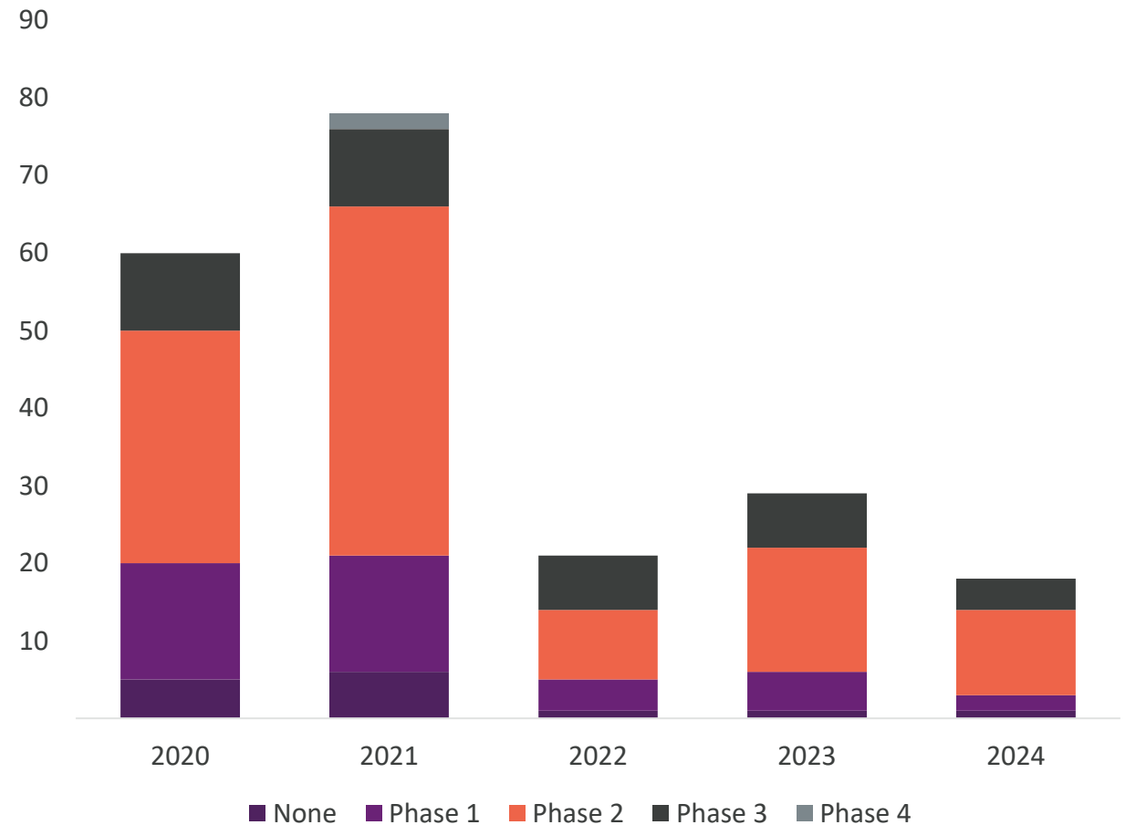
Investments in **AI-driven drug discovery**, **precision medicine**, and **digital health** are expected to dominate investment in 2025.

KPMG 2025 Healthcare and Lifesciences Outlook; Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025). CRO=contract research organisation; CDMO=contract development manufacturing organisation.

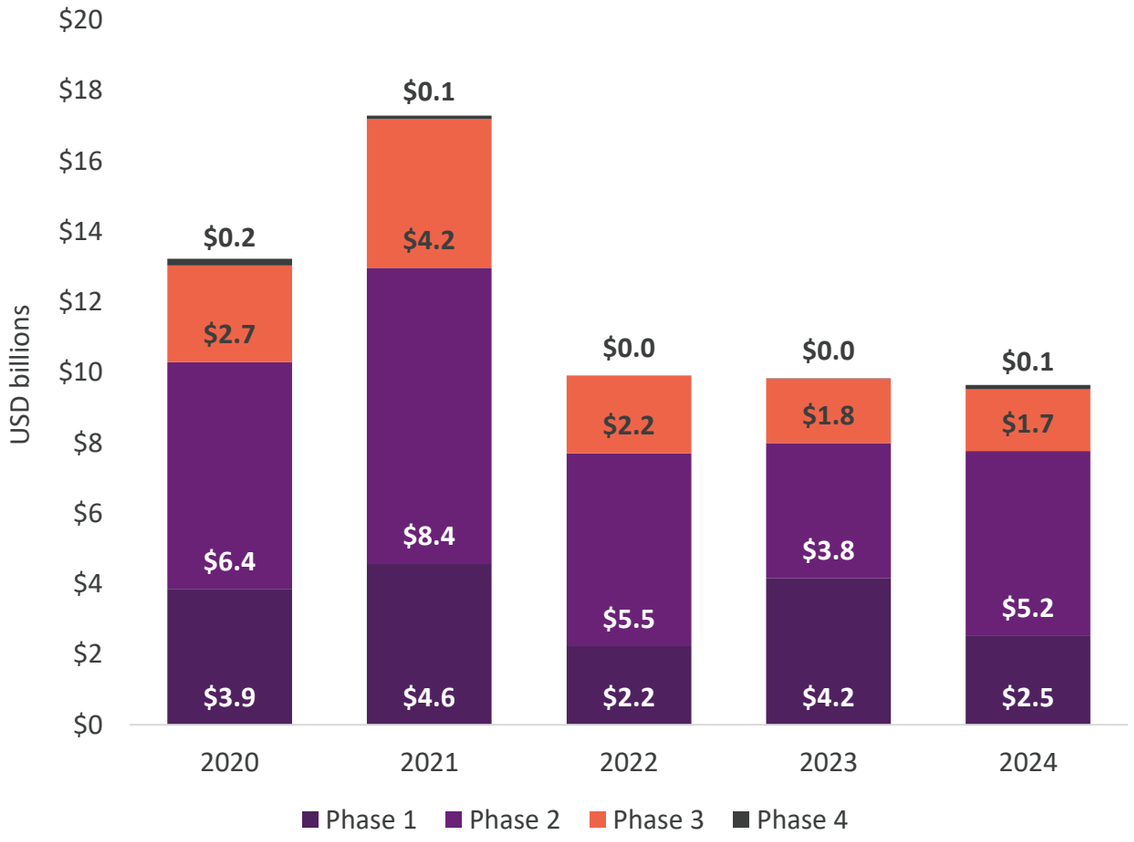
Globally, VC deals focus increasingly on later stage, less risky assets

This means that many companies are developing assets to Phase 2 or 3 before an exit

Biopharma VC IPO count by highest phase



Biopharma VC deal value (USD$bn) by highest phase



**Data until September 30, 2024*

Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Global macro trends in healthcare are shaping changes in the landscape

Key trends driving the sector forward include new treatment modalities that are enabling personalised medicine, digital health and the integration of digital technologies with pharmaceutical and med tech products



Personalised and Precision Medicine

- Strong global momentum toward precision and personalised medicine, driven by increased understanding of genomics, biomarkers and individual patient variability. These approaches enable targeted treatments across a range of conditions including oncology to rare and chronic diseases.
- Global investment is accelerating, with the US, EU, and Japan, funding infrastructure and research into advanced diagnostics, biomarker testing and adaptive clinical trial designs.
- This is fueling demand for biobanking, genomic sequencing capabilities and integrated R&D precincts that can support translational research.
- Regulatory bodies are also adapting frameworks and developing guidance documents to support the cell and gene therapies, radiotheranostics and mRNA platforms, which have had significant deal activity globally.

New treatment modalities:

- Regenerative medicine (cell and gene therapies)
- Radiotheranostics
- mRNA-based therapies
- Microbiome-based therapies
- Cancer vaccines



Digital Technologies: AI & Quantum

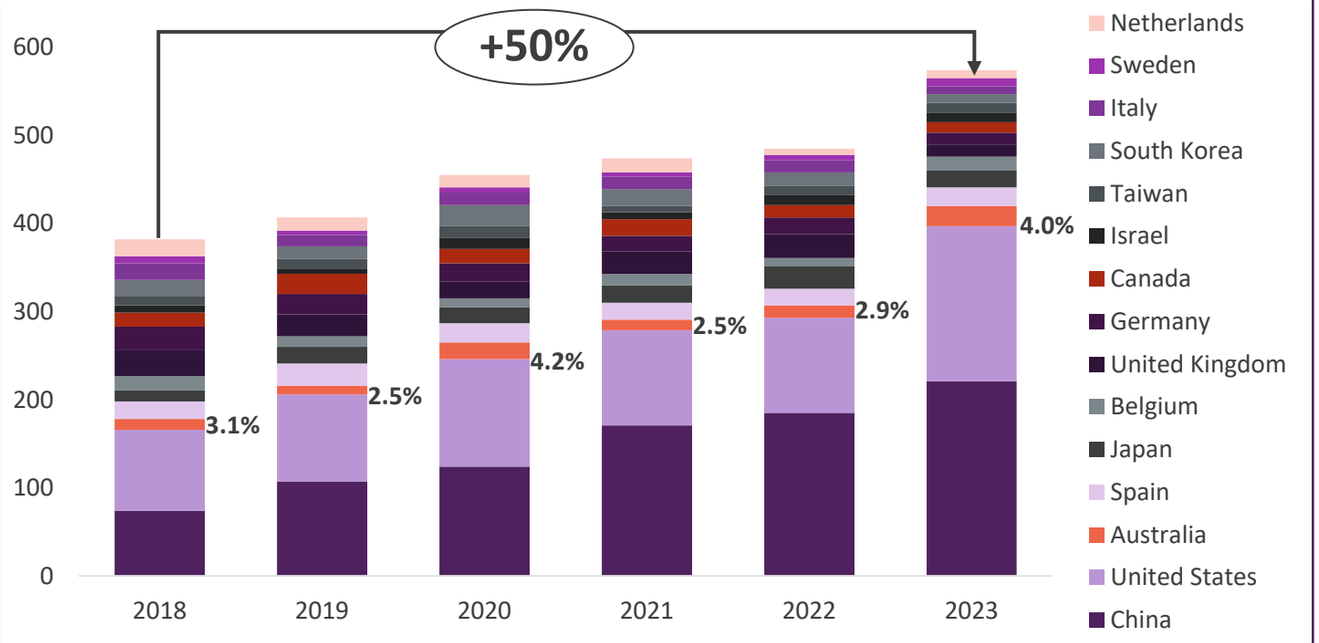
- The expansion of digital technologies in life sciences reflects a widespread push towards data-driven healthcare systems and more efficient R&D.
- While initially limited to AI-driven drug discovery, applications are now driving innovation across the entire value chain, including clinical trials.
- Countries worldwide are prioritising investments in AI-driven infrastructure, real world evidence platforms and remote patient monitoring tools, supported by secure cloud computing and data centers.
- This convergence is also fostering cross-secotr collaborations between biotech, medtech, and technology companies.

New modalities:

- AI-driven drug discovery and clinical trial patient recruitment
- Digital therapeutics
- Companion diagnostics
- Remote patient monitoring and wearables
- Digitally-enabled implantable devices
- Telehealth-enabled clinical trials

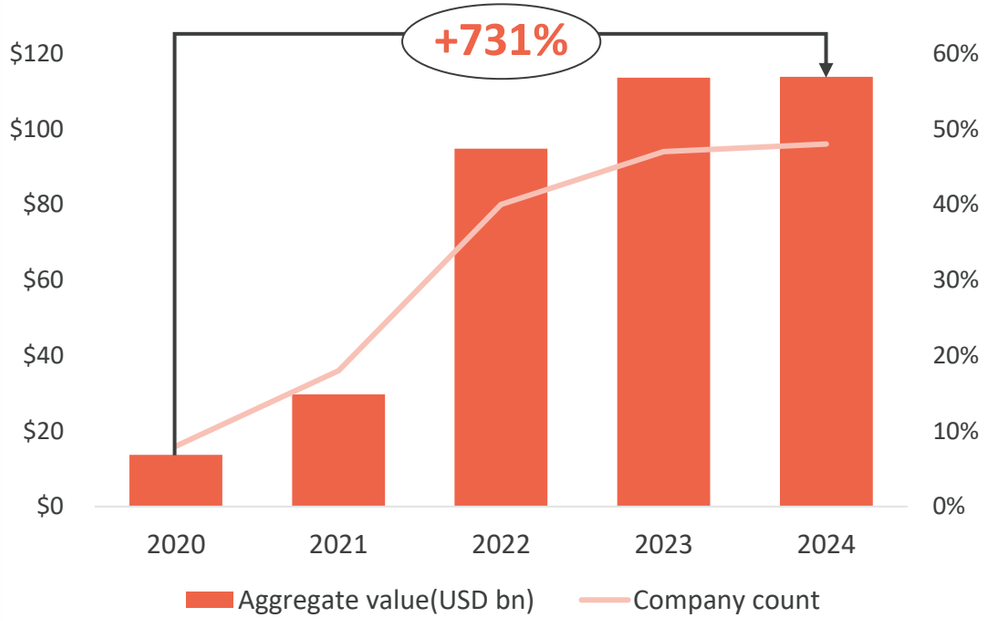
Growth in advanced therapies and digital health signal adoption of new modalities

Number of Industry Sponsored Advanced Therapy Trials



- **In 2023, cell and gene therapies accounted for 22% of total deal volume with 9 out of the 10 largest deals focused on precision medicine**.
- Although deal activity declined in 2024, strong growth in advanced therapies is still anticipated. This drives clinical trial activity, where Australia outperforms.
- While China has the highest by number, these are mostly smaller, domestic only trials.

Global Aggregate Digital Health VC Value and Count



- The digital health sector has seen rapid growth in VC funding, which has resulted in a maturing sector with many startups now positioned for transition to public markets or commercial exits.
- This subsector is anticipated to increasingly converge with biotech, medtech and delivery via wearables, AI-enabled drug discovery and clinical trials.

Global Data Advanced therapies refers to Molecule Type search criteria, cell therapy; gene therapy; gene-modified cell therapy. The analysis excluded suspended, terminated and withdrawn trials; KPMG 2025 Healthcare and Lifesciences Outlook; Pitchbook 2025 Healthcare & Life Sciences Outlook, Global (2025)

Australian Life Sciences Sector Value, Overview & Trends

Section 3

Life sciences is a growth sector that contributes strongly to the economy

The sector fuels jobs, investment and global partnerships through a highly educated and skilled workforce, access to leading infrastructure, a globally competitive clinical trials sector and the commercialisation of new medical technologies

$255bn

Value of ASX-listed life sciences industry (2024)

350,000

Jobs across the life sciences industry (2024)

4.4%

Forecast life sciences industry annual growth

23rd

Australia's Global Innovation Index R&D ranking (2024)

2,905

Life sciences organisations in the sector in 2024

$64bn

Partnership deals (domestically and internationally, 2017 to 2024)

IBISWorld Biotechnology report (2023); Australian Department of Health and Aged Care (2022); AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025); WIPO, Global Innovation Index (2024)

Australia is an important market for biomedical products and as an R&D destination

Australia is a relatively small market (globally), but has a sophisticated healthcare system and strong government support for R&D

Indicators influencing Australia's attractiveness:

Market for Biomedical Products

Population Growth: Population aged over 65 is set to almost double by 2060, driving health expenditure.

Health Spending as a Percentage of GDP: Australia is among the top 15 countries in the world in health expenditure.

Spend on Innovation: Australia is ranked 15th in OECD for the proportion of new drugs reimbursed.

Respected Regulatory System: Recognition of TGA approvals and work-sharing arrangements can enable streamlined submission across countries.

R&D Destination

R&D Expenditure and Funding: Australia has had consistent growth in health R&D expenditure, >$7bn in 2022-23. 73 biotech IPOs raised $1.55bn between 2010-2022. Biotech/medtech are among the top 3 sectors attracting VC funding.

Clinical Trials: Growing sector which attracts $1.25bn in industry expenditure.

Skilled Workforce: Australia has 109K STEM and Health graduates (2022), and 350,000 employed in life sciences (2024).

Government Support: Over $14bn in government R&D expenditure in 2024-25 including $4.2bn in R&D Tax Incentive.

IP Protection: Perceived as a market with strong IP protection for innovations.

World-Leading Institutions and Clinical Trial Capabilities: Leading universities (40) and medical research institutions (55), supporting a thriving clinical trial sector.

Research Infrastructure & Precincts: Health and innovation precincts across every major city, enabling collaboration across industry, research institutes, and universities.

Local Businesses: Strong local biotech and medtech ecosystem with 2,905 life sciences organisations, supported by research, clinical, manufacturing and commercialisation services.

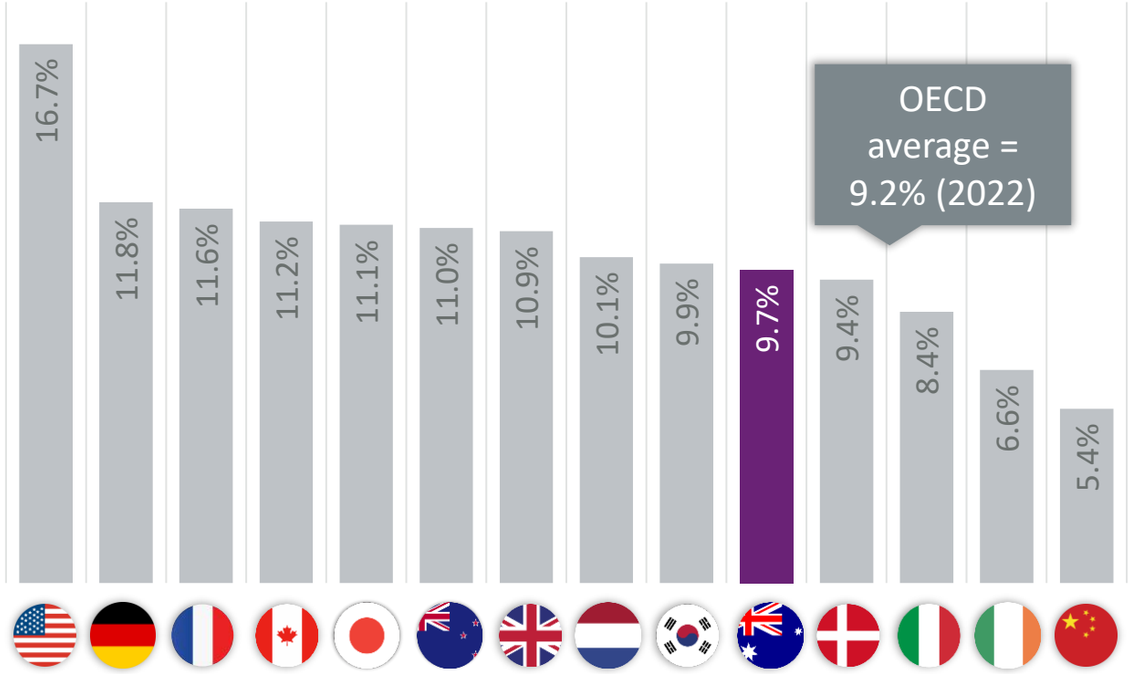
TGA = Therapeutic Goods Administration

Source: AIHW, Health expenditure (2023;OECD Data Health Spending (2023); PhRMA Global Access to New Medicine Report (2023); Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25; DISR, STEM Equity Monitor (2025)

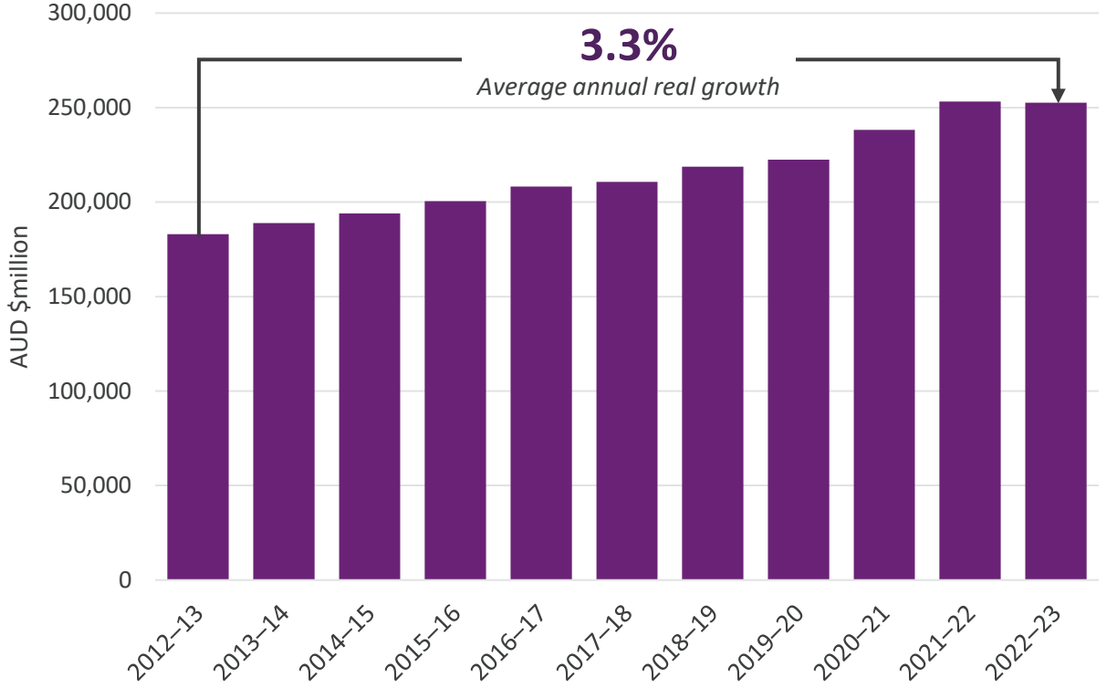
Australia is among the top 15 countries in the world in health expenditure

Australia is a smaller but important market for multinational companies to commercialise health technologies

Health spending as a % of GDP (2023 or nearest year)



Total health spending, constant prices



- In 2022, Australia's health spending as a % of GDP ranked 15th among 38 other OECD countries.
- Australia's population over the age of 65 is set to almost double by 2060, which will drive health expenditure.

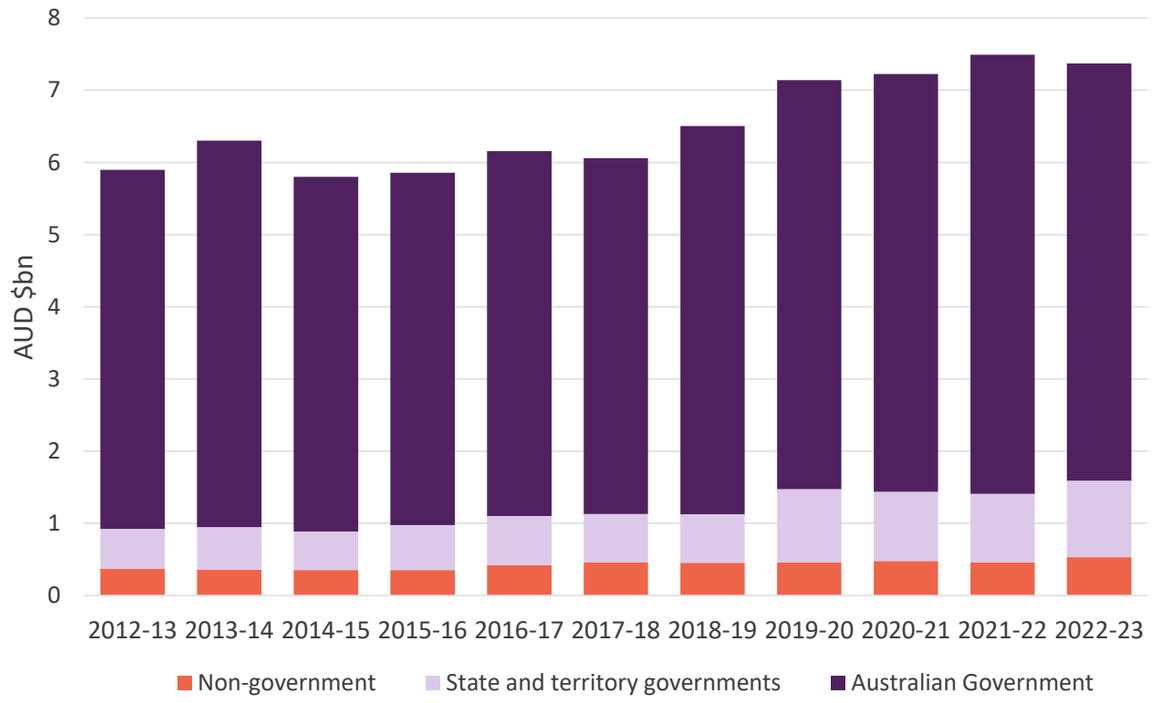
- Australia's total health expenditure per capita is expected to exceed Germany's current level by 2031-32.
- Spend on innovations is significant, with Australia ranking 15th in OECD for the proportion of new drugs reimbursed.

AIHW, Health expenditure (2023); OECD Data Health Spending (2023); PhRMA Global Access to New Medicine Report (2023)

Australia invests heavily in health-related R&D, primarily funded by government

Government invests 18.7% of total R&D in health, which is predominantly performed by universities and businesses

Health-related R&D funding by source

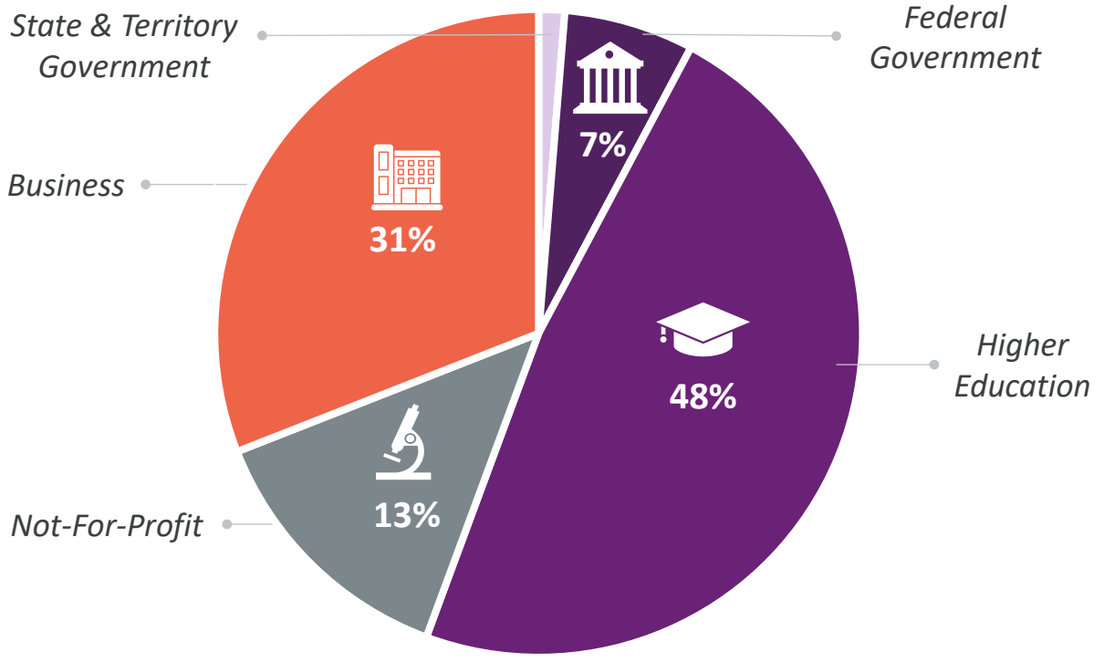


1.7%
Australian Government: Real Growth 2012-2023

7.9%
State and Territory: Real Growth 2012-2023

3.8%
Non-Government: Real Growth 2012-2023

Performance of life sciences R&D by expenditure (2022)‡*



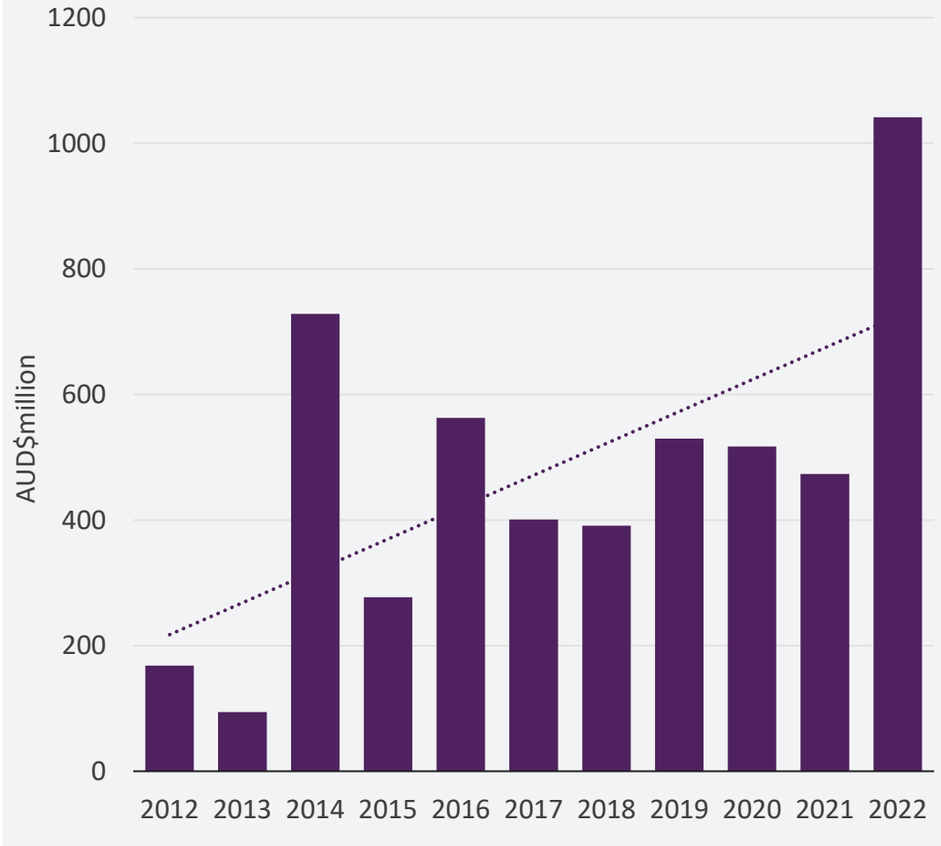
**Estimates based on Australian Bureau of Statistics (ABS) data. Government and NFP data is for 2022/23; Higher Education is for the calendar year 2022 and Business is for 2021/22.*
‡SEO of Health (by socio-economic objective) generally provides the most accurate estimate of life sciences R&D. However, the combined Fields of Research (FoR) of Biomedical and Clinical Sciences; and Health Sciences (ANZSCR 2020); is used for Business because most health and medical research in industry is classified under the SEO of Manufacturing (rather than Health).

AIHW, Health expenditure (2023); Research Australia, Australian H&MR Facts (2024)

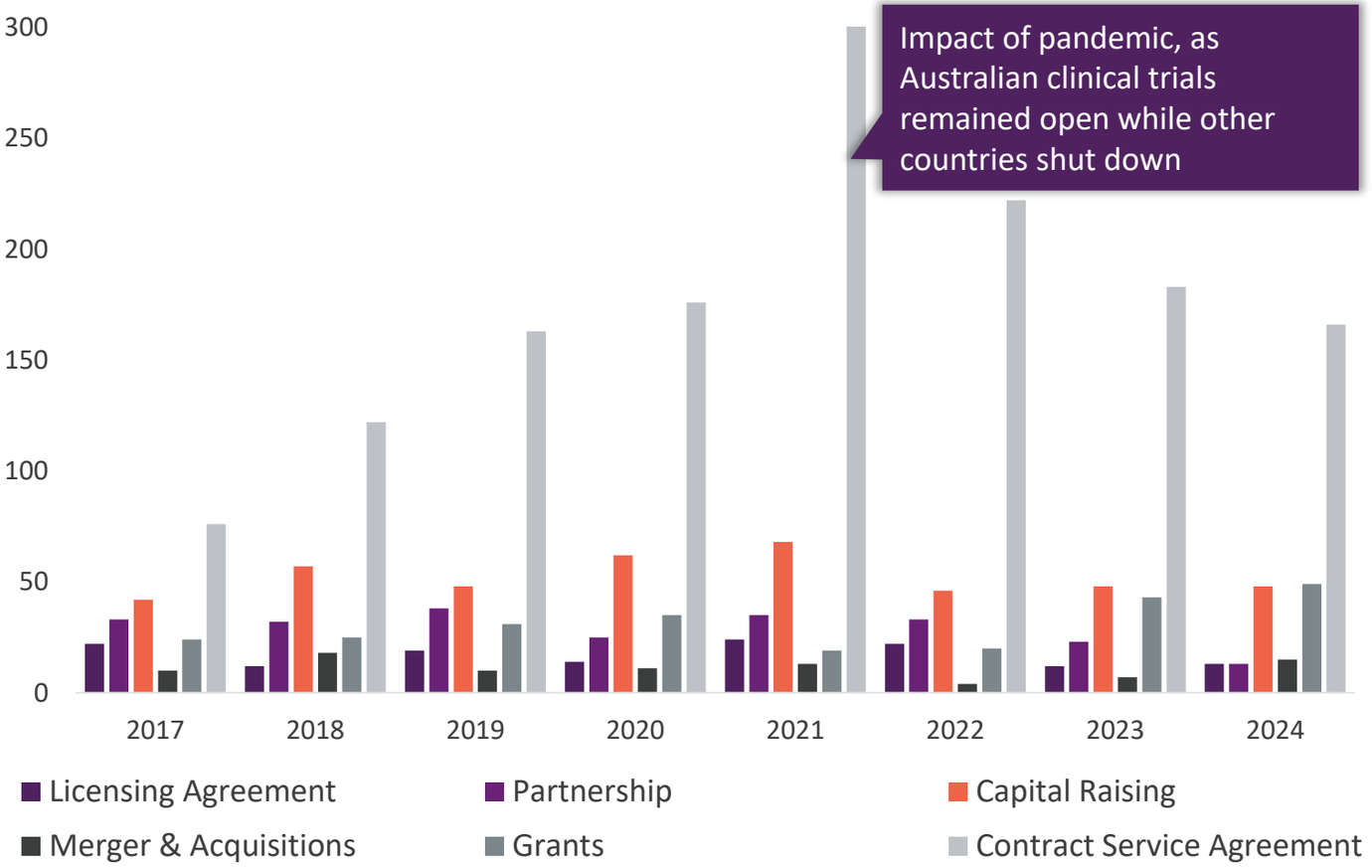
Inward FDI investments largely flow to contract services (clinical trials)

Life sciences FDI has generally grown over the past decade, which has been strongest in contract service agreements (indicative of clinical trials and manufacturing via CDMOs)

Australian life sciences FDI, estimated capital expenditure



Number of deals in Australia's pharma/biotech sector, by type



UK Life Sciences Competitiveness Dashboard (2024); AusBiotech and MTP Connect National Biotech and Medtech Development and Commercialisation Summit 2024 Discussion Paper (2024)

Australia's clinical trials sector is a key strength

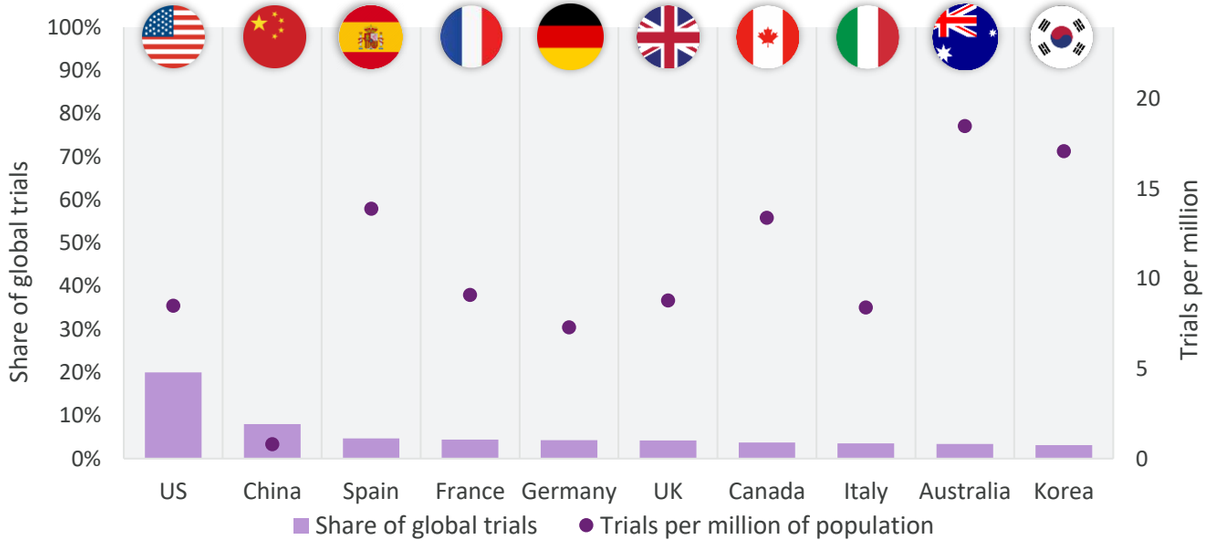
Leveraging Australia's key capabilities and competitive advantage, the sector attracts local and international companies, with $1.25bn in industry expenditure, and NSW leading in the number of clinical trials by state (31%)

Globally Competitive Sector
Australia competes with global leaders (US, EU, China) in attracting industry-sponsored trials, leading on a per capita basis.

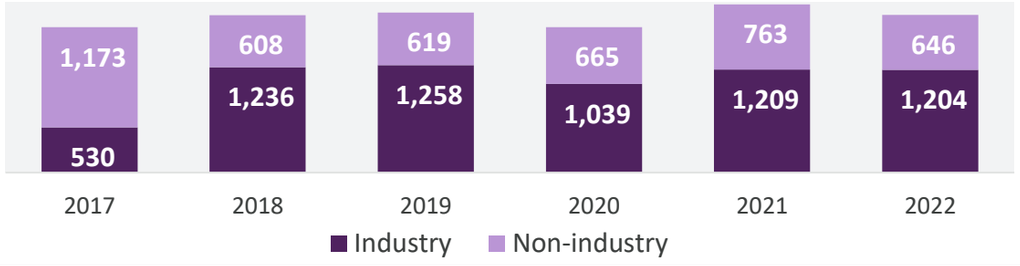
Biotech vs Medtech
Australia's clinical trials sector largely reflects drug trials, accounting for 80% of total trials in 2022.

International Sponsors
Approximately one-third of all trials initiated in Australia are industry sponsored – these are typically conducted by multinationals, with only 9% of industry sponsors headquartered in Australia.

Industry-sponsored drug and device trials per capita, 2022



Drug and devices trials started in Australia



Australia's Competitive Advantage

- Efficient CTN Scheme
- R&D Tax Incentive
- Internationally Recognised Investigators & KOLs
- High-Quality and Reliable
- Robust Infrastructure
- Diverse Population
- Proximity to Regional Markets

MTP Connect, Australia's Clinical Trials Sector Report (2024) ANZCTR Data (14 Nov 2023) and L.E.K analysis

Significant IPOs over the last decade highlight a maturing sector

Australia has fostered an increasingly commercial life sciences R&D market, with numerous successful IPOs, providing strong investor interest, robust capital markets, and a supportive ecosystem for innovation

73 IPOs for a total of $1.55bn raised from 2010-2022

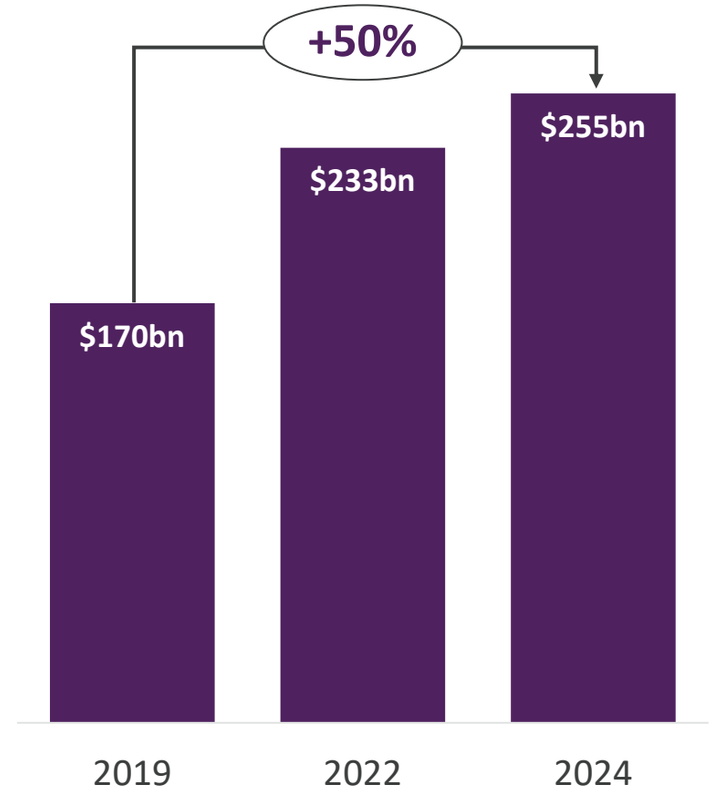
Noteable companies with IPOs from 2010-2022	Base	Market Cap	Disease Area	Product Type
Imugene	Sydney, NSW	$268m	Gastrointestinal, lung, breast and brain cancers	Immuno-oncology – genetically modified viruses, cancer vaccines
Clarity Pharmaceuticals	Sydney, NSW	$1.1bn	Solid tumors, neuroblastoma and prostate cancer	Radiopharmaceuticals – specifically targeted copper theranostics
Neuren Pharmaceuticals	Melbourne, VIC	$1.67bn	Neurodevelopmental disorders and neurological diseases	Small molecule drugs
Telix Pharmaceuticals	Melbourne, VIC	$8.86bn	Prostate, Kidney, brain and blood cancers	Prostate cancer imaging agent, and cancer treatments
Opthea	Melbourne, VIC	$1.2bn	Ophthalmology	VEGF-C/D inhibitor to enhance vision and slow disease progression with retinal vascular disorders

UK Life Sciences Competitiveness Dashboard (2024)

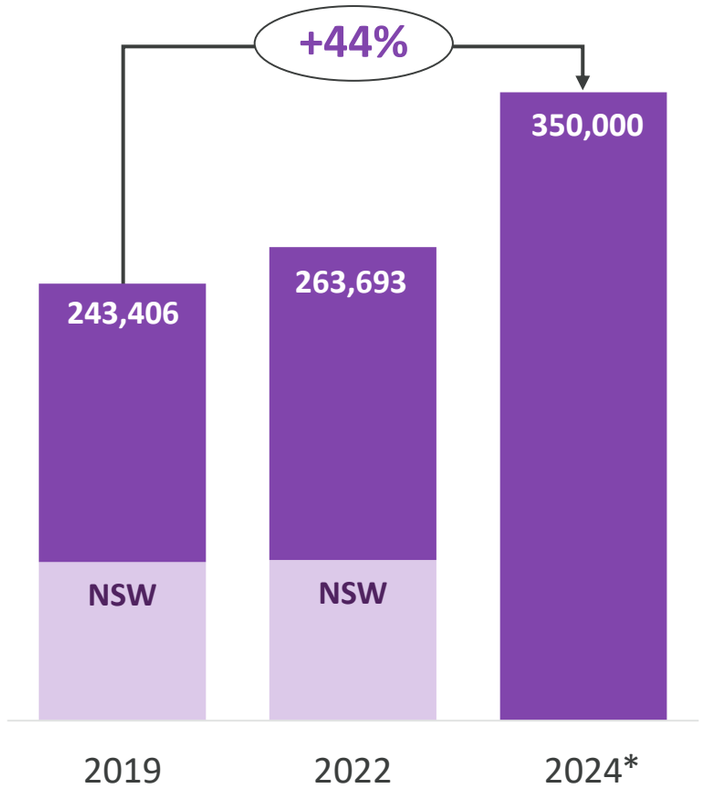
Sustained growth reflects the expanding nature of the sector in Australia

These growth fundamentals are expected to fuel demand for specialised life sciences commercial property

Growth in market capitalisation of ASX-listed biotechnology industry



Growth in number of employees in the life science sector



Growth in number of life science organisations



**NSW number of employees in 2024 not available.*

Source: AusBiotech Australian Biotechnology Sector Snapshot (2022), AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025)

Biotech, pharma, medtech and digital health are all represented in Australia

Based on available data, pharma and medtech lead in IP generation, which is indicative of sector growth and potential spin outs

	Biotech	Pharma	Medtech	Digital Health	Quantum	Research & Clinical Services
Overview (AUS)	*Focused on novel treatments and diagnostics; typically high reliance on government funding, VC and partnerships.*	*Responsible for bringing new drugs to market, investing heavily in clinical trials in Australia.*	*Focused on developing and manufacturing medical devices, equipment, and diagnostics.*	*Integration of technologies to improve patient outcomes, access, and efficiency.*	*Application of quantum computing to enhance drug discovery and development.*	*Providing services for research, clinical trials and manufacturing including analytical testing and contract research.*
# of Companies (AUS)	**548** *2022*	**206** *2025*	**577** *2023*	**>513** *2022*	**16** *2020*	**146** *2025*
Growth in Total Companies	**+40%** vs 2019	Not available	**+49%** vs 2019	**+61%** vs 2020	Not available	Not available
# of Patent Applications	**3,006** *2023*	**3,945** *2023*	**3,690** *2023*	Not available	**1,694*** *2023*	N/A
Share of Total Patents in AUS	9.5%	12.5%	11.7%	Not available	5.4%	N/A

**Refers to Computer Technology patent applications*

AusBiotech Sector Snapshot (2022); ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022); MTAA The Value of MedTech Report (2024); IP Australia, Patent Report (2024), AusBiotech Australian Life Science Innovation Directory (2025); CSIRO Growing Australia's Quantum Technology Industry (2020)

Australian growth in life sciences is aligned with global growth technologies

The convergence of regenerative medicine, digital health, and advanced technology is shifting treatment modalities and the areas of life sciences R&D, changing infrastructure needs and highlighting gaps in Australia's offering

Regenerative Medicine

	Therapies manipulate or modify a patient's cells or genes to treat disease (e.g. cell and gene, stem cell therapy)
	Over 45 research centers in cell and gene therapies exist in Australia
	Complex manufacturing and supply-chain processes, requires proximity to point of care – including Royal Prince Alfred Hospital in Camperdown

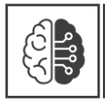
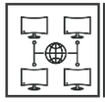
Personalised & Precision Medicine

	Omics technologies (e.g. genomics, proteomics, metabolomics) increasingly applied, enhancing efficiency and reducing costs
	Require tailored equipment (e.g. for bioinformatics), AU Government support with $500m 10-year Genomics Health Futures Fund
	Emerging technologies include radiotheranostics (nuclear medicine and radiopharmaceuticals), mRNA applications beyond vaccines

Medical Technology

	Evolving with patient-specific devices for orthopaedics and bioprinting for regenerative medicine
	May require unique infrastructure including 3D printing, advanced materials labs for tissue engineering and prototyping labs
	Specialised biofabrication and manufacturing can be integrated into point-of-care facilities, like the Herston Biofabrication Institute in QLD

Advanced Technology & Computing

	Convergence of **AI, quantum computing and digital health** transforming life sciences including drug discovery, diagnostics, and patient care
	Co-location of tech hubs with life sciences precincts facilitates collaboration across these two highly innovative sectors
	AU Government released National Quantum Strategy (2023), with $101.2m over 5 years to support AI and quantum tech integration

AI = Artificial intelligence; SOC = Standard of Care

https://www.industry.gov.au/publications/national-quantum-strategy; https://www.industry.gov.au/news/investments-grow-australias-critical-technologies-industries; https://www.health.gov.au/our-work/mrff-genomics-health-futures-mission;

VC leads private investment in the sector, but there is competition from other sectors

Biotech and medtech attract a sizeable proportion of capital in Australia, compared to other sectors, however, it is insufficient for the capital needed for R&D

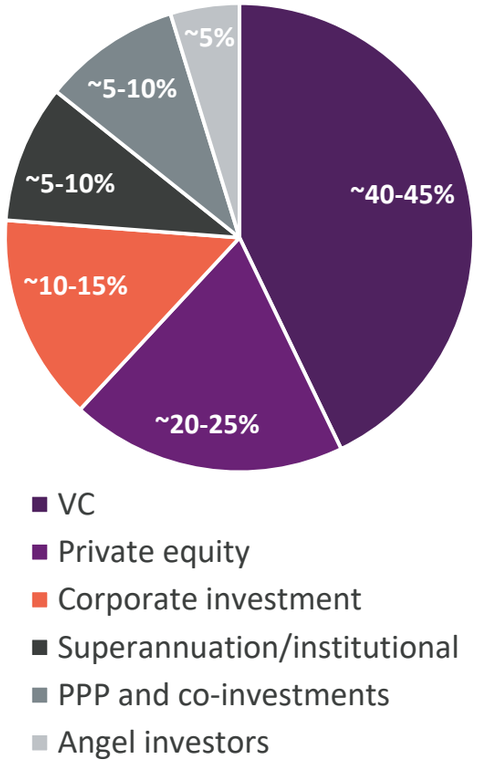
Aligned with the global trend, after peaking mid-COVID, Australia's medtech and biotech activity declined until 2023, amid growing competition from deep tech sectors like AI.

In 2024, Australian startups secured **$4.0bn across 414 deals**, an **11% increase** from 2023.

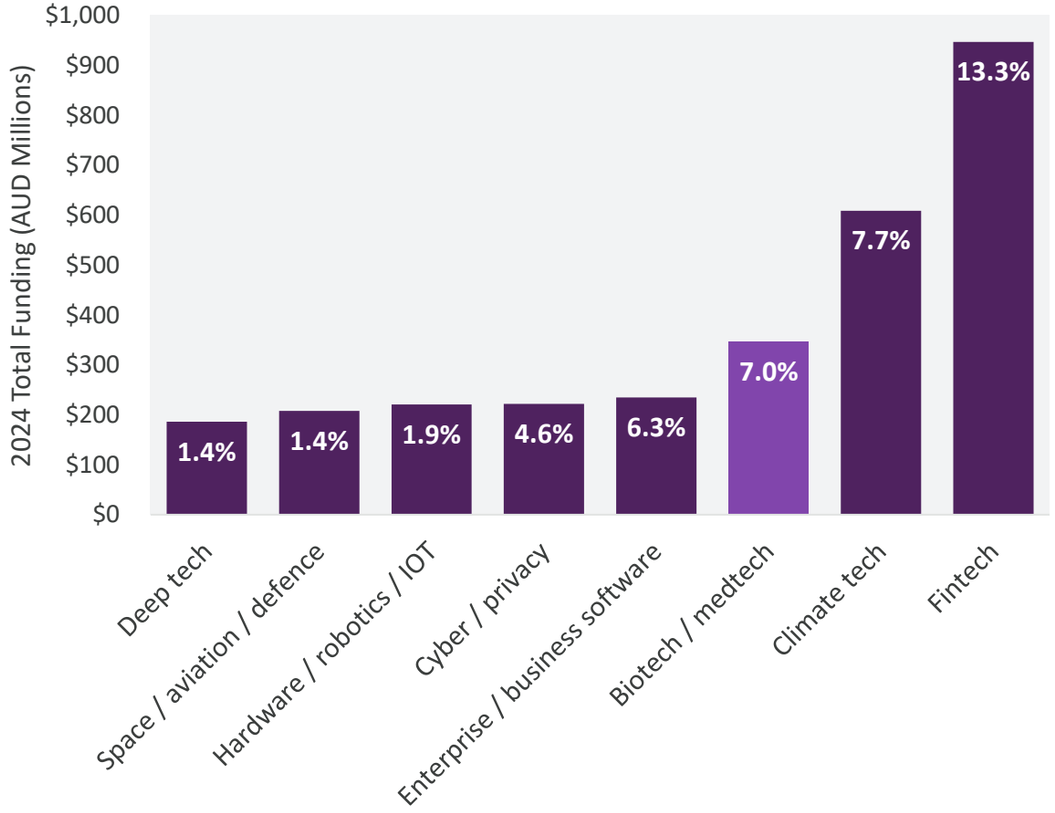
Fintech led with $947m, rebounding from a slower year, followed by Climate tech ($609m, most deals) and **Biotech/Medtech ($347m combined, 76% of all VC deals)**.

65% of VC was raised by startups based in NSW in 2024.

Estimated source of private investment in Australia life sciences



Australian VC investment by sector in 2024



VC = Venture capital; PPP = Public-private partnerships
https://pulse-economics.com.au/positioning-australias-life-sciences-for-global-success/; Australian Start Up Funding Report (2024)

Several life sciences-focused VC funds exist, though there is still an investment gap

There has been a recent expansion of Australian life sciences-focused funds, which have included public sector funding

Recent expansion of Australian life sciences-focused funds include:

- Brandon Capital over $1.25bn across six funds, including a sixth fund with an initial close of $270m
- Uniseed over $200m
- Breakthrough Victoria $2bn (across multiple sectors including biotech, medtech and digital health)
- Tenmile, initial $250m fund for health tech
- Tin Alley Ventures $125m funding for deep tech startups affiliated with the University of Melbourne
- ANDHealth, including the $50m CUREator+ program funded by the Australian government in partnership with Brandon Capital
- Proto Axiom, a biotech incubator with $35m in funding
- One Ventures, with $900m under management across a range of sectors including biotech, medtech and healthcare

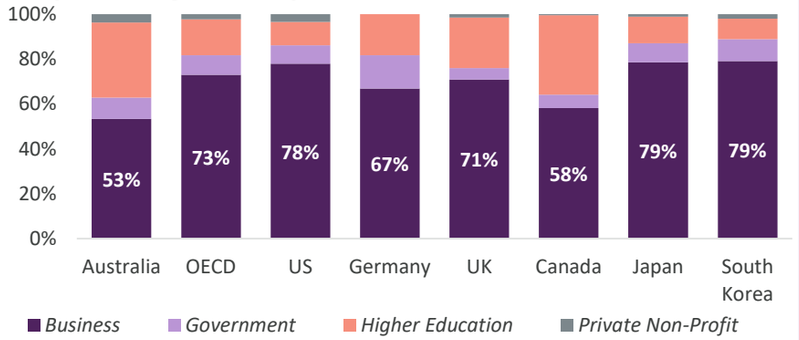
Brandon Capital Announces Sixth Fund with A$270 million (US$180 million) Initial Close to Drive Life Science Innovation - Brandon Capital; $50m federal funding for BioMedTech Incubator program; Australian biotechnology incubator Proto Axiom completes initial fundraising - Proto Axiom;

Barriers to commercialisation and translation limit Australia's ability to capitalise on investments in health and medical research

Private investment and partnerships are required to develop the life science ecosystem

Australia remains heavily reliant on public sector funding, with business investment in R&D (BERD) significantly lower than key competitors:

Components of Gross Expenditure on R&D in 2021



- Expanding private sector investment, such as the Life Sciences Hub (Camperdown), will be essential in developing self-sustaining innovation precincts.
- This can attract additional capital, enable collaboration, and fund specialised infrastructure otherwise cost-prohibitive, ultimately supporting commercialisation, strengthening Australia's global competitiveness and driving economic outcomes.

While gaps remain, there have been recent developments across three areas that are associated with commercialisation…

1 Access to private capital

- Australia's industry structure is dominated by small businesses (93%), many of which operate with limited cash flow, restricting the ability to invest in R&D and scale.
- Australia lags behind major global markets in access to venture capital and attracts just 3% of global life sciences FDI, which predominantly goes to contract services.
- Recent expansion of Australian life sciences-focused funds include: Brandon Capital over $1.25bn across six funds; Uniseed over $200m; Breakthrough Victoria $2bn (across multiple sectors); Tenmile estimated $250m; Tin Alley Ventures $100m; ANDHealth; Proto Axiom and One Ventures

2 Specialised infrastructure

- Access to affordable laboratory space and essential infrastructure (e.g., biobanks and advanced manufacturing) remains a key challenge.
- Recent developments include the Jumar Bioincubator (VIC), UNSW Health Translation Hub and UoS Sydney Biomedical Accelerator.
- Major investments from NSW Government intended to stimulate further activity include NSW Health Statewide Biobank, the RNA Pilot Manufacturing Facility and Viral Vector Manufacturing Facility.

3 Skilled workforce

- Australia has historically seen a steady "brain drain" of highly-skilled workers to larger, better-funded life sciences hubs in the US, Europe and Singapore.
- Development of the local life science ecosystem, including through private investment and researcher-industry partnerships, is important.
- Recent partnerships between Sanofi and QLD's Translational Research Hub and Moderna and Monash University provide opportunities to retain talent in Australia – similar partnerships in NSW are required.

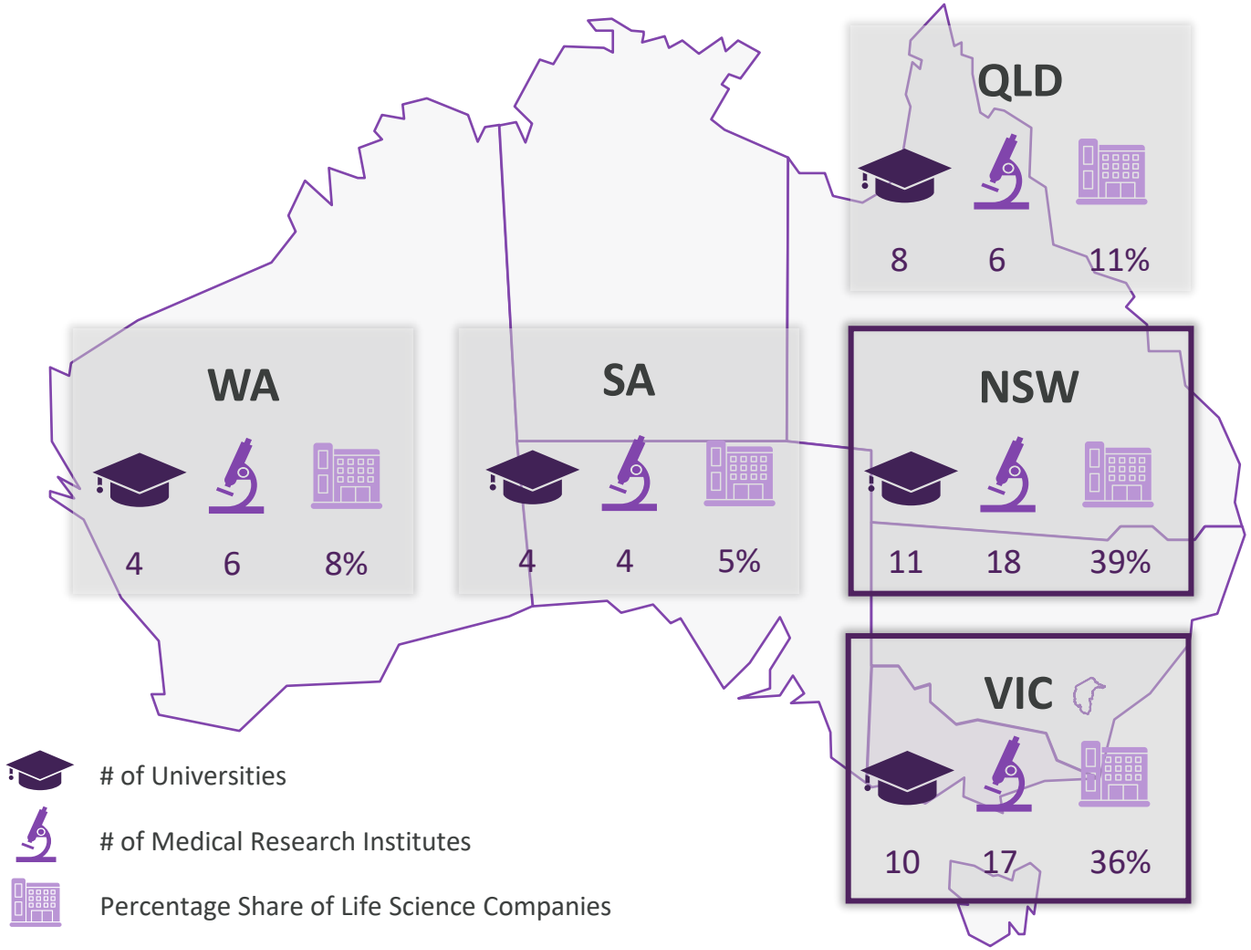
Source: Strategic Examination of R&D discussion paper; UK Life Sciences Competitiveness Dashboard (2024);

Growth Opportunities in NSW

Section 4

Australia's life science industry is geographically clustered in VIC and NSW

NSW leads Australia in the number of life science companies (39%). Proximity to leading universities and MRIs, where companies spin-out to commercialise, has contributed to the development of clusters.



Of the 2,905 life science organisations, key clusters in **Melbourne, Sydney, and Brisbane** are driving industry growth via strong academic-industry collaboration and serving as hubs for talent.

Precincts and co-location with research institutions has been recognised to accelerate innovation, supporting the development of spin-outs and commercialisation.

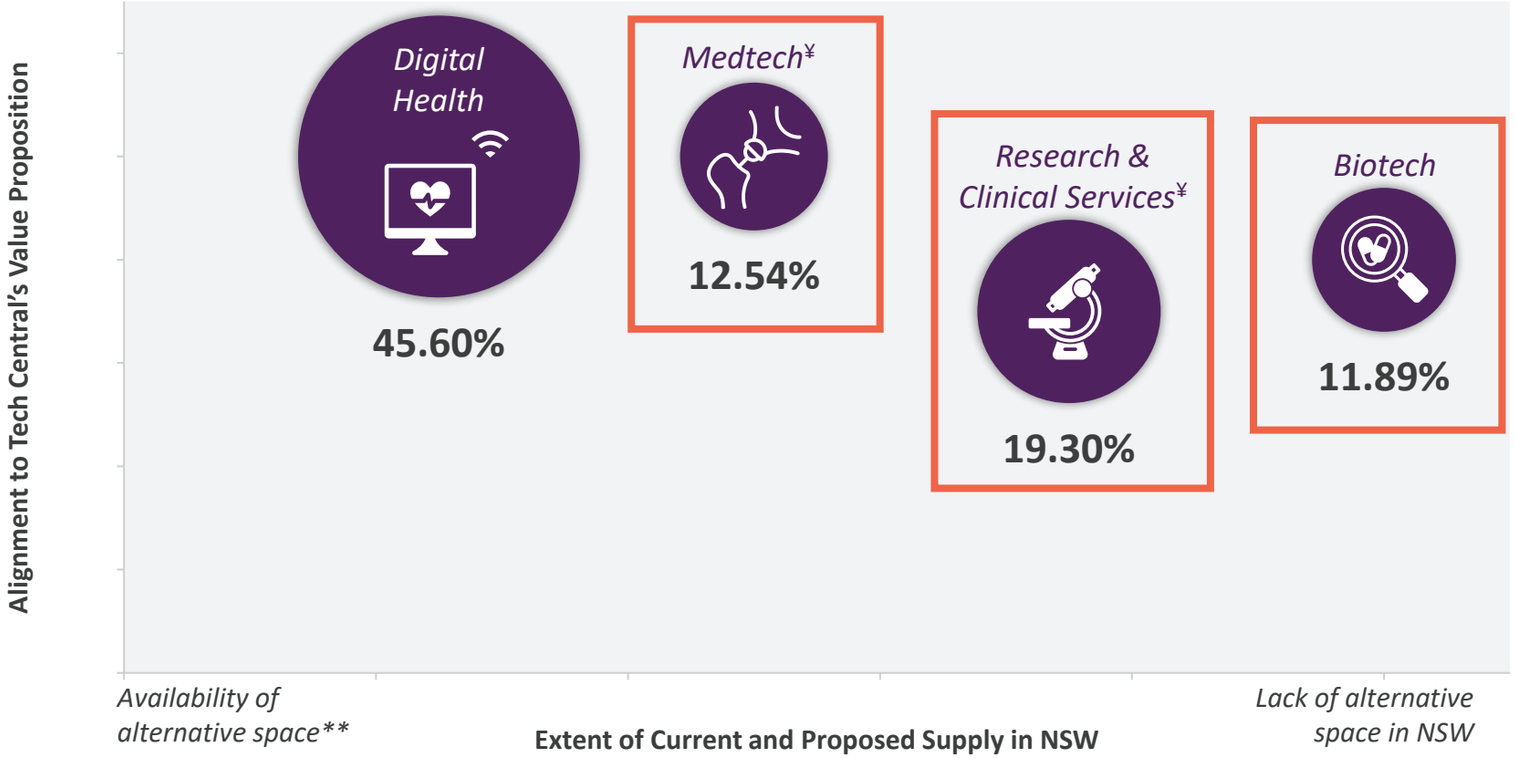
WA and SA are expanding their life sciences presence, with company growth of **149% and 113% respectively** from 2017 to 2024, driven by medtech, biotech, and clinical trials.

AAMRI Report (2024), Australian Universities (2024), IBISWorld Biotechnology report (2023), AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025)

Key opportunities for specialised (lab) space come from growing subsectors

Biotech, research & clinical services and medtech represent key opportunities for Life Sciences Hub (Camperdown), given their requirements for lab space

Assessment of opportunity across key archetypes, bubble size indicates CAGR in NSW companies 2017-2022‡



NSW Companies	2017	2019	2022
Biotech	138	152	242
Medtech & Digital Health	104	117	187
Support Services	126	157	304
Digital Health	86 *(2020)*		182

There is no official classification for biotechnology companies in the Australian and New Zealand Standard Industry Classification, the majority of available biotechnology company data at the industry level is drawn from industry body reports, which serve as indicative measures. As such, it is inherently difficult to measure the relative concentration, success or failure of the industry in Australia.

***Factors in the existence of close substitutes for digital health and medtech;* ǂ CAGR for digital health was calculated based on 2020-2022 figures; ¥ Medtech represents medtech & digital health figures from AusBiotech; Ausbiotech reports support services which includes research & clinical services. These represent CROs, CDMOs, contract research and analytical services and lab testing) – there is potential this growth is also driven by consultancies. Lab infrastructure requirements vary across these areas, being greatest for contract research and analytical services and lab testing.

AusBiotech Sector Snapshot (2022;) ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022)

Recent expansion of NSW's infrastructure signals greater opportunities to retain local companies, as well as attract global players to the region

Current & Future Supply

Two major developments in NSW will increase lab capacity, absorbing some of the demand for lab space. Six floors (10,900m^2) are currently available for lease in anticipation of the Health Translation Hub launch in mid-2025. **The planned Sydney Biomedical Accelerator incubator could serve as a future pipeline for tenants in the proposed site, rather than direct competition**, given this incubator is targeted towards early-stage startups. Assessment of their ability to fully meet demand requires qualitative market research to better understand local demand.

Existing Incubators

Sydney's main incubators with lab space are Cicada Innovations and Macquarie University Deep Tech Incubator. Cicada currently caters to early-stage tech and life sciences companies, however the extent of currently available lab space in this site is unknown.

Demand Decision Factors

Consideration needs to be given to how the type of products or various disciplines within the major subsectors influences the facility they will choose. With the current low availability of wet lab spaces for early-stage companies in Sydney, companies have limited choices in where they can locate their R&D operations. If there is greater supply and a range of options, different companies may choose different lab/incubator facilities based on the support provided for their particular therapeutic area.

Tenant Selection

Commercial for-profit operators do not appear to curate their tenants based on therapeutic area. Although, Cicada Innovations and Jumar Bioincubator selectively curate tenants based on therapeutic areas and strategic alignment (or other company attributes).

NSW lags other states for dedicated commercial life science laboratory space

Investment in NSW is catching up to Victoria, which is home to a similar proportion of Australian life sciences companies

STATE	LIFE SCIENCE PRECINCT / HUB	DEDICATED COMMERCIAL LIFE SCIENCES LABORATORY SPACE
NSW	Tech Central Precinct, Camperdown	✓ Planned in Sydney Biomedical Accelerator (SBA)
NSW	Macquarie Park Innovation District (MPID)	✓
NSW	Westmead Health & Innovation Precinct	✓
NSW	Randwick Health and Innovation Precinct	✗ Planned in UNSW Health Translation Hub
NSW	Liverpool Innovation Precinct	✗
NSW	UNSW Torch Innovation Precinct	✗
NSW	Hunter Health and Innovation Precinct	✗
NSW	nandin Innovation Centre (ANSTO)	✓

STATE	LIFE SCIENCE PRECINCT / HUB	DEDICATED COMMERCIAL LIFE SCIENCES LABORATORY SPACE
VIC	Melbourne Biomedical Precinct, Parkville	✓
VIC	Monash Science Technology Research and Innovation Precinct (STRIP)	✓
VIC	Western Centre for Health, Research and Education	✗
VIC	La Trobe Research and Innovation Precinct	✓
QLD	Gold Coast Health and Knowledge Precinct	✓
QLD	Boggo Road Innovation Precinct	✓
QLD	Herston Health Precinct	✓
QLD	QLD Biosciences Precinct	✗
SA	Adelaide BioMed City	✓

ANSTO = Australian Nuclear Science and Technology Organisation
Biointelect analysis based on publicly available information

Biointelect

Emerging private investments around Australia complement public spaces

Financial drivers are different across these major investors and aim to attract different types of tenants

Government and Not-for-Profit

Macquarie University Deep Tech Incubator *Macquarie Park Innovation District*	Macquarie University ($7m) Investment NSW ($3.5m)
Sydney Biomedical Accelerator Tech Central Precinct (Camperdown)	NSW Government ($150m) University of Sydney SLHD Sydney Local Health District ($25m) Philanthropy ($20m)
Melbourne Connect *Melbourne Biomedical Precinct*	VIC Government University of Melbourne
Monash Innovation Labs *Monash STRIP*	VIC Government Monash University
LaTrobe University Bio Innovation Hub *La Trobe Research and Innovation Precinct*	VIC Government ($8m) La Trobe University
Cohort Innovation Space *Gold Coast Health and Knowledge Precinct*	QLD Government
Translational Research Institute Incubator *Boggo Road Innovation Precinct*	QLD Government ($100m) Australian Government ($140m) QUT ($25m), UQ ($10m) Atlantic Philanthropies ($50m)

Private Investment

Cicada Innovations *Tech Central Precinct*	Private investment NSW Government
HealthTech Hub, Innovation Quarter (iQ) *Westmead Health & Innovation District*	Charter Hall Group ($67m) Western Sydney University Investment NSW ($7.8m)
Yild Technical Spaces *Norwest, Sydney*	Private investment
Health Translation Hub *Randwick Health & Innovation Precinct*	ISPT, HESTA, UniSuper and Plenary Group ($600m)
Area53 *Sydney and Melbourne*	Private investment ($1.5bn domestic and international)
Jumar Bioincubator *Melbourne Biomedical Precinct*	CSL, WEHI and University of Melbourne ($45m over 10 years) Breakthrough VIC ($25m)
CoLabs *Proximal to Melbourne Biomedical Precinct and Monash STRIP*	Private investment (including Spirit Super, Ethical Property Australia) VIC Gov ($800k)

Note: This list of laboratory infrastructure is not exhaustive

Most private investments in life sciences hubs also receive public support

Joint public-private goals include research translation and commercialisation, leveraging public support to generate sustainable new businesses

DESCRIPTION, YEAR OPENED	PRECINCT	MODEL/RATIONALE	PRIORITY SUBSECTOR(S) & WET AND/OR DRY LABS
Jumar Bioincubator *35,000m² (building)* *2024*	Melbourne Biomedical Precinct	• Support biotech commercialisation through co-location with CSL and precinct • Operation outsourced to Cicada Innovations	• 25 self-contained labs (24–90m²) in PC2 facility • Cleanroom space
Melbourne Connect *2021*	Melbourne Biomedical Precinct	• Increase research infrastructure and promote STEM industries • Primarily occupied by University of Melbourne faculty	• Customised dry labs • Shared engineering maker space (1,138m²)
Monash Innovation Labs *2023*	Monash STRIP	• Provide lab space for early-stage Monash University spin-outs	All • 8 purpose-built labs (31–101m²)
LaTrobe University Bio Innovation Hub *2024*	La Trobe Research and Innovation Precinct	• Provide lab space for biotech and agritech industry and LaTrobe spin-outs	• Up to 12 PC2 labs (20–60m²), fit-out at companies' own expense
CoLabs *1,100m²* *2021*	Proximal to Melbourne Biomedical Precinct	• **For-profit provider** of labs for lease by the week or month using a members' model and no lock in contracts	All • Fully equipped PC1 and PC2 labs • Engineering and fabrication lab
Cohort Innovation Space *2,500m²* *2019*	Gold Coast Health and Knowledge Precinct	• Rental labs available for startup companies to accelerate commercialisation • Operation outsourced to CoSpaces	• Partially fitted-out PC1 an PC2 labs (82–164m²)
Translational Research Institute Incubator *2012*	Boggo Road Innovation Precinct	• Increase research infrastructure and promote researcher and clinician collaboration across partners • Operation via founding partners' joint venture	• 5 cleanrooms • Customisable PC2 laboratories • Clinical manufacturing

Biointelect analysis based on publicly available information; this list is not exhaustive, additional incubators will be assessed in the Final Report: Bio21 Incubator, Aikenhead Centre for Medical Devices (ACMD)

Biotech *Medtech* *Digital health* *Pharmaceutical* *Research & clinical services* *Agritech* *Quantum*

There is limited, but expanding commercial lab space in NSW life science precincts

Sydney Biomedical Accelerator and UNSW Health Translation Hub (both under development) will increase supply in NSW

	DESCRIPTION, YEAR OPENED	PRECINCT	RATIONALE	PRIORITY SUBSECTOR(S) & WET AND/OR DRY LABS
EXISTING	**Macquarie University Deep Tech Incubator** *2017*	Macquarie Park Innovation District *905,000m²*	• Support early-stage Macquarie University spin-outs and industry	• Co-share lab space based on individual benches
EXISTING	**Cicada Innovations** *2024*	Tech Central Precinct	• **Run as a for-profit model** based on sustainability – any profit reinvested back in the company	• Modifiable wet labs (including PC2) and cleanrooms • Shared design and prototyping spaces
EXISTING	**Sydney Knowledge Hub** *2019*	Tech Central Precinct (Camperdown)	• Support early-stage University of Sydney spin-outs	• Hardware lab for engineering and fabrication including 3D printers, CNCs, electronics and general tools
EXISTING	**Yild Technical Spaces**	Not located in a precinct (Norwest, Sydney)	• **For-profit provider** – rental model for co-share lab infrastructure	• Fully equipped PC2 labs (11–60m²) • ISO Grade 5 cleanrooms (150m²)
PROPOSED	**Sydney Biomedical Accelerator** *36,000m², ~800 researchers* *TBD – 2028*	Tech Central Precinct (Camperdown)	• Support early-stage University of Sydney spin-outs • Promote industry engagement and research commercialisation	• Wet labs (specifics unknown) • Prototyping facility • Biobank and GMP cleanrooms • Clinical trials / health clinic • Computing and bioinformatics
PROPOSED	**Health Translation Hub** *35,600m²* *TBD – 2025*	Randwick Health & Innovation Precinct	• Support UNSW research • Promote industry engagement and research commercialisation	• Faculty and teaching spaces • Research labs (specifics unknown) • Health clinics

Biointelect analysis based on publicly available information

Biotech · Medtech · Digital health · Pharmaceutical · Research & clinical services · Agritech · Quantum

With growth in the sector, NSW has scope to increase lab infrastructure



Assessment of supply focused on life sciences-focused lab infrastructure for companies within precincts, with a particular focus on availability in NSW, VIC and QLD



At the precinct level, benchmarking highlighted NSW lags other states for dedicated commercial life science laboratory space



There are direct competitors vs public-supported incubators, where financial drivers are likely to be different and may aim to attract different types of tenants



Other states have increased supply of commercial life sciences lab infrastructure



Comparatively, current limited commercial lab space currently exists in NSW life science precincts

- Sydney Biomedical Accelerator and UNSW Health Translation Hub (more than 10,900m^2 available) will increase supply in NSW



Expansion of NSW's infrastructure signals a commitment to retaining local companies and attracting global players to the region

https://www.healthtranslationhub.com.au/

Government Policy Alignment

Section 5

NSW Govt supports precincts to stimulate economic growth and R&D commercialisation

The Australian and NSW Governments have demonstrated commitments to life sciences through sustained policies and investments

Australia's innovative life sciences industry delivers significant value to the economy

- Life sciences has a high R&D intensity which fuels economic growth from activities across the value chain
- The return on investment from medical research to the economy has been estimated at $3.90 per dollar invested (2018)
- State-based analysis conducted in WA and VIC suggests this may vary on a state-by-state basis

The Australian Government has demonstrated enduring cross-party commitment to life sciences over the past 100 years

1985
Research & Development Tax Incentive (RDTI)

1990
Cooperative Research Centre Grants (CRC)

1992
National Health & Medical Research Council (NHMRC) Act

2004
National Collaborative Research Infrastructure Strategy (NCRIS)

2015
Medical Research Future Fund (MRFF)

NSW Government's focus for life sciences is driving economic growth, leadership in innovation and healthcare advancement

- NSW continues to invest significantly in health/research infrastructure
- Government is currently driven to improve NSW's innovation performance, relative to other states and globally

>$5bn
in life sciences infrastructure

$3.4bn
for capital works in 2024-25 budget

Health and innovation precincts have been identified as an opportunity to address Australia's commercialisation challenges

- Precincts generate economic and social returns
- Private investment makes critical contributions to life sciences and precinct developments, contributing to precinct maturity

sanofi — *Translational Research Institute (QLD)*

moderna — *mRNA Manufacturing facility & Regional Research Centre for Respiratory Medicines and Tropical Diseases (VIC)*

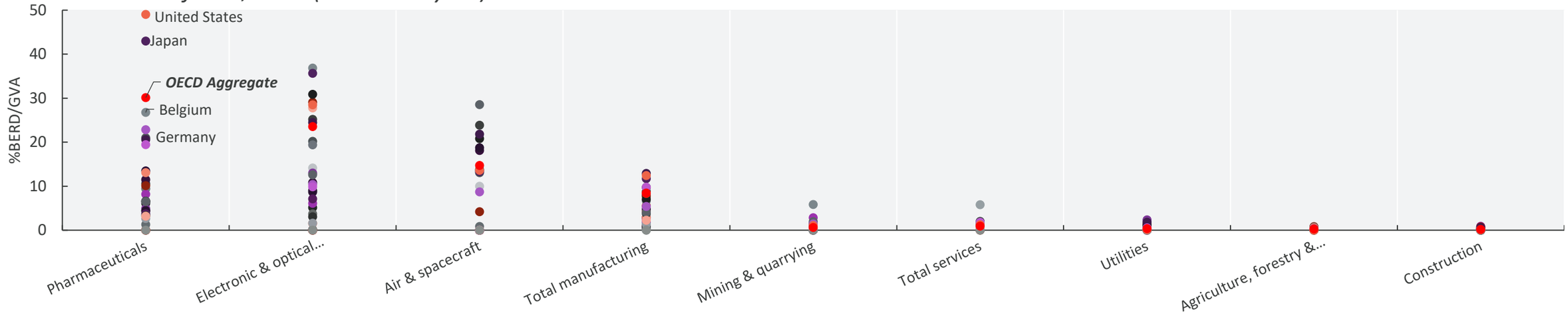
Plenary — *UNSW Health Translation Hub (NSW)*

AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020), https://www.nrf.gov.au/; https://www.industry.gov.au/publications/medical-science-co-investment-plan; Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25;

Life sciences has a high R&D intensity which fuels economic growth

The R&D intensity of the pharmaceutical industry reflects the significant capital investment required to develop high-value medicines and vaccines

BERD as a share of GVA, 2019 (or nearest year)



Importance of R&D activity to long-term economic performance

R&D

Intentional investment in R&D and development now, to create a permanent, higher future permanent stream of economic outcomes.

Capital investment

The benefits of innovation R&D are incorporated into the economic factors of production, including capital stock.

Enhanced economic productivity

The innovative benefits are incorporated into economic factors of production, consequently increasing total factor productivity (TFP).

Increased economic growth

Increased economic activity leading to greater gross domestic product (GDP and per capital income).

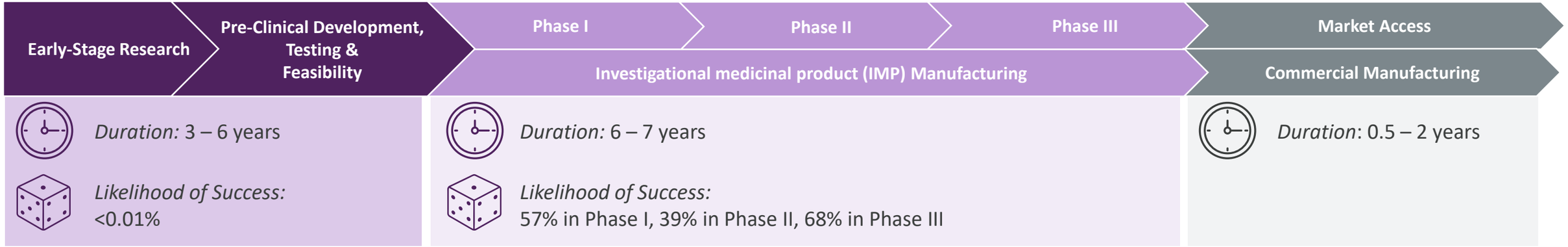
BERD = Business expenditure on R&D; GVA = Gross value added

OECD Health at a Glance 2023 – Analytical Business Enterprise R&D (ANBERD), Structural Analysis (STAN) and System of National Accounts (SNA) databases

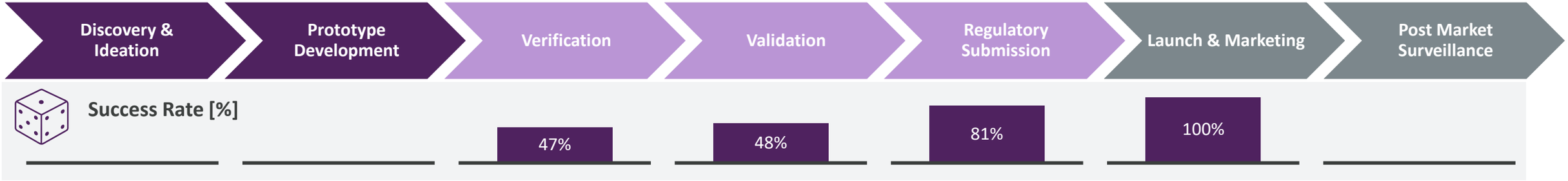
There are a range of R&D activities across the value chain

The capital-intensive nature of the life sciences sector is driven by high development costs and significant failure risks; R&D investment across phases is underpinned by investment in R&D infrastructure

BIOTECH & PHARMA



MEDTECH



International Federation of Pharmaceutical Manufacturers & Associations (IFPMA), The Pharmaceutical Industry and Global Health, Facts and Figures (2022); Makower, J., Meer A., Denend, L. FDA Impact on U.S Medical Technology Innovation: A Survey of over 200 Medical technology companies. MedTech Europe. November 2010.; Sertkaya, A., Jessup, A., DeVries, R. Cost of developing a therapeutic complex medical device for the U.S market. Prepared for Harvard Center for Risk Analysis. September 2019

The Australian Government has demonstrated enduring cross-party commitment to life sciences through sustained policy and investment over the past 100 years

The Federal Government has provided consistent funding across more than 8 departments, 14 portfolios and 151 programs, with an estimated $14.4 billion for investment in 2024-25

Key long-term policies include:

1926	1985	1990	1992	2004	2015	2023
Science Industry Endowment Fund	Research & Development Tax Incentive (RDTI)	Cooperative Research Centre Grants (CRC)	National Health & Medical Research Council (NHMRC) Act	National Collaborative Research Infrastructure Strategy (NCRIS)	Medical Research Future Fund (MRFF)	National Reconstruction Fund

Significant federal investments ongoing in 2024/2025:

$15bn
National Reconstruction Fund

Stimulate priority industries, including medical science and diversify industrial capacity

$1.5bn
Medical Science Co-Investment Plan

Support infrastructure, manufacturing and growth of innovative companies

$20bn
Medical Research Future Fund

Support biomedical research that delivers national health priorities and economic returns

$4.2bn
R&D Tax Incentive

Stimulate additional R&D and IP generation in Australia, across all industries

AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020), https://www.nrf.gov.au/; https://www.industry.gov.au/publications/medical-science-co-investment-plan; Australian Government, Department of Industry, Science and Resources (DISR) Research and Innovation Budget Tables 2024-25

NSW Government's key focus for life sciences is increasing economic growth, leadership in innovation and healthcare advancement

These priorities leverage NSW strength in research, infrastructure and innovative health solution development to attract investment, generate jobs and maximise partnerships

Precincts	Establishing globally significant Health and Innovation Precincts that co-locate health services, laboratories, universities and MRIs.
Translation	Accelerating translation by enhancing capabilities in the development, translation and manufacturing of advanced therapeutics.
Clinical Trials	Growing clinical trial competitiveness with a focus on efficient start up and innovative models such as adaptive clinical trials.
Manufacturing	Growing local manufacturing to build sovereign capability and supply chain resilience.
Preparedness	Promoting health system readiness and workforce development.

Key Government bodies include:

NSW Health Office of Health and Medical Research (OHMR) supports research, translation and commercialisation through a range of programs, including *clinicalTrialsNSW* (enables clinical trial capacity, capability and collaboration)
Health Infrastructure – delivers infrastructure solutions and services, oversees the planning, design and construction of health capital works >$10M in NSW

Office of the Chief Scientist & Engineer (OSCE): Four distinct functions including the provision of independent advice, management of the NSW Research Attraction and Acceleration Program (RAAP), industry development including administration of key commercialisation programs (Biosciences Fund, Small Business Innovation and Research Program) and science outreach and education.

Promotes investment in various sectors, including health sciences, technology, and advanced manufacturing through grants and programs.

Relevant NSW Government web pages and policy documents; https://www.health.nsw.gov.au/about/nswhealth/Pages/structure.aspx; https://www.chiefscientist.nsw.gov.au/about; https://www.investment.nsw.gov.au/

NSW is an economic powerhouse of Australia's life sciences sector, driving national growth and global investment

8,484,400

Residents, highest population in Australia (30 June 2024)

>89,500

People employed in NSW life sciences sector (2022)

$35.1bn

Health spend in 2024-25 Budget

$700bn

Largest state economy in Australia (larger than Singapore and Malaysia)

55%

of Australia's life sciences organisations are in NSW

2 of top 20

global universities in NSW, with 6 ranked in global top 200

> **NSW is 5th in the world for biotech capabilities**, in the **top 10 destinations globally for clinical trials**, and home to **55% of Australia's medtech and biotech companies**. I welcome you to explore, partner and do business with our outstanding health and medical research sector.
>
> **The Hon. Ryan John Park MP**
> **NSW Minister for Health, NSW Minister for Regional Health**
> *NSW Prospectus: A focus on research, develop and grow for BIO 2024 (June 2024)*

> Our state hosts **50 pharmaceutical companies, 400 biotechnology companies and 500 medical technology companies**, more than 100 of which are listed on the ASX. **Australia has the 12th largest pharmaceutical sales market in the world** and the **2nd largest in the Asia–Pacific**.
>
> **The Hon. David Harris MP**
> **NSW Minister for Medical Research**
> *NSW Prospectus: A focus on research, develop and grow for BIO 2024 (June 2024)*

NSW Government, Health Prospectus for BIO (2024); ABS, National, state and territory population (2024); AusBiotech Sector Snapshot (2022)

NSW's policy landscape for innovation and life sciences has shifted following change of government in 2023

Although NSW has historically invested strongly in innovation, the change in Government ushered in significant realignments to funding programs, reflecting the greater emphasis on advanced manufacturing, job creation, and targeted infrastructure

Key NSW Government policies and pathways include:

20-year NSW R&D Roadmap	NSW Innovation Blueprint (In Development)	NSW Health & Medical Research Strategy	NSW Industry Development Framework	State Significant Development (SSD) Pathway
Provides long-term direction for research capabilities in areas like health, medtech, AI, and sustainability.	Boosting well-paying jobs and productivity through "frontier sectors" such as quantum computing, AI, data, cyber, advanced manufacturing—and by extension, life sciences.	Strengthen collaboration among hospitals, universities, and industry to accelerate medical research, translation, and commercialisation.	Stimulate growth across priority sectors in NSW. It aims to create jobs, attract investment, and foster industry resilience, with life science/medtech featuring prominently.	Streamlines planning approvals for large projects with major economic or social impact (e.g. precinct expansions).

Notable recent/ongoing investments:

$160m

Medical Research Support Program

Develop state-wide capacity for health and medical research

$8m

Medical Devices Fund (annual)

$70m since 2013 to support medical device development

$8m

Quantum Computing Commercialisation Fund (2022-23)

Single-round, tech development & commercialisation program

In 2023, over $227 million in industry/innovation grants were paused or reviewed, part of a broader effort to reduce state spending by $13 billion.

Fewer broad-based innovation programs remain, with the **Future Economy Fund partially reprofiled** and some grants (e.g., **MVP Ventures**) continuing on smaller scales.

NSW continues to invest significantly in health/research infrastructure despite cutbacks in general innovation grants

Despite scaled-back innovation grants, NSW invests heavily in critical health/research facilities, building the foundational capacity needed for a thriving life sciences sector

>$5bn

in life sciences infrastructure

$3.4bn for capital works in 2024-25 budget

Provide the essential infrastructure – labs, clinical research spaces, manufacturing facilities, and ecosystem support—that enable the sector to grow

Key Relevant Investments	
>$3bn	Developing Westmead over the next 10 years
>$1.5bn	Randwick Health & Innovation Precinct (co-investment with UNSW)
$835m	John Hunter Health & Innovation Precinct ($498.2 over 4 years in the 2024-25 Budget)
$214m	RNA Pilot Manufacturing Facility ($95m for facility and $119m for R&D)
$160m	Medical Research Support Program
$143m	Sydney Biomedical Accelerator
$134m	Viral Vector Manufacturing Facility (VVMF)
$12m	NSW Health Statewide Biobank

> I am particularly interested in how governments can promote more interaction between different parts of the innovation ecosystem to overcome knowledge barriers and drive collaboration.
> I believe that we have the people, institutions and competitive edge to close that gap. What is missing perhaps is better drive and better collaboration between the sectors to close this gap.
> **Place-based approaches such as innovation districts are one way to achieve this.**

Anoulack Chanthivong (Nov 2023)
Minister for Better Regulation and Fair Trading, Minister for Industry and Trade, Minister for Innovation, Science and Technology, Minister for Building, and Minister for Corrections

https://www.hinfra.health.nsw.gov.au/projects/project-search/john-hunter-health-innovation-precinct; https://rhip.org.au/; https://www.investment.nsw.gov.au/focus-sectors/health-and-life-sciences/#:~:text=The%20NSW%20Government%20is%20targeting,vector%20manufacturing%20facility%20in%20Westmead.; https://thepolicymaker.jmi.org.au/harnessing-research-and-innovation-to-secure-nsws-future/

Strategic investment into life sciences is noted across most major Australian States

Each major state has established significant funding programs with sustained cross-party support, demonstrating long-term commitment to life sciences infrastructure and research capabilities

South Australia and **Western Australia** have invested significantly through major infrastructure projects while also providing ongoing operational and research funding to support commercialisation and industry growth.

Key policies

- SA's Innovation Places Leadership Framework 2024-2034
- WA Health and Medical Research Strategy 2023-2033

Recent investment

$1.8b

WA Future Health Research & Innovation Fund

Funding for research and advancing infrastructure

The Victorian government have invested an estimated **$4 billion in infrastructure and capabilities over the past 20 years** in science, technology, innovation and medical research, with a significant proportion directed to life sciences.

Key policies

- Health and Medical Research Strategy 2022-2032
- Made in Victoria: 2030 Manufacturing Statement

Recent investment

$350m

Victorian Higher Education State Investment Fund

Supports capital works, including for the life science infrastructure

The Queensland Government has accelerated investments in developing the local sector, with **bi-partisan support and funding for developing innovation precincts**.

Key policies

- Queensland Innovation Precincts and Places Strategy 2022-2032
- Research Strategy 2032

Recent investments

$26m

Research Infrastructure Co-investment Fund

$53m

Quantum & Advanced Technologies Strategy

Including $28.1m Quantum and Advanced Technologies Commercialisation Infrastructure Program

https://www.vic.gov.au/victorian-higher-education-state-investment-fund; https://science.desi.qld.gov.au/industry/funding/ricf; https://fhrifund.health.wa.gov.au/; https://www.health.wa.gov.au/~/media/Corp/Documents/Reports-and-publications/Strategies/State-Health-and-Medical-Research-Strategy.pdf; AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025), Allen + Clarke Consulting Medical Research Commercialisation Landscape (2020)

NSW Government is currently driven to improve NSW's innovation performance relative to other states and globally

The 2024 NSW Innovation & Productivity Scorecard highlighted gaps in converting innovation into economic impact, presenting an opportunity for infrastructure investment that enhances commercialisation, industry collaboration and scale-up support

The Scorecard highlighted the need for **stronger policy intervention to drive economic growth**

"Right now, NSW is not performing as well as it could in this global innovation market because **it is not an environment that actively supports long-term success and prosperity.**"

George Peppou (2025)
Founder and CEO of Vow and project champion of the Innovation and Productivity Council

The NSW Innovation Blueprint, was recently released, acknowledging NSW's comparative strengths in life sciences and highlighting targeted investments in areas such as clinical trials infrastructure, while seeking to embed innovation more broadly across government policy and economic development.

Key focus areas include:



- Strengthening the innovation ecosystem (startups, R&D, industry linkages)
- Scaling local businesses & commercialisation pathways
- Attracting private investment & VC funding
- Bridging university-industry collaboration gaps
- Developing talent & skills in emerging tech sectors

The ***NSW Health Research and Innovation Strategy 2025-2030*** was also recently released, highlighting statewide precincts and place-based initiatives as a strategic focus

"There is no shortage of reports and metrics that show NSW – and Australia as a whole – don't rank well in comparison to some of our peers in terms of converting innovation inputs into tangible benefits for people and the economy...
…. Digging a bit deeper, our innovation inputs, which include tertiary education and R&D, are ranked 16th, whereas our innovation outputs, which include knowledge impact and diffusion, are ranked 30th. What does it say about some of our institutional components when there is such difference between us and our advanced trading partners? **This can and must change.**"

Anoulack Chanthivong (Nov 2023)
Minister for Better Regulation and Fair Trading, Minister for Industry and Trade, Minister for Innovation, Science and Technology, Minister for Building, and Minister for Corrections

https://www.startupdaily.net/topic/the-nsw-parliament-voted-to-force-the-government-reveal-documents-on-the-innovation-blueprint-startups-have-been-waiting-18-months-to-see/; https://www.nsw.gov.au/sites/default/files/2024-02/innovation-blueprint-summit-discussion-paper_1.pdf; https://thepolicymaker.jmi.org.au/harnessing-research-and-innovation-to-secure-nsws-future/; https://www.health.nsw.gov.au/research/Publications/research-and-innovation-strategy.pdf

Health and innovation precincts have been identified as an opportunity to address Australia's challenges research commercialisation

Australia has long faced challenges in commercialising R&D and innovation…

Despite ranking in the top 10 for the Global Innovation Index, Australia falls to **30th for outputs from research.**

Access to capital is the number one barrier to commercialisation – with Australia capturing only 3% of life sciences foreign direct investment in 2022.

Limited infrastructure, loss of talent and industry-partnerships further slow commercialisation.

Recently the Australian Government launched a strategic review of Australia's R&D system…

The independent expert panel is assessing ways to:

- Strengthen collaboration between research and industry.
- Improve translation of research into commercial outcomes.
- Align R&D investments with national priorities to enhance economic resilience.
- Boost Australia's overall R&D intensity and drive greater private sector investment.

This review will shape policies to boost Australia's R&D and innovation.

Innovation precincts are increasingly recognised for their role in addressing this challenge…

Both Australian and international evidence on innovation precincts highlights their success in encouraging increased **collaboration** across **researchers, clinicians**, and **industry partners**, fostering **innovation**, **knowledge transfer**, and **commercialisation.**

Precincts also act as magnets for industry seeking partnerships or regional expansion.

The Advanced Manufacturing Parliament Inquiry highlighted their value and role for private co-investment…

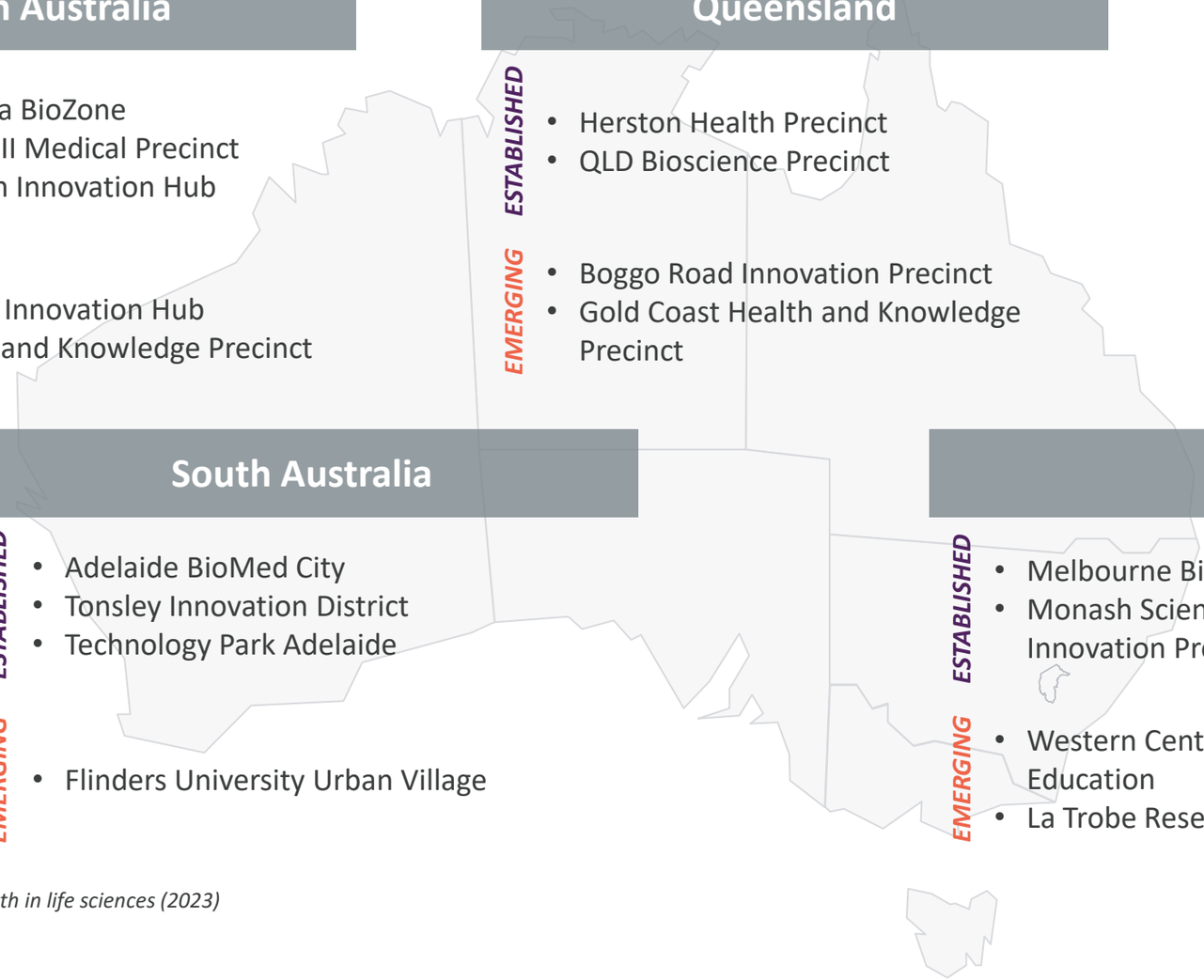
> "The Committee would like to acknowledge and emphasise the often-unsung initiatives that are seeking to address commercialisation challenges in Australia. **Collaboration and co-funding have resulted in many success stories** and will, **if consistently maintained over time, provide a way to bridge the 'valley of death' from idea to commercial reality.**"

Australian Parliamentary Inquiry into Developing Advanced Manufacturing in Australia (2023)
Chapter 4 – Commercialisation and Collaboration

AusBioech National Biotech and Medtech Development and Commercialisation Summit Discussion Paper (2024); Australian Parliament. Sovereign, Smart, Sustainable: Driving Advanced Manufacturing in Australia. House of Representatives Standing Committee on Industry, Science and Resources (2023).

Almost all states have major health and life science precincts and hubs

These precincts are increasing in both number and scale across Australia, with several emerging developments in each state



Western Australia

ESTABLISHED

- Western Australia BioZone
- Queen Elizabeth II Medical Precinct
- Joondalup Health Innovation Hub

EMERGING

- WA Life Sciences Innovation Hub
- Murdoch Health and Knowledge Precinct

Queensland

ESTABLISHED

- Herston Health Precinct
- QLD Bioscience Precinct

EMERGING

- Boggo Road Innovation Precinct
- Gold Coast Health and Knowledge Precinct

New South Wales

ESTABLISHED

- Macquarie Park Innovation District
- Westmead Health Precinct
- **Tech Central (Camperdown)**
- Liverpool Innovation Precinct

EMERGING

- Randwick Health and Innovation Precinct
- STEMM Precinct (Newcastle)

South Australia

ESTABLISHED

- Adelaide BioMed City
- Tonsley Innovation District
- Technology Park Adelaide

EMERGING

- Flinders University Urban Village

Victoria

ESTABLISHED

- Melbourne Biomedical Precinct, Parkville
- Monash Science Technology Research and Innovation Precinct (STRIP)

EMERGING

- Western Centre for Health, Research and Education
- La Trobe Research and Innovation Precinct

CBRE Research: A new era of growth in life sciences (2023)

Governments invest in precincts for the economic and social returns they generate

A 2018 analysis estimated the return on investment from medical research to be $3.90 per dollar invested, however state-based analysis conducted in WA and VIC suggests this may vary on a state-by-state basis

R&D investment, including in precincts, generates a wide range of benefits and positive spillovers into the Australian economy and broader healthcare sector

Sector Benefits
- Innovation and knowledge spillovers
- Improved research translation
- Improved infrastructure
- Enhanced talent expertise and upskilling

Patient Benefits
- Reduced burden of disease
- Access to innovative treatments
- Improved patient outcomes

Australian Research Profile
- Global reputation
- Additional inward investment
- Talent attraction

Economic Activity
- Increased GDP
- Sector Growth
- IP generation

Job Creation
- Job creation
- High-skill opportunities

Healthcare Costs
- Avoided costs for the healthcare system
- Improved standard of care

Multipliers
- Indirect job creation
- Increased demand through income
- Productivity increases and workforce participation

Macquarie Park Innovation District (MPID; NSW)

$13.6bn
GDP in 2023

133+
Startups since 2017

60,000
Jobs

Monash Technology Precinct (VIC)

$9.4bn
Generated to VIC economy each year

123+
Startups

Gold Coast Health and Knowledge Precinct (QLD)

$3.4bn
Value add to QLD economy

15,000
Workers

$250m
Private development

KPMG, The Economic Impact of Medical Research in Australia (2018), Macquarie University Incubator, Report Card (2023); https://www.connectmpid.com.au/about-macquarie-park; https://www.statedevelopment.qld.gov.au/team-qld/innovation-and-infrastructure#

Private investment is a key factor contributing to precinct development

While government and non-profits have driven Australia's life sciences precinct expansion, private investment could elevate these precincts into self-sustaining ecosystems

State governments primarily drive precinct development given alignment with many of their primary responsibilities – land planning, infrastructure investment and economic development.

Role can include:

- Co-fund existing innovation and infrastructure to attract anchors
- Provide grants for precincts
- Supportive land use planning and zoning
- Utilising land ownership assets
- Supportive macroeconomic policies and programs
- Engaging with stakeholders and the community – investment in placemaking



Despite Australia's dependence on government for precincts, the **private sector is critical in precinct development and maturity** – this includes venture capital, private equity, real estate partners and life science industry companies.

The Federal government plays a critical role in fostering the underlying business and innovation environment to support innovation precincts:

- Protecting IP
- Support for innovation (e.g., grants)
- Reducing investment barriers
- Enhancing tax environment

Federal government has also directly provided substantial investment in life science precincts, although this traditionally appears to have been haphazard.

Universities are key drivers behind innovation precincts often acting as anchors to attract other institutions, health services and private companies. Universities can play a role through investments in infrastructure, entrepreneurship programs, and talent development.

NSW Innovation and Productivity Council, NSW Innovation Precincts (2018); https://smart-societies.com/2020/12/02/australias-healthcare-innovation-precincts-as-competitive-advantage/; https://www.aph.gov.au/Parliamentary_Business/Committees/House/Industry_Science_and_Resources/AdvancedManufacturing/Report/Chapter_4_-_Commercialisation_and_collaboration

Case study: growing private sector involvement signals precinct maturity

MaRS Discovery District illustrates how government is often essential in the early stages of innovation precincts – providing infrastructure, funding and support, which as the precinct evolves can crowd in private sector investment

Phase 1

MaRS' inception included **government support**, creating a deliberate collaboration among the **University of Toronto** and MRIs, including dense clustering strategies, strategic relocation of R&D functions, reconfiguration of real estate assets, and integration of research and entrepreneurship.

Phase 2

Government support extended into a second phase with a long-term view, when the Ontario provincial government strategically relocated **Public Health Ontario's** Toronto laboratory into the precinct. This decision helped anchor the growth of MaRS and strengthened the province's public health infrastructure. The government further bolstered the precinct by establishing a new **Institute of Cancer Research** within MaRS.

After establishing itself as a leading innovation hub, the MaRS precinct has benefitted from substantial private investment – there are now over **1,400 science and tech companies**. This included a collaboration with MaRS, Johnson & Johnson and the government to develop the JLABs incubator for biotechnology.

Phase 3

MaRS' third growth phase includes **public and private anchor tenants** (labs, universities and spin-outs), as well as **residential developments**.



NSW Innovation and Productivity Council, NSW Innovation Precincts: Lessons from international experience (2018)

All major precincts appear to have been supported by federal and/or state governments

Infrastructure within precincts typically involve federal and/or state funding, with mechanisms including direct grants, City Deals, land use planning, direct government commissioning and via universities and research institutes or hospitals



Melbourne Biomedical Precinct

Australian Institute for Infectious Disease (AIID)

- $245m — VIC government
- $150m — University of Melbourne, the Doherty Institute and the Burnet Institute



Adelaide BioMed City

- $80m — South Australian immunoGENomics Cancer Institute
- $68m
- $44m — South Australian Health and Medical Research Institute second site (SAHMRI II)



Gold Coast Health and Knowledge Precinct

- $154m — *RDX Life Sciences Centre at Lumina:* Economic Development Queensland and Northwest Healthcare Properties



Tech Central Innovation Precinct

- $48m — Establishing Tech Central
- $750m — Royal Prince Alfred Hospital Redevelopment
- $1.5bn — Atlassian Headquarters



Westmead Health &Innovation District

- $1bn — Redevelopment of Westmead Health Precinct
- $67m — Charter Hall Group: Innovation Quarter

RANDWICK HEALTH & INNOVATION PRECINCT

The future of lifelong health

Randwick Health & Innovation Precinct

- $720m — Randwick health redevelopment
- $100m — Sydney Children's Hospital & Minderoo Children's Comprehensive Cancer Centre
- $50m

Federal government *State government* *Private* *Universities and not-for-profits*

Parliament of Australia, Inquiry into Developing Advanced Manufacturing in Australia (2023); Press Releases of various investments

Public-private partnerships are attracting large-scale manufacturing projects to AUS

These projects drive long-term industry commitments that boost employment and economic activity, as well as strengthen local R&D and commercialisation through collaboration

moderna

- The **Australian Government**, **Victorian Government** and **Moderna** entered a 10-year partnership to accelerate mRNA research, translation and manufacturing.
- **$2bn** population-scale mRNA Manufacturing facility in Melbourne (within the Monash Technology Precinct) and Moderna's Regional Research Centre for Respiratory Medicines and Tropical Diseases.

Under the agreement, the Federal government will provide **preferential purchasing** for vaccines manufactured at the site, acting as a participation target.

SANOFI

- Agreement between between **Sanofi**, the **University of Queensland (UQ)**, **Griffith University** and the **Queensland Government.**
- **$280m** Translational Science Hub located across Queensland, utilising the laboratories and infrastructure of the UQ, Griffith University and the Translational Research Institute (TRI).

This investment in QLD was made despite Sanofi's Australian headquarters being located in Macquarie Park, NSW.

vaxxas

Government funding supported Vaxxas' Brisbane production facility:

- Australian government's Modern Manufacturing Initiative ($4.4m and $8.2million
- QLD government co-investment and operational support, as well support from Brisbane City Council.

"Together this assistance has **allowed Vaxxas to develop its facility on home soil instead of being built overseas**."

https://djsir.vic.gov.au/mrna-victoria/manufacturing/population-scale-mrna-manufacturing; https://statements.qld.gov.au/statements/96732; Parliament of Australia, Inquiry into Developing Advanced Manufacturing in Australia (2023)

Co-investment models are increasingly used and indicate precinct maturity

Government and not-for-profit funding, along with institutional backing, real estate partners and property developers are accelerating the development of leading biotech and medtech hubs and precincts

SITE, YEAR & SIZE	FUNDING MODEL	KEY INFRASTRUCTURE
CSL Global Headquarters, *2024*  35,000m^2 17 floors	**Public, Private and Not-for-Profit ($65m)** • CSL, Australia's largest biotechnology company • Breakthrough VIC, Victorian government's venture capital fund ($25m) • Walter & Eliza Hall Institute (WEHI) • University of Melbourne	**Anchor Tenant:** CSL Office Spaces: ~60% R&D Laboratories: ~30% Retail & Amenities: ~10% **Incubator:** Jumar Bioincubator (2 floors)
Translational Research Institute, *2024*  32,000m^2 8 floors ~1,000 researchers	**Public, Private and Not-for-Profit ($356m)** • QLD Government ($100m) • Australian Government ($140m) • Queensland University of Technology (QUT) ($25m) • University of Queensland ($10m) • Atlantic Philanthropies ($50m) • Subsequent Sanofi investment (Translational Science Hub, see page 70)	**Anchor Tenant:** Researchers from Partner Institutions: UQ, QUT, Mater Medical Research Institute, Princess Alexandra Hospital **Industry/Incubator:** TRI Incubator
Health Translation Hub, *approx. 2025*  35,600m^2 15 floors	**Private ($600m)** • Co-investment led by Plenary Group, real estate developer and investor • Investment partners include property fund manager, ISPT and super funds, HESTA and UniSuper, who collectively hold 33.3%	**Anchor Tenant:** UNSW (65% for 20-years) **Industry:** Anticipated remaining 35% (6 floors, 10,900m^2 are currently available for lease)

HDR Analysis, Life Sciences Hub (2024); https://massdesigngroup.org/sites/default/files/multiple-file/2017-11/Purpose%20Built_Translational%20Research%20Institute.pdf; https://randwickcampusredevelopment.health.nsw.gov.au/projects/health-translation-hub

Appendices

1 – Life Sciences Hub (Camperdown): Tenant Archetypes & Needs

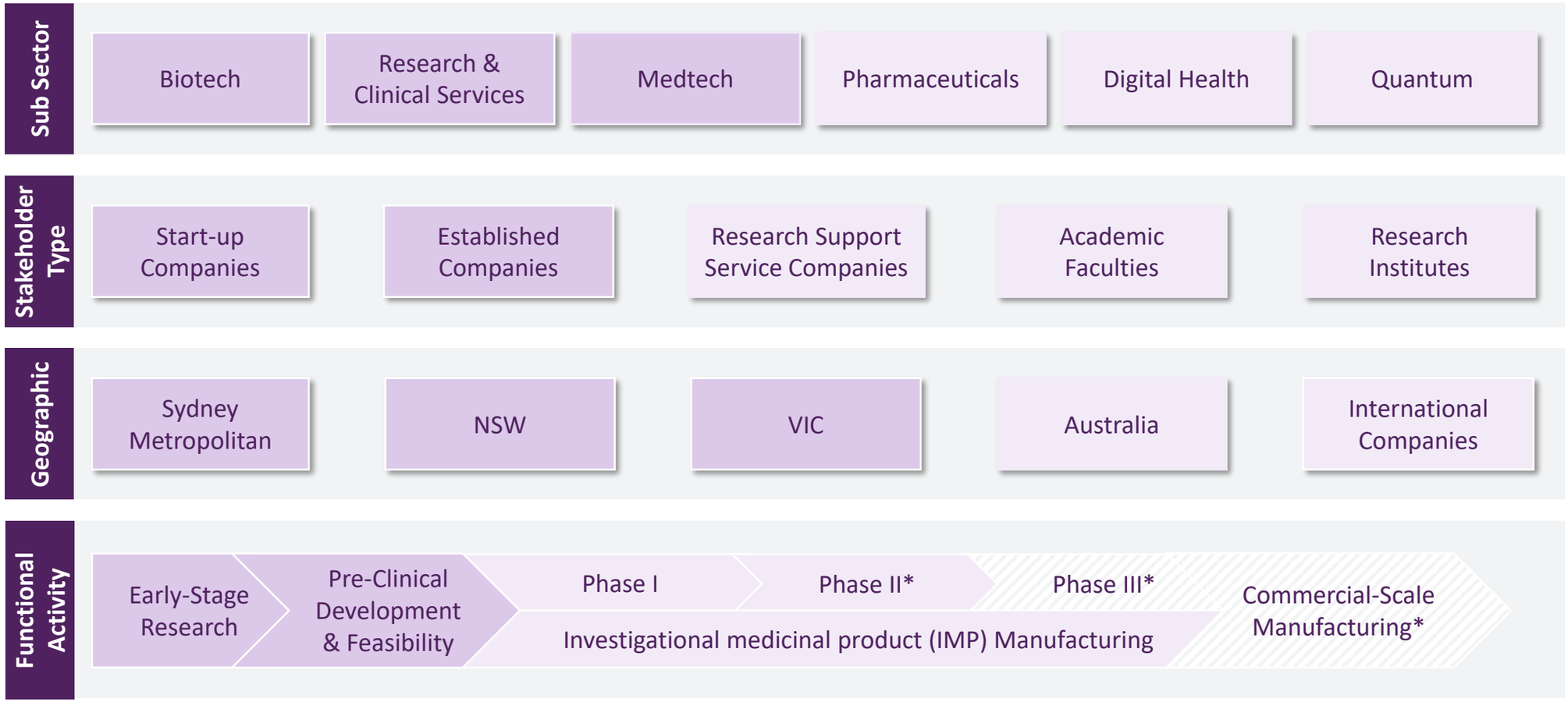
2 – Structure of Australia’s Life Sciences Industry

Life Sciences Hub (Camperdown): Tenant Archetypes & Needs

Appendix 1

There are a range of potential life sciences tenants for the Life Sciences Hub

Prioritised analysis of potential tenant archetypes focused on the key differentiator of this proposed site: the provision of life sciences-specific laboratory infrastructure



There are a range of potential tenants for the Life Sciences Hub (Camperdown)

Infrastructure needs and availability of supply differ significantly across the subsectors and tenant archetypes

	Biotech	Research & Clinical Services*	Australian-based Pharmaceutical Companies	Multi-National Pharmaceutical Companies	Medtech	Digital Health	Quantum
Companies in AUS	**548** *2022*	**146** *2022*	**120** *2025*	**86** *2025*	**577** *2023*	**>513** *2022*	**16** *2022*
Anticipated Infrastructure Needs	• Fitted-out PC1 and PC2 wet labs • Shared labs with specialist equipment (e.g., microscopy) • Facility management • Coworking, offices, meeting rooms	• Customisable wet labs • Cleanrooms for clinical manufacturing (GMP required for Phase 2 beyond) • Health clinics/ patient facilities • Coworking, offices, meeting rooms	• Fully customisable wet labs (PC1 and PC2) • Fully customisable GMP cleanrooms for clinical manufacturing • Private offices, meeting rooms	• Private offices, meeting rooms	• Fitted-out shared prototyping and fabrication labs (e.g., 3D printing, electronics) • Private offices, meeting rooms	• Private offices, meeting rooms • Access to dedicated data centres with AI/ML processing capabilities • Regulatory-compliant cloud storage for patient data	
Key Camperdown/ Tech Central Value Elements	• Affordable local infrastructure • Proximity to parent institutions – USYD, SBA and RPAH • Talent attraction	• High-quality local infrastructure • Colocation with leading RPAH and potential customers • Integration with clinical trial units and biobanks	• Colocation with collaborators - USYD, RPAH, clinical trial sites • Connectivity and proximity to CBD	• Connectivity and proximity to CBD • Access to potential research partnerships	• Affordable local infrastructure • Proximity to parent institutions - USYD, SBA and RPAH • Talent attraction	• Proximity to RPAH, UTS and USYD • Colocation with tech companies	

Research & clinical services represent CROs, CDMOs, contract research and analytical services and lab testing. Lab infrastructure requirements vary across these areas, being greatest for contract research and analytical services and lab testing. *Anticipated infrastructure needs reflect the general requirements of each subsector; however, they will vary depending on the specific product and company. Therefore, qualitative market research of potential tenants is recommended for validation.*

RPAH = Royal Prince Alfred Hospital; UTS = University of Technology Sydney; USYD = University of Sydney; SBA = Sydney Biomedical Accelerator

Biotech companies require highly specialised and costly laboratory infrastructure

These companies typically require certified wet labs with specialist equipment in fit-for-purpose, compliant facilities

Biotech

548
companies (2022)

113*
NSW companies (2025)

Example Tenants:

- *TroBio Therapeutics*
- *Syntara Limited*
- *Thrombio*
- *NeuClone*
- *Anthrocell*
- *Cambium Bio*

Key Archetype Issue

- Specialised laboratories are crucial for biotech R&D but are often **cost prohibitive for early-stage biotech** companies.
- Early-stage biotechs typically prefer leasing a lab space that is already fitted-out given time-consuming nature of fit-out

Potential Value of Proposed Site

- Availability of affordable local infrastructure could reduce the need for companies to relocate to other states or internationally, **retaining economic value and innovation**.
- **Co-location with commercialisation advisory**, **researchers, the Sydney Biomedical Accelerator and support services** can be attractive to support translation.
- Proximity to collaborators and **core research facilities** within research institutes and universities.
- **Access to specialised and skilled researchers,** this site would provide an attractive CBD location, proximal to potential talent source organisations (e.g., universities, research institutes).
- Ability for inbound biotechs to access Australian incentives including R&D Tax Incentive.

Accredited Labs: PC2, GMP

- Typically, **PC1 labs** with some requirement for **PC2 labs**.
- Most biotech companies will outsource manufacturing, so **Good Manufacturing Practice (GMP)** compliance is likely not required, unless clinical trial manufacturing is being undertaken in-house.

Specialised Build, Equipment & Waste

- **Containment measures** and **efficient waste disposal** systems are required for hazardous chemicals and biological materials.
- **Specified lighting**, **ventilation**, and suitable **floor-to-floor height** are important for compliance.
- Shared access to tissue culture, flow cytometry, bacterial shared and lamina flow, PC2 wash up room.
- **Facility management** can help reduce significant R&D costs.

**Based on AusBiotech Australian Life Science Innovation Directory (2025)*

Biotech and medtech have distinct infrastructure needs; bioprinting bridges both

Biofabrication and biomaterials are emerging fields that could present a key opportunity for the Life Sciences Hub (Camperdown)

MAXONIQ

MAXONIQ is ***medtech company*** which uses 3D printing to treat end-stage bone and joint conditions.

MAXONIQ is located on a dedicated floor **within Melbourne Connect** in the Melbourne Biomedical Precinct.

- Private office space within an innovation building
- Custom dry labs for prototyping

This location may have been driven by:

- Proximity to St Vincent's Hospital and University of Melbourne
- Reduced rent with ability to scale with additional floors

Tetratherix™

Tetratherix™ has developed a novel injectable biomaterial under investigation for a range of diseases and use cases.

Tetratherix™ initially was located at Cicada Innovations in Eveleigh, however have since moved to a commercial space in Alexandria.

- Their current Alexandria site was an empty warehouse, which they converted in an ISO 13485 certified clean-room/ sterile production facility.
- Preclinical studies currently appear to be outsourced to research institutes and contract research organisations across Australia, not conducted in-house.

This location may have been driven by:

- Ability to obtain affordable warehouse space, suitable for customisation

Potential Opportunity: Bioprinting and Tissue Engineering

Biofabrication and biomaterials represent a unique and diverse field of research which combines principles of biomedical engineering and medical devices, with biology, medicine, and pharmaceuticals. As a result, R&D, manufacturing and subsequently, infrastructure, span both areas of biotech and medtech.

These needs vary based on the type of product, but may include;

- PC1 or PC2 labs (for bioprinting and tissue culture)
- Dry labs (for additive manufacturing)
- Facilities suitable for a quality overlay of ISO 13485 (for medical devices)
- GLP and/or GMP

https://www.cicadainnovations.com/incubator/residents; https://www.linkedin.com/feed/update/urn:li:activity:6944518958133719040/; https://tetratherix.com/; https://advanced.onlinelibrary.wiley.com/doi/full/10.1002/adhm.202201714

Tech Central precinct has existing value for medtech companies

Medtech is one of the 7 existing growth industries Tech Central focuses on

Medtech

577
companies (2023)

Example Tenants:

- *Baymatob*
- *Seer Medical*
- *Atomo Diagnostics*
- *Saluda Medical*
- *SDIP Innovations*
- *ENVision Medical Devices*
- *AthroLase*

Key Archetype Issue

- *Early-Stage:* Access to specialised, high-cost equipment, such as CNC machines, 3D printers, and spectrometers can be cost prohibitive for early-stage medtech companies.
- *Established Device Companies:* Need for office space for to support Australian sales and distribution operations.

Potential Value of Proposed Site

- NSW location, which is recognised as a medtech leader.
- Access to **affordable shared infrastructure** and equipment and proximity to University of Sydney core research facilities could reduce development costs.
- Integration with local hospitals can support clinical engineering and translation.
- **Co-location with commercialisation advisory, researchers, the Sydney Biomedical Accelerator and support services** can be attractive to support translation.

Quality Management

- Medtech companies typically operate under a Quality Management System (QMS) to demonstrate safety and performance. Infrastructure and processes should be considered for their ability to show compliance with ISO 13485 for medical devices.

Dry Labs & Equipment

- **Shared prototyping space** for device development and testing to accommodate various disciplines including machining, software integration and rapid manufacturing.
- **Fit out** with shared equipment including hand tools, 3D printers, CNC machines and electronics.
- **Dedicated areas for PCB design and assembly** which require specific controls for working with these components.
- **Dedicated and customisable dry labs** for production of early-stage prototypes and small-batch devices, including suitable build for assembly areas
- Areas for or access to **sterilisation** which could include autoclaves, dry heat sterilisers, hot isostatic press, etc.

MTAA The Value of MedTech Report (2023)

Accredited, high-quality labs are required for research & clinical service providers

Facilities must support diagnostics, genomic sequencing, pathology, and clinical trial testing in compliant and controlled settings

Research & Clinical Services



146
companies (2022)



42*
NSW companies (2025)

Example Tenants:
- *360 Biolabs*
- *PPD Australia*
- *PAREXEL*
- *Resolian*
- *Catalent*

Key Archetype Issue

- Demand for high-quality research services, including genomic sequencing and specialised testing for clinical trials, continues to grow as precision medicine and advanced therapies progress.
- These companies rely on access to **leading, accredited lab infrastructure** that provides high-quality research and testing for their clients.

Potential Value of Proposed Site

- Access to high-quality local infrastructure could improve the **cost competitiveness** of these services.
- Integration with local hospitals can support these services and translation of genomics and precision medicine.
- **Proximity to clinical trial units** and **biobanks** enables streamlined sample processing and real-time data integration, reducing turnaround times.
- **Co-location with potential clients** such as biotechs, academic faculties and pharmaceutical companies.

Accredited Labs: GLP, NATA, ISO 17025

- Design compliance with **biosafety regulations** (e.g., PC2/PC3 containment for infectious disease research).
- Compliance with **Good Laboratory Practice (GLP)** for pre-clinical research and **National Association of Testing Authorities (NATA)** or **ISO 17025** for testing services.

Specialised Build & Equipment

- ***Tissue Culture:*** Dedicated lab areas with biosafety cabinets, CO_2 incubators, and controlled air filtration.
- ***Genomic Sequencing:*** Next-generation sequencing (NGS), PCR platforms, and high-throughput bioinformatics infrastructure.
- ***Pathology & Biobanking:*** Advanced histopathology and microbiology laboratories with controlled sample storage (e.g., liquid nitrogen and ultra-low temperature (-80°C) freezers)
- ***Cleanrooms:*** ISO-classified cleanrooms for biological materials and cell therapies.
- ***Cloud*** computing infrastructure for genomic sequencing, bioinformatics and automated environments for conducting experiments remotely.

**Based on AusBiotech Australian Life Science Innovation Directory (2025)*

Australian-based pharma companies typically require R&D infrastructure

AU-based* Pharma

120
companies (2025)

Example Tenants:
- *Minomic*
- *Recce Pharmaceuticals*
- *Clarity Pharmaceuticals*
- *Imugene*
- *AdvanCell Isotopes*
- *QBiotics Group*
- *Starpharma*
- *Respirion Pharmaceuticals*

Key Archetype Issue

- **High cost of commercial-scale** infrastructure for research, offices and manufacturing.
- **Limited current access** to pilot-scale manufacturing facilities for early-stage and mid-sized pharmaceutical companies in Australia.

Potential Value of Proposed Site

- **Co-location with collaborators** at leading research institutes, universities and hospitals within the Camperdown precinct.
- Attractiveness of **proximity to clinical trial sites** and investigators.
- *For pharmaceutical companies with **cell and gene therapy candidates**,* ease of transport to major hospitals, in particular the Royal Prince Alfred Hospital, would be key for logistics and supply chain.
- **Central location** to attract talent.

Office and Working Space

- **Private office and meeting room** space for regulatory, quality, business development (BD), commercial and management.
- Flexibility to **increase occupancy** as the company scales and increases in-house capacity, may be a key value attribute (shift away from outsourcing/consulting services).

Accredited Labs: PC2, GMP

- **GMP certified** cleanrooms for clinical manufacturing.
- **Flexible PC2 labs** accredited by **Office of the Gene Technology Regulator** (OGTR), and potentially **PC3 labs** for infectious disease-focused pharmaceutical companies.
  - Companies would likely want these spaces to be customised, rather than fitted out.
  - Ability to increase GMP cleanroom and wet lab space as the company scales and increases batch sizes would likely be advantageous.
- **Dedicated quality control labs** and quality assurance space
- Access to stability testing and storage facilities, likely not shared.

**Headquartered in Australia*
GlobalData search of Australian Public and Private Companies, Parent or Independent, with Highest Drug Development Stage ≥ Phase 2

AU-based pharmaceutical companies likely require lab space, whereas MNCs typically only require corporate office space in Australia

CLARITY PHARMACEUTICALS

Clarity Pharmaceuticals is an ***AU-based pharma company*** with clinical stage radiopharmaceutical platform products for oncology.

Clarity is located **within Cicada Innovations**' Eveleigh site for deep tech residents (biotech, digital health, agritech, climate and energy, space).

- Office space within an innovation building
- Presumed wet labs for R&D

This location may have been driven by:

- Central location to attract talent & proximity to Camperdown precinct
- Incubator and commercialisation support programs (by Cicada Innovations)
- Low-cost rent with ability to scale with flexible and custom space

starpharma

Starpharma is an ***AU-based pharma company*** with a pipeline of candidates leveraging their proprietary dendrimer platform.

Starpharma is based in Abbotsford, Victoria in a **private commercial office** and lab building.

- Wet labs for R&D, in-process reaction monitoring and QC release
- **GMP cleanroom** with TGA licence for clinical manufacturing
- Private office space

This location may have been driven by:

- Private space
- Adequate land/building size for specialised labs and GMP cleanrooms
- Parking for staff members

Cicada Innovations; https://starpharma.com/

Biointelect

Multi-national pharma in NSW have limited R&D facilities, but can act as important anchors for partnerships

Multi-National Pharma

86
companies (2025)

Example Tenants:
- *AbbVie*
- *Apotex*
- *AstraZeneca*
- *Takeda*
- *Boehringer Ingelheim*
- *Johnson & Johnson*
- *Merck Sharp & Dohme*
- *Roche*
- *Teva Pharma*

Key Archetype Issue

- Need for office space for affiliates to support APAC operations, including clinical trials, research partnerships and commercial activities.

Potential Value of Site

- **Central location** to attract talent.
  - In recent years, many multi-national pharma companies have relocated to Sydney CBD to attract talent
- A **strategic APAC affiliate** with access to leading clinical trial sites and networks.
- Co-location with University of Sydney and UTS, as well as research institutes for **potential research partnerships and collaborations**.
- Ability to access **Australian incentives** including R&D Tax Incentive.

Corporate Office Space

- Majority of infrastructure required will be **corporate office** space for commercial, regulatory and market access teams.
- This office space will most likely need to be dedicated floors to minimise commercial conflicts and manage expectations regarding confidentiality.

NSW has a higher concentration of multi-national pharma companies compared to other states. There could be a potential opportunity to target these as major tenants in the Camperdown site, acknowledging that they would likely have limited lab infrastructure needs.

AMGEN, Pfizer, Lilly, Roche, NOVARTIS, MSD, abbvie, Takeda, AstraZeneca



GlobalData search of Australian Public and Private Companies, Subsidiary, with Highest Drug Development Stage ≥ Phase 2, Company Drug Count ≥ 8
**This list of logos is not exhaustive*

Digital health and quantum have fewer physical lab requirements, the site's location in Tech Central has a strong value proposition

Digital Health

>513
companies (2022)

Example Tenants:
- *Vively*
- *Harrison.ai*
- *Perx Health*
- *Kali Healthcare*
- *Cardihab*
- *Metabolic Health Solutions*

Quantum/ Deep Tech

14
companies (2020)

Example Tenants:
- *ARIA Research*
- *Quantium*
- *Q-Ctrl*
- *Sydney Quantum Academy*
- *Silicon Quantum Computing*
- *Quantum Brilliance*

Key Archetype Issue

- Access to affordable and scalable co-working/office space.

Value of Proposed Site

- Colocation with leading tech companies and supporting services including Atlassian and Sydney Quantum Academy.
- Proximity to research collaborators within University of Sydney and UTS.
- Proximity to clinicians to facilitate collaboration to solve real-world health challenges.

Office Space & Infrastructure

- Majority of infrastructure required will be **coworking and/or private office** space for commercial, regulatory and market access teams.
- Robust data infrastructure including cloud computing, and secure data privacy, particularly relating to patient data and complying with Privacy Act 1988, and GDPR laws.
- Dry labs for quantum computing including vibration-controlled environments.

Quantum Applications

- Quantum sensors can enable early disease detection through their use in diagnostics and AI.
- Quantum computers can support accelerated drug development through quantum chemistry simulation – this can identify lead compounds and optimise their binding affinity.

Note: We propose to validate these needs prior to finalisation of this draft report. GDPR = General Data Protection Regulation
CSIRO Growing Australia's Quantum Technology Industry (2020); Quantum Computing's Role In Developing New Pharmaceuticals

Structure of Australia's Life Sciences Industry

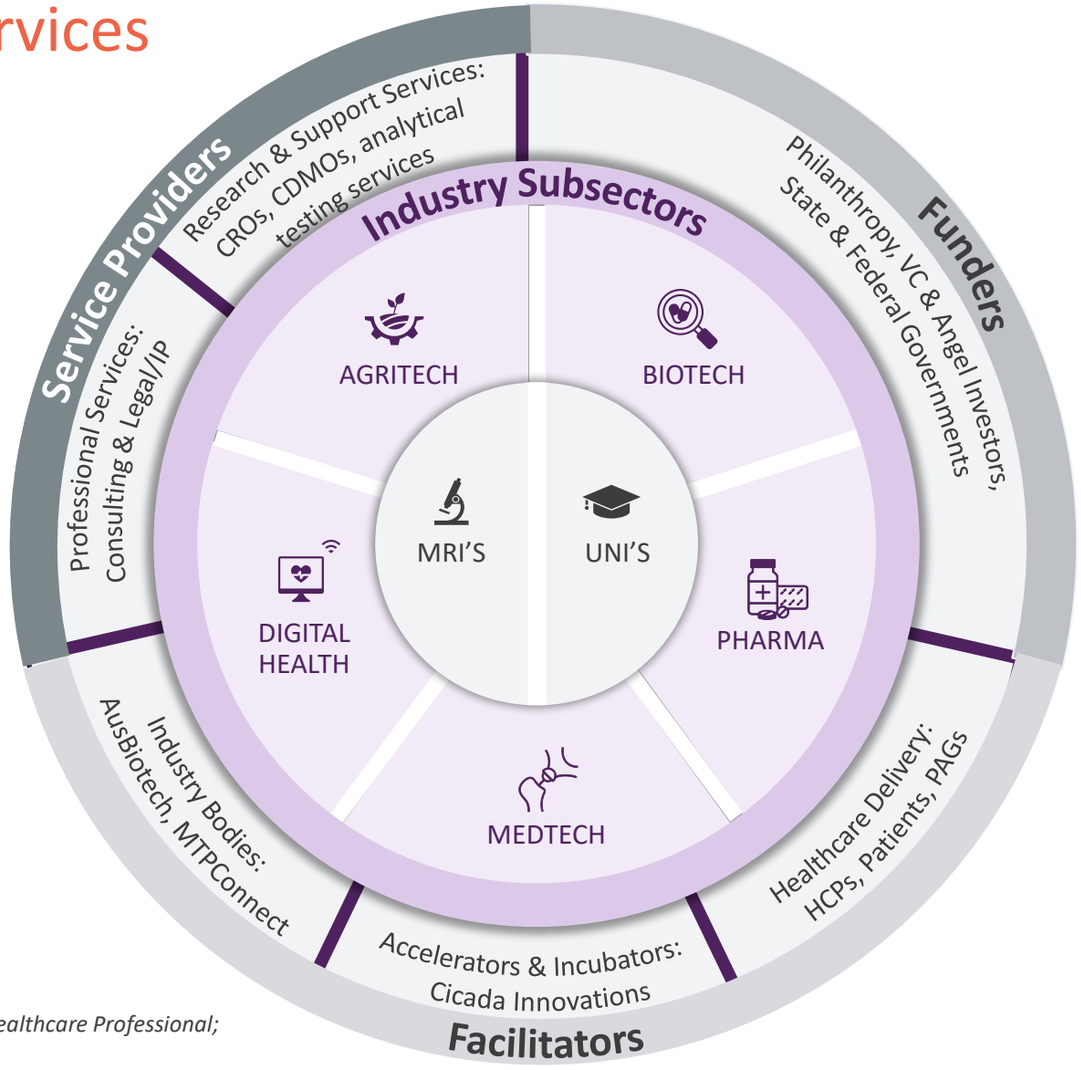
Appendix 2

Australia's life sciences sector is a complex ecosystem spanning multiple subsectors, underpinned by strong research and support services

Australia's life sciences sector is underpinned by strong research capabilities with **world-class universities, medical research institutes (MRIs), and hospitals**. These institutions often act as anchors within health and life sciences precincts, both attracting and enabling research and commercialisation.

The industry is **funded** by strong government support, including grants, R&D tax incentives, and precinct-based investments. Increasing private sector investment and global partnerships support commercialisation, though challenges remain in scaling and retaining local IP.

Industry bodies such as AusBiotech and MTPConnect play an important role in advocacy, policy development, and industry coordination, while **accelerators and incubators**, including ANDHealth and Cicada Innovations, provide support for startups through mentorship, funding, and commercialisation pathways.



CRO = Clinical Research Organisation; CDMO = Clinical Development and Manufacturing Organisation; VC = Venture Capital; HCPs = Healthcare Professional; PAGs = Patient Advocacy Groups; IP = Intellectual Property

Life sciences is an innovative growth industry in Australia with significant opportunity

The sector fuels jobs, investment and global partnerships through a highly educated and skilled workforce, access to leading infrastructure, a globally competitive clinical trials sector and the commercialisation of new medical technologies

$255bn

Value of ASX-listed life sciences industry (2024)

350,000

Jobs across the life sciences industry (2024)

4.4%

Forecast life sciences industry annual growth

23rd

Australia's Global Innovation Index R&D ranking (2024)

2,905

Life sciences organisations in the sector in 2024

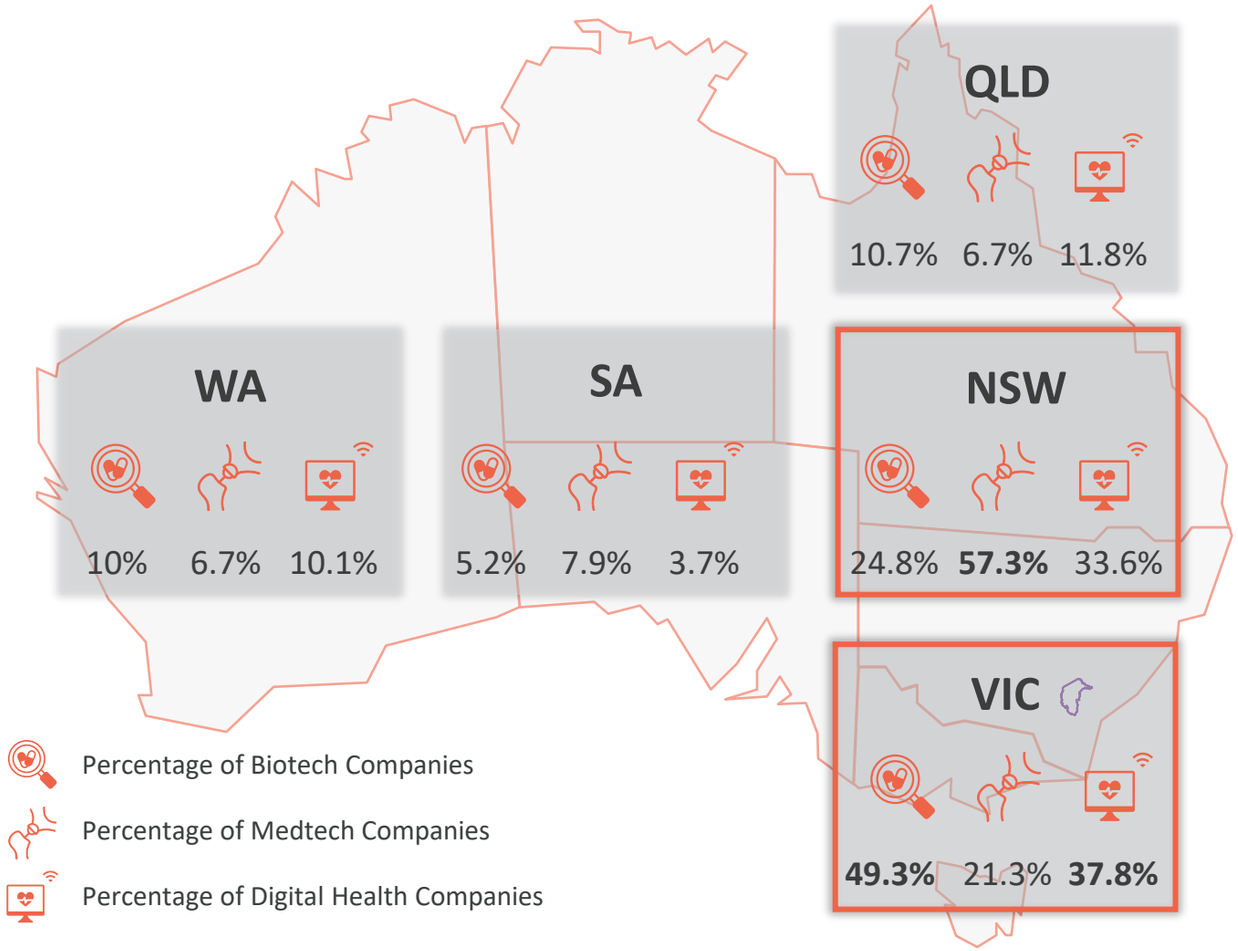
$64bn

Partnership deals (domestically and internationally, 2017 to 2024)

IBISWorld Biotechnology report (2023); Australian Department of Health and Aged Care (2022); AusBiotech Pre-Budget Submission 2025-26 Federal Budget (2025); WIPO, Global Innovation Index (2024)

Of the major subsectors, NSW leads in the number of medtech companies

Of these medtech companies, around 50% are Australian parent organisations (as opposed to multi-national subsidiaries)



56.2% of all medtech companies in Australia originated as **startups or spin-outs**, with 5.7% spun-out of universities.

49.4% of all companies are Australian-only or headquartered organisations – indicating the **strength of the local industry**

+112% NSW led the expansion in the number of **digital health companies**, with an increase of 112%, between 2020 to 2022, as compared to +45% in VIC.

61.7% While VIC leads in attracting biotechs, NSW has the highest density of **multi-national (MNC) pharmaceutical companies** at 61.7%, compared to VIC at 30.9%.

GlobalData Companies (Public, Private, Independent, Parent or Joint Venture); ANDHealth The Awakening Giant: The Rise of Australia's Evidence-Based Digital Health Sector (2022); MTAA The Value of MedTech Report (2024)

This report is a **draft** summary of analysis undertaken by Biointelect Pty Ltd in respect of Life Sciences Precincts relating to the Life Sciences Hub (Camperdown) (Subject Matter). This report has been prepared at the request of and for the sole benefit of Wentworth Capital (Spark Sub Trust)(Client) and may not be relied upon by any other person.

This report has been prepared solely for the purpose of assisting the Client in its consideration of life science precincts and Life Sciences Hub (Camperdown) opportunity. It is limited in scope, and relies on financial and other information provided to us by or on behalf of the Client together with other publicly available information.

The completeness, accuracy or authenticity of that information has not independently verified by Biointelect.

This report should not be treated as a substitute for advice on matters of specific concern to the Client and is given as of 13 June 2025.