Health & Life Sciences

Sydney's Westmead Health and Innovation District



Acknowledgement of Country

BESydney acknowledges Westmead's first inhabitants, the Darug people. The Darug nation is the overarching Aboriginal nation of Western Sydney. We pay our respects to the Elders who have come before us and those who presently uphold their time-honoured traditions. "It's an inspiring place for visitors looking to hold events in the health innovation sector because there's this density of amazing research and entrepreneurial activity to translate that research into investment. We are offering a window into the future of health services."

 – Liza Noonan, Executive Director of Innovation Districts

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First Nations people are advised that this eBook may contain images, voices and names of deceased people.

Welcome to Westmead

Sydney's Westmead Health and Innovation District has undergone a groundbreaking transformation, with more in the pipeline. A globally renowned precinct for advanced medical research and treatment, it is on track to become Australia's largest health hub.

Here, the best minds in medical research and health care are working together to solve the greatest health challenges of our time. With access to cutting-edge facilities and a collaborative and connected community, they are producing breakthroughs in gene therapy, cancer treatment, immunology, and vaccinology that are changing lives.

Bolstered by substantial investment from public and private sectors and working within Australia's robust regulatory and IP frameworks, Westmead Health and Innovation District is at the pinnacle of bioinnovation. Central to the precinct's success is the co-location of major hospitals, medical research institutes, pathology services, and manufacturing facilities in an interconnected area, enabling a multitude of innovation opportunities.

This beneficial environment has attracted the world's leading researchers and clinicians who are working together daily to address global health complexities, leading to investment across various domains, such as medtech, biotech, e-health, and data analytics.

As a vital cog in Sydney's wider health and innovation landscape, the Westmead Health and Innovation District represents a remarkable convergence of science, research, and real-world solutions. Amid this transformation, the Westmead Health and Innovation District encompasses the diverse community of Western Sydney, home to nearly one million residents. A socially and culturally vibrant area of Sydney, a large percentage of its residents hold postgraduate degrees and form a formidable force making up a crucial talent pipeline.

The remarkable growth trajectory of the Westmead Health and Innovation District is creating an air of optimism in Western Sydney. The workforce is expected to exceed 50,000 fulltime staff by 2036, while the student body is likely to expand to over 10,000.

With its strategic location 25km west of the Sydney CBD and 30km from the upcoming Western Sydney International airport and the emerging Aerotroplis district, Westmead is poised to serve as an essential gateway to global health markets.

Recognised as a leader in bioinnovation, Westmead Health and Innovation District is shaping the future of healthcare in Australia and around the world, positioning Sydney as a premier destination for health and life sciences events.



4

Major hospitals

2 University campuses

3 Active open-space corridors

1.6KM

Dedicated pedestrian/ cycleways

1.3M

Population by 2031

26.3%

of Westmead residents hold a postgraduate degree

Change Starts in Westmead



"The expertise, intelligence, and capability here is phenomenal."

- Graeme Loy, Chief Executive of the Western Sydney Local Health District



Accelerating Purpose

A new era in healthcare



The Westmead Health and Innovation District is addressing complex global health challenges and pioneering revolutionary new treatments that will change how we live, work, and play.

At the heart of the Westmead Health and Innovation District is the well-established Westmead Health Precinct, in operation for over 40 years. Here, you'll find four major hospitals, accompanied by five world-renowned medical research institutes, two thriving universities, and the largest research-intensive pathology service in New South Wales.

Up to 1,000 clinical trials are being conducted at Westmead at any one time, giving patients access to groundbreaking new treatments.

Graeme Loy is the Chief Executive of the Western Sydney Local Health District. He says Westmead's strength lies in its capacity to translate new research into innovation, care at the bedside, and commercial opportunities. Mr Loy says. "The expertise, intelligence, and capability here is phenomenal. You don't see it in too many places, but we have this real concentration here in Western Sydney. We are doing so much research here that's leading the way and attracting global attention from countries who are coming to see what we do and looking to partner with us. So it's really exciting.

"We are contributing on a global scale to things like cancer research, phage therapy, CAR-T cell research, and viral vector manufacturing. It is wonderful what's occurring here, and it will only grow and accelerate over the next 12-to-18 months."

The emergence of exciting new medical treatments is paving the way for new business opportunities. The Westmead Health and Innovation District is ensuring startup hubs and incubators are accessible to foster that growth.

Liza Noonan, Executive Director of Innovation Districts, says, "There's a real tide turning in the business culture of Westmead. New business ventures are spinning out of the research. For example, we're starting to see some really interesting digital health startups move into the district. "It's a great place for visitors looking to hold events in the health innovation sector because there's this density of amazing research and really great entrepreneurial activity to translate that research into investment. We are offering a window into the future of health services."

Key medical and research facilities at Westmead Health Precinct

- Westmead Hospital
- The Children's Hospital at Westmead
- Cumberland Hospital
- Westmead Private Hospital
- Children's Medical Research Institute (CMRI)
- Westmead Institute for Medical Research (WIMR)
- Western Sydney University
- The University of Sydney

Australia's largest pathology service

The NSW Government's Health Pathology service at Westmead is Australia's largest public pathology and forensic and analytical science service. It performs more than 100,000 clinical and scientific investigations daily and employs over 5,000 staff.

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Accelerating Progress

Innovation: The top 5 focus areas

The Westmead Health and Innovation District has identified five areas of bioinnovation that are fundamental to our shared future. It is investing heavily in these areas, producing incredible new discoveries and treatments that reverberate around the world.

- 1. Advanced therapeutics like gene therapy promise to revolutionise medical treatment.
- 2. Translational cancer research programs such as ProCan offer great hope in the fight against cancer.
- 3. Infectious disease, immunology, and vaccinology advances such as phage therapy are addressing global health concerns, including antimicrobial resistance and viral pandemics.
- 4. Clinical trials speed up patient access to new treatments.
- 5. Digital health and big data use data mining, analytics, and modelling to give vital new insights into disease.

Ms Noonan says the intersection of life sciences and data science is where real progress is being made.

"Every day at Westmead, they are fusing life sciences with data to be more precise in developing therapeutics and uncovering disease," she says.

Growth: Health Enterprise Zone

A large area of land in the northern end of the Westmead Health and Innovation District has been earmarked for future development. Known as the Health Enterprise Zone (HEZ), it will draw further innovation, creativity, and resourcefulness to the area, enabling advanced manufacturing, commercial ventures, research initiatives and complementary facilities to flourish.

HEZ is envisioned to become an integral part of the Westmead innovation ecosystem, driving economic growth and job opportunities for the Western Sydney region.

Medical breakthroughs: Sydney leads the way

The great strides being made at Westmead reflect Sydney's overall commitment to innovation, with equally exciting medical advances happening at sister precincts across the city.

To the east of Westmead, the Randwick Health and Innovation District offers preclinical facilities, four hospitals, and research institutes dedicated to fields such as neuroscience, mental health, cancer, biomedical sciences, and robotics.

And in the centre of Sydney, major medtech and biotech breakthroughs are happening at the Tech Central innovation hub.

Tech Central comprises over 50 medtech companies, representing 55% of Australia's medtech and biotech entities. Supported by a \$5.5 billion research and development investment, Tech Central fuels substantial advancements, making it a driving force in medical innovation.

The future of health care

Sydney Children's Hospitals Network Chief Executive Adjunct Associate Professor, Cathryn Cox PSM, says the future of healthcare relies on integrating research and technology in collaborative environments to create more targeted medical solutions.

Sydney Children's Hospitals Network is Australia's largest provider of health services for children and young people. It comprises:

- The Children's Hospital at Westmead
- Sydney Children's Hospital, Randwick
- Kids Research
- Newborn and paediatric Emergency Transport Service (NETS)
- Bear Cottage
- Children's Court Clinic

"Since its establishment in 1880, The Children's Hospital at Westmead has a proud legacy of pioneering innovation in the treatment of sick children across Australia," Adj A/Prof Cox says.

"With a focus on research and cutting-edge technology, we are ensuring that we continue to be a world leader in providing care for sick children by embedding research into the fabric of paediatric care and supporting greater opportunities for researchers to work holistically alongside frontline medical teams."



"An example of cutting-edge innovation lies within the Sydney Children's Hospitals Network Clinical Research Centre (CRC) and its diverse portfolio of clinical trials including Phase I-IV trials of drugs and advanced therapeutics in gene and

vn Cox PSM

cell therapy."

"We're also developing Australia's first commercial-scale Viral Vector Manufacturing Facility (VVMF), expanding the pilot facility located in the Westmead Health and Innovation District to meet the growing demand for clinical grade viral vectors for use in gene and cell therapy research and clinical trials in Australia and internationally."

"This innovative technology will enable personalised healthcare to support children who are living with highly complex conditions to live their healthiest lives."

Progress unleashed: 3 big breakthroughs to watch

Viral vector

The global viral vector market is estimated to grow to US\$2.6 billion by the end of 2026. Westmead is building an advanced viral vector manufacturing facility with a 550-litre capacity. The only one of its kind in Australia, this facility will serve as a critical hub for groundbreaking trial therapies targeting infections, cancer, and genetic disorders.

Westmead's gene therapy is led by Professor Ian Alexander. A leading professor in the Paediatrics and Molecular Medicine Disciplines of Child and Adolescent Health and Genetic Medicine at the Children's Hospital at Westmead, he says, "We are one of the best precincts on the planet for doing gene therapy and have participated in some of the most groundbreaking research. With the quality of work coming out of Australia, we do command very substantial international respect."

Phage therapy

To address the major threat of antimicrobial resistance, phage therapy uses tiny viruses to combat bacterial infections and is considered the best alternative to antibiotics. However, there is a global manufacturing bottleneck in delivering phage therapy.

The NSW Government has committed \$3.5 million over two years to urgently address this shortfall, with Phage Australia's Westmead lab the country's first phage manufacturing facility.

Professor Jon Iredell is the Founder and Director of Phage Australia and Professor of Medicine and Microbiology at The Westmead Institute for Medical Research. He says, "Antimicrobial resistance is expected to be the number one killer of humans within a generation. The demand for phage therapy is enormous, and we're the first people making phages in the country."

ProCan

ProCan is a pioneering international research program based at Westmead that aims to document the proteome of human cancer. The goal is to enhance insights into cancer behaviour and produce more targeted cancer treatments.

Professor Roger Reddel, Director of the Children's Medical Research Institute, Co-Director of ProCan, and Head of the Cancer Research Unit, says it's a world-first initiative that positions Westmead as a leader in cancer research.

"We're building a database that links the protein analysis of cancers with the outcome for individual patients including how they responded to treatment. When a new patient is diagnosed, we will be able to analyse their cancer and use the database to predict what will be the most effective treatment for that individual," he says.



\$134.5M

Government investment in viral vector manufacturing until 2027

100K

Clinical investigations every day by Australia's largest pathology service

\$3.4B

Investment over the next 10 years

2,344

Phages registered by Phage Australia

5

World-leading medical research institutes

Accelerating Change

The intersection of research and industry

Westmead's approach to health care is fundamentally changing. While continuing to also be focused on research and treatment, it's moving in a new direction with the introduction of manufacturing capabilities like the viral vector facility.

According to Lani Attwood, Associate Director Research Operations for Sydney Children's Hospitals Network, this is a game-changer.

"Viral vectors are a key component in gene therapies, and there's a global shortage of manufacturing capability," Ms Attwood says.

"There's been a recognition that there are world-class facilities and capabilities within the Westmead precinct. Having that production capability in Australia is so vital, but we need to partner that with the clinical trial facilities in order to actually deliver those therapies.

"Having those two functions co-located means we can not only develop the therapies but also deliver them to our patients. So we're not just trying to invest in production capability, we're also making sure we're developing along the therapeutic pipeline, and we're able to deliver these therapies to our patients at the bedside.

"Having everyone co-located means the scientist can speak to the manufacturer, who can speak to the clinician, who can consult the patient, who can then deliver the therapy – all in one location."

The Innovation Quarter takes Sydney's bioinnovation capacity to new heights

An exciting new development within the Westmead Health and Innovation District is the Innovation Quarter (iQ). This \$350-million research hub consists of 43,000 square metres of critical health, education, research, and business space.

A collaboration between Western Sydney University and the Charter Hall Group, this visionary centre contains three of the university's internationally recognised institutes: The MARCS Institute for Brain, Behaviour and Development; the National Integrative and Complementary Medicine Health Research Institute (NICM); and the Translational Health Research Institute.

These institutes reside alongside Australia's national science agency, the CSIRO.

Researchers from CSIRO's Australian e-Health Research Centre and Nutrition and Health teams moved to the Westmead Innovation Quarter in 2021. In a vote of confidence for Westmead, the move has seen some of the CSIRO's best and brightest minds join forces with experts at Westmead Health and Innovation District.

According to Ms Noonan, the iQ heralds a new direction for Westmead.

"The Innovation Quarter is a signal of how Westmead is changing," she says. "It's changing mindsets about what happens to medical research.

"The typical researcher's journey is to publish, publish, publish. We're creating an opportunity for researchers to think about the impact of the research in a different way. We're giving them access to life science investors who can be there to bounce ideas off to test their value proposition. They'll also have connections to the regulators and IP experts."

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Westmead Innovation Ecosystem Fund

The NSW Government has allocated up to \$10 million over four years to ensure the Westmead Health and Innovation District reaches its full potential.

This fund aims to catalyse research commercialisation in fields like biotechnology, diagnostics, and digital health while fostering the creation of knowledge-intensive jobs. The fund will offer grants of \$1 million to a maximum of \$10 million to innovative partners delivering services across categories like commercialisation, incubator and accelerator programs, global partnerships, promotion, and innovation architecture.

"The Innovation Fund is giving researchers permission to go out there and think about their research beyond the clinic," Ms Noonan says. "It will connect them with mentors and experts who can help them translate their research into a clinical environment. There will also be a biomedical incubator for startups seeking partnerships with the researchers."

MARCS Institute for Brain, Behaviour and Development

With two decades of experience studying human interaction, the MARCS Institute excels in fundamental science and impactful translational research. Collaborating globally, it operates 12 specialised laboratories with over 120 researchers, delving into brain function for enhanced wellbeing. Disciplines span engineering, psychology, neuroscience, and music science. Key areas of research comprise a Baby Lab, an Age Lab, biomedical engineering, and research into human-machine interaction.

NICM Health Research Institute

NICM is a leading Australian institution specialising in integrative and complementary medicine research and policy. The facility features TGA-certified laboratories, including herbal analysis and medicinal cannabis, as well as GMP manufacturing and clinical trial facilities. A key facility within Western Sydney University since 2007, it is a pioneer in this domain, offering education, research, and clinical services.

Translational Health Research Institute (THRI)

This esteemed research institute facilitates collaboration between 180 researchers from various universities, industry, and government. Emphasising translation and impact, THRI investigates acute and chronic diseases, enhancing health outcomes through integrated research, policy, and practice.



50K

Health professionals and researchers by 2036

100+

Active clinical trials through industrypartnered contracts at any one time

1K

Clinical trials taking place at any one time

20K

Current health professionals and researchers

12.15HA

Total developable area

Accelerating Connection

Bringing diverse sectors together in one place

The Westmead Health and Innovation District fosters connection between diverse sectors. Hospitals and independent research institutes collaborate with universities, the CSIRO, and the primary health network to leverage their differing strengths and capabilities.

That connection extends beyond Sydney to encompass health networks interstate and overseas.

Mr Loy says, "We do research on a national scale across advanced therapeutics, Cancer across the lifespan including particle therapy, infectious disease, immunology and vaccinology. We work with partners locally and on a global scale. Our researchers and innovators are world leading."

"We rely heavily on leveraging off each other and learning together, and that's how we achieve excellence."

Adj A/Prof Cox agreed. "The research and collaboration occurring within the Westmead Health Precinct makes it an exciting and exceptional place to be. We have a diverse modern village of remarkable institutions, people, technology and infrastructure all working together to solve the biggest healthcare challenges of our time."

"Westmead is the geographic heart of Sydney, and there's no better place to come and learn, experience and innovate."

This is the future vision of the Westmead Health and Innovation District. To transform health outcomes by bringing together brilliant innovators and providing a global destination for the best healthcare on the planet.

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> - Graeme Loy, Chief Executive at Western Sydney Local Health District



Why BESydney?

For over 50 years, BESydney has been working to bring the world to Sydney. Every day, we invite people to consider Sydney for their meeting needs. From every touchpoint we create, we are delivering the essence of Sydney.

We're local experts with remarkable connections, growing Australia's international reputation as one of the world's most memorable hosts. Financially supported and backed by the New South Wales Government, the City of Sydney and the private sector, our services are free and unbiased. To bring global meetings to Australia, we have talented people located all around the world, including Asia, Europe and the Americas, as well as our head office here in Sydney. We hail from many nationalities and speak over 10 languages. And with our vast experience across a range of sectors, we quickly get to the bottom of your meeting needs – and open your eyes to the unique ways Sydney can make your next meeting unforgettable.

Bid. Connect. Inspire.



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