

A photograph of a modern building's courtyard. The building has a facade of light-colored panels and large windows. In the foreground, there is a green lawn with several dark, abstract sculptures of animals. A curved concrete wall separates the lawn from a garden area with young trees and plants. The sky is blue with some clouds.

# **MULTIPLEX**

**Built to outperform.**

**Health**

# A trusted partner

Multiplex has delivered many of Australia's leading health projects - from Greenfield developments to complex research centres and refurbishments of fully operational facilities. Our mobile team of health specialists can deliver wherever we are required, in both city and regional locations.

We have a track record of delivering on or ahead of time, within budget and to a high standard of quality. We are a safe pair of hands in achieving our clients' goals.

Our delivery methods are tailored to suit our clients' unique requirements, and we look for ways to not only excel in project delivery but to achieve our clients' broader goals and objectives.

As a result many of our clients are repeat customers.

#### Delivery models used:

- Early Contractor Involvement
- Managing Contractor
- Design & Construct (including full and novated design)
- PPP / PFI
- Bespoke Design, Construct & Maintain

*"The team from Multiplex have worked with us to develop what I consider a partnership to deliver a great project on time and on budget,"*  
**Alan R Kinkade, Group Chief Executive, Epworth HealthCare.**

# We offer an end to end solution

As delivery partners we consider projects from a whole of life perspective. We partner with clients and act in a consultative capacity during the early design phase, become the building and delivery team during construction, and ensure operational readiness post construction.

Over the years we have developed a comprehensive user group process to assess and balance stakeholder aspirations alongside project objectives and translate these into practical building solutions. We ensure the right people are involved at the right time, and make them part of the upfront design process that culminates into the final design solution.

At Fiona Stanley Hospital in Western Australia we managed over 130 user groups to evolve the design solution and make joint decisions to benefit project outcomes.

We recognise that construction completion is only the first step in achieving a finished facility, and that operational commissioning and transition activities are just as important. Therefore we can facilitate training, FF&E and relocation of staff along with building works.

Beyond delivery we know that the maintenance and operation of hospitals represents a bigger cost to clients than the initial capital outlay – so we seek long-term design solutions that reduce costs over a hospital's operational life. At the University of Canberra Hospital, for example, we simplified the façade design to enable easier cleaning and maintenance, reducing whole-of-life costs for the facility whilst also accommodating weather and security requirements.

SINCE 2000

## We have delivered...

44

health projects

23

in operational environments

19

projects for repeat clients

5

in regional locations

Over  
**\$9.5BN value**



University of Canberra Public Hospital, ACT

# We specialise in live environments

Many of our health projects are constructed in operational hospitals. They come with unique challenges and require considered implementation.

We understand the impact construction can have on our clients' ability to deliver a service, and we plan our delivery methodologies around their operational needs.

We do this by being an extension of our client's team. We look after their concerns and manage their risks as if they were our own, and make flexibility and agility the norm. It is common for us to share a space with our client and consultants, enabling us to respond to issues as they arise and make 'best for project' decisions together.

On the Mercy Hospital in Werribee we successfully completed the tricky task of adding four new floors to a fully functioning hospital, while at St George Hospital in Kogarah we added a seven-level building on top of the existing operational emergency department.

# We create high performance assets

With every project our aim is to provide a high performance asset that goes beyond the construction itself to support our clients' broader goals – be they performance-based, financial, social or environmental.

We have long understood and contributed to evidence-based design in health and recognise the unique opportunity for hospital buildings to have a positive impact on the health and wellbeing of patients, clinicians and communities.

At a functional level we consider things like natural light, noise, views, fresh air, way-finding, FF&E and ICT in the design and construction of our buildings because we understand the positive impact those attributes stand to make on occupants. But we take this a step further.

We are currently collaborating with the Cooperative Research Centre for Low Carbon Living (CRCLCL) to develop a tool that helps to pinpoint and prioritise our clients' unique value drivers. At our Westmead Redevelopment project, we are supporting our clients' indigenous engagement goals by committing to ambitious Aboriginal Participation in Construction targets. We have also established the Westmead Connectivity Centre, a space within the Westmead precinct that enables local job seekers, job providers and community groups to collaborate and support each other.

We are also actively participating in research with universities including Queensland University of Technology, Canberra University and Deakin University, to identify those issues that inhibit flexibility, adaptability and functionality in hospital design and delivery. This includes assessing modular componentry and interchangeability of spaces to enable facilities to address future needs and changing modes of service delivery.



Fiona Stanley Hospital, WA



The opening of the Westmead Connectivity Centre, NSW

# Project Directory



## University of Canberra Public Hospital, ACT

**Scope:** new building to provide 140 overnight beds, 75 day places, specialised outpatient services and teaching spaces

**Contract Value:** \$147M

**Client:** ACT Health

**Dates:** 2015 - 2017

The University of Canberra Public Hospital (UCPH) is part of the ACT Government's \$909 million Health Infrastructure Program.

In searching for a contractor, our client required a delivery method that encouraged innovation and established a long-term partnership.

Working with ACT Health, we proposed a bespoke Design Construct Maintain model as an alternative to a PPP. Under the model we designed and constructed the hospital in partnership with our sister company and facilities manager BGIS who will maintain the facility for 25 years. We shared an office with BGIS which embedded them in our decision making and ensured our design solutions considered the hospital's ongoing FM requirements.

For ACT Health, this arrangement meant they could retain ownership and control of the Hospital without bearing risk for the contracted 25 year period.

In determining a design solution we considered things like site orientation, access, user demographics and patient wellbeing, and proposed a number of design modifications. For example the facade was simplified to enable easier maintenance, reducing whole-of-life costs whilst addressing weather and security requirements.

***Our bespoke delivery approach enabled nimble, long-term design decisions to be made to reduce overall costs, while maintaining flexibility and control for ACT Health throughout the delivery and into the operation of the facility.***



## St George Hospital Acute Services Building, NSW

**Scope:** new 7-level acute services building with 128 inpatient beds and 52 ICU beds; refurbishment of existing hospital buildings; FF&E; patient transition; expanded on site carparking

**Contract Value:** \$277M

**Client:** Health Infrastructure

**Dates:** 2015 - 2017

The St George Acute Services Building was the first of its scale in NSW to be constructed above an operational emergency department, making it an extremely complex project.

It required removal of the existing emergency department roof and construction of a new concrete structure directly above the 24-hour emergency department. The project was also highly specialised in nature with state-of-the-art medical grade inclusions.

Despite the complexities we were able to provide an alternate decant strategy to have all works completed on time and within budget.

Beyond construction, we engaged with the local community through an indigenous trainee program in which 11 trainees were engaged on the project, three of which we were able to offer full time employment in the industry.

***"This building delivers improved clinical outcomes, safer clinical outcomes and a more connected hospital - a hospital with a core." Project Director, Health Infrastructure.***

***"This building is the result of a wonderful collaboration. The clinicians have engaged with the architects, project team, Multiplex and Health Infrastructure. We've worked together, not against each other, and I think you can see the results." Dr Theresa Jacques, Director of Intensive Care, St George Hospital.***



## Westmead Central Acute Services Building, NSW

**Scope:** new 12-storey central acute services building; new plaza; bridge link connections; new main entrance

**Contract Value:** \$500M

**Client:** Health Infrastructure NSW

**Dates:** 2017 - 2020

As design and construction contractor for the Westmead central acute services building (CASB), we are delivering the centrepiece of the \$1 billion Westmead Redevelopment.

We were awarded the main works contract following a seven month early contractor involvement phase, during which we undertook an extensive user group consultation process to finalise a design.

At 12 storeys high from ground level, the CASB will be the tallest hospital building in Australia and will embrace the new trend towards vertical hospital design. For patients, this will mean faster transfer times, more natural light and better views from rooms, aiding their experience and recovery. The design also includes the plaza, an interactive outdoor public space with extensive landscaping, natural shade and quiet green spaces to encourage staff, patients and visitors to linger and engage with the Westmead precinct.

As part of our commitment to engaging with the Westmead community, and in support of client Health Infrastructure's social ambitions, we launched the Westmead Connectivity Centre to match local job seekers with employment opportunities, including those associated with the Westmead Redevelopment.

***"Multiplex has joined our partnership. They have made it very clear to us that they want to make a substantial contribution to this place through construction, and want to make a substantial contribution to the place of western Sydney." Danny O'Connor, Chief Executive, Western Sydney Local Health District.***



## Epworth Geelong Hospital, VIC

**Scope:** a new purpose-built seven level 262 bed hospital on a greenfield site in Geelong

**Contract Value:** \$277M

**Client:** Epworth Foundation

**Dates:** 2014 - 2016

As part of this complex greenfield project we managed extensive site clearance and bulk earthworks to prepare for the construction of the new hospital. External landscaping included a large water feature set in a roundabout at entrance, footpaths, fencing, retaining walls, roads, car parks and the planting of over 300 trees. We installed both in-ground and above ground external services, as well as a 'curtain wall' façade system with Glass Reinforced Concrete and vision glazing.

Throughout delivery, Multiplex worked with the local Chamber of Commerce and Industry Capability Network to maximise the potential and opportunity for local subcontractors and labour force in the regional area.

Multiplex led a collaborative project delivery and worked to resolve design and scope of PC sums to achieve significant savings against budget allowance.

The project received outstanding client and stakeholder feedback and was successfully delivered one month ahead of schedule, providing valuable extra transition time into the new facility.

***"The D&C team have proven to be excellent collaborators in our project team. They have worked hard to understand the vision, driving the project and consistently demonstrating outstanding health care knowledge and experience," Alan R Kinkade, Group Chief Executive, Epworth HealthCare.***



## South East Regional Hospital, NSW

**Scope:** new regional integrated health campus on a 17.5 hectare greenfield site  
**Project value:** \$135M  
**Client:** Health Infrastructure NSW  
**Dates:** 2014 - 2015

As one of the biggest infrastructure projects undertaken in the Bega Valley Shire, the South East Regional Hospital (SERH) offered a fantastic opportunity to have a genuine and positive impact on the local community for many years to come.

We worked closely with Health Infrastructure NSW to implement a range of social initiatives that engaged local residents and created a lasting legacy for the Bega community.

We used the project to help highlight opportunities in the health and construction sectors by organising and facilitating a variety of tours for local students and potential health professionals. The aim was to inspire students by creating an opportunity to see and experience a construction site first-hand.

We also created career opportunities for local indigenous people by partnering with the Bega Local Aboriginal Land Council (LALC) to provide a 12 month construction based traineeship program. Using the hospital construction site as a training ground, 20 local indigenous trainees were given the opportunity to develop a diverse and unique range of skills in a mentoring atmosphere.

The SERH was completed 10 weeks early in October 2015.

***“The team have been there to work through any design or planning issues to seek a resolution that is achievable and provides the best outcome for the clinical functionality, the staff and the community.”***  
**Kerry Abramowski, Project Change Manager, Southern NSW Local Health District**



## Fiona Stanley Hospital, WA

**Scope:** greenfield ‘mega campus’ providing 783 hospital beds including the state’s rehabilitation service  
**Project value:** \$2.1BN  
**Client:** Department of Health, Department of Treasury & Finance  
**Dates:** 2009 - 2013

Fiona Stanley Hospital is the largest infrastructure project ever undertaken by the West Australian Government, with eight separate buildings and more than 130 user groups.

One of the greatest challenges for a project is enabling all stakeholders to work together collaboratively in a team, particularly for a project with the scale and complexity of Fiona Stanley Hospital.

We overcame this challenge through Early Contractor Involvement (ECI). ECI enabled us to value engineer the design of the hospital to ensure it met its program requirements, and resolve buildability issues before the project became too advanced, with cost savings passed back to the client.

All parties shared an office and engaged regularly to ensure swift resolution of project issues.

We completed the Fiona Stanley Hospital in December 2013 on budget and ahead of time.

***“This hospital will be the flagship of the Western Australian health system. It shows the construction industry in Western Australia can build great projects.”*** Colin Barnett, ex-Premier of Western Australia.

***“The challenge is that we get a group of health professionals to work in this place who are as good as the people who have built it. If you have that then you are going to have the best healthcare in the world right here in Western Australia.”***  
**Professor Fiona Stanley AO.**



## St John of God Private Hospital (Murdoch), WA

**Scope:** multi-staged redevelopment including two new standalone buildings; extensions and renovation of existing hospital buildings; on grade car parks; new central energy plant  
**Project value:** \$130M  
**Client:** St John of God Healthcare  
**Dates:** 2012 - 2014

Adjacent to Fiona Stanley Hospital, the redevelopment of the St John of God Hospital in Murdoch was Western Australia’s largest ever private health sector investment. It increased the hospital’s capacity from 363 to 537 beds and enabled an additional 25,000 patients to be cared for each year.

With works being undertaken in a live environment, we delivered the project in 52 planned handover stages to minimise disruption. We also installed a vibration and noise monitoring system to protect sensitive procedural areas adjacent to the heavy construction works, which included a range of testing and data collection.

Stakeholder engagement was an essential part of the project given the hospital’s proximity to houses, commercial offices and shopping centres. We developed a comprehensive communications plan that included strategies to inform and engage with stakeholders throughout the two-year build.

***With works being undertaken in a live environment, we delivered the project in 52 planned handover stages to minimise disruption.***



## Telethon Kids Institute, WA

**Scope:** two level fitout providing new work zones; PC2 wet laboratories; and PC2 bioresources facility  
**Project value:** \$54M  
**Client:** Minister for Works  
**Dates:** 2017 - 2017

The fitout of the Telethon Kids Institute’s new home at the Perth Children’s Hospital provides world-class facilities, technology and equipment to aid its research into childhood diseases, conditions and issues. The fitout includes state-of-the-art laboratories, fit-for-purpose workspaces, flexible meeting rooms and trial suites.

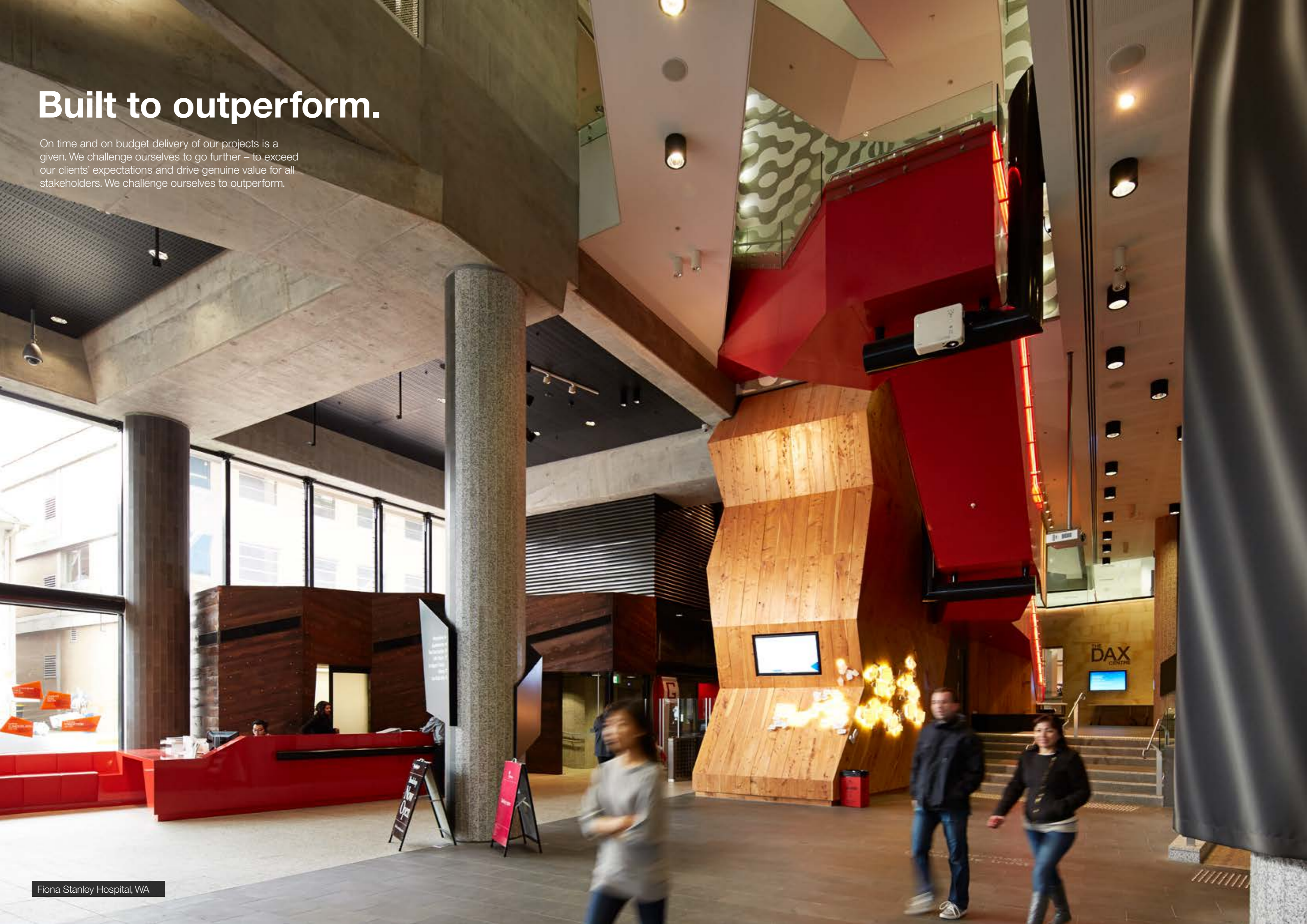
This was a highly complex and technical project that required spaces to be delivered to PC2 certification standards. Alongside engaging a highly specialist lab compliance consultant early in the project, we implemented compliance workshops with subcontractors, specific induction processes and quality assurance work procedures.

On top of this, we were required to carry out work within the operational Children’s Hospital and integrate with the existing Children’s Hospital base building services. Various noise, vibration, dust and air quality management measures were put in place to limit disruption while ensuring the project progressed to construction compliance certification and practical completion.

***“The builder approached this contract in a very collaborative manner, always offering “best for project” solutions. This resulted in a complex fit-out with both a high level of finish and functionality.”***  
**Nick Wood, Chief Operating Officer, Telethon Kids Institute.**

# Built to outperform.

On time and on budget delivery of our projects is a given. We challenge ourselves to go further – to exceed our clients' expectations and drive genuine value for all stakeholders. We challenge ourselves to outperform.



# MULTIPLEX

For further information please  
contact Multiplex on  
info@multiplex.global or:

## **New South Wales**

L22, 135 King St  
Sydney, NSW 2000  
T: +61 2 9322 2400  
F: +61 2 9322 2001

## **Western Australia**

Level 1, 123 St. George's Tce  
Perth, WA 6000  
T: +61 8 9483 0899  
F: +61 8 9483 0898

## **Queensland**

Level 6, 240 Queen Street  
Brisbane QLD 4000  
T: +61 7 3907 4000  
F: +61 7 3220 1177

## **Victoria**

Level 3, 499 Swanston Street  
Carlton, VIC 3053  
T: +61 3 9353 3500  
F: +61 3 9663 4930

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[www.multiplex.global](http://www.multiplex.global)

