

TRANSFORMING USER-EXPERIENCE





A community of experts

Stantec's global network of designers, engineers, scientists and project managers work together at the intersection of community, creativity and client relationships. Careful balancing of these priorities results in Smart Buildings that advance the quality of life, address climate change and maximises communities across the globe.

But wherever Stantec is located it is our local teams who have the skills, experience and knowledge to drive Smart Building designs in their own back yards. In Australia and New Zealand (ANZ), our local offices of award-winning multi-disciplinary engineers have been helping both private and government clients build communities for over 60 years.

Smart Buildings position people and experiences first. We believe Smart Buildings are a forward-looking investment and that using human-centred design strategies is the core of future buildings. By taking a holistic approach to enhancing employee wellbeing and productivity, we can also create real time control, opportunities for increased operational efficiencies and lifecycle cost savings.

Our team's methodology & approach means we can insert any application or technology essential for your building's design, giving you comfort from start to finish in fulfilling your project goals. So, whether you're designing a commercial, residential or industrial building, the technological revolution of connected technologies helps improve our day-to-day working lives while maximising architectural spaces.

Our global business

26K+

Employees

400+

Locations

6

Continents

#01

From start to finish. Our team leaders continue to manage the projects they tender, right through to completion. Change in team management causes delays and undermines a project's stability and design direction. From our core building disciplines to delivering innovative technology, your project's continuity is more conducive to achieving your goals within programme and budget.

#02

Value-adding innovation. Stantec's Creativity & Innovation program encourages our global network of engineers to develop tools, processes and technology. These creative ideas might save time at the early design stages of a project, reducing client costs and allowing you to focus on your asset.

#03

The right experience. As a Smart Buildings practice focused on the Centre of Excellence, our mission is to provide best practices for the modern horizontal architecture to bring you more. From audio visual, connectivity layer, network layer, device layers, independent data layer, application layer, ICT and telecommunications,

#04

Focus on buildability. Engaging with engineers in the early stages can save time and money in the long-term. Pragmatic spatial considerations, site-appropriate construction methods, informed materials selection, compliance with legislation and consideration of the operational environment. Our advice gives reassurance to stakeholders, boards and financiers that all factors have been fully considered.

#05

We're at the right tables. Our people are active proponents within Australia's property industry, seeking positive change on behalf of their communities. The influential tables at which we sit include the Urban Development Institute of Australia, the Property Council of Australia, Consult Australia and Green Building Council of Australia.



We don't just say we deliver outstanding solutions and client service. We prove it.

Stantec has been recognised numerous times at the independently assessed Beaton Client Choice Awards in Australia and New Zealand.

2022 Beaton Client Choice Awards Winner:

- Best Provider to Property

2019 Beaton Client Choice Awards Winner:

- Most Client Focused Consulting Engineer

2017 Beaton Client Choice Awards Winner:

- Best Consulting Engineering Firm (revenue \$50m-\$200m)

2016 Beaton Client Choice Awards Winner:

- Best Provider to Property Sector



#1

Ranked most sustainable corporation among industry peers

2022 Corporate Knights Global 100

Net Zero

Carbon neutral and then net zero

Our Operational Pledge

World's Best Employers

2021 Forbes – World's Top Female Friendly Companies

Gender Equality Index

2021 Bloomberg

Supplier Engagement on Climate

2021 Global Supply Chain Report – CDP Supplier Engagement

65+ Years

in the ANZ Region



SMART BUILDINGS PUT PEOPLE FIRST

 Australian Bragg Centre (SAHMRI 2)

At Stantec, we recognise that our urban world is rapidly transforming. Demographic shifts, the knowledge and technology economy, massive infrastructure investments in our urban cores and the speed of digital change are all transforming how our communities live. These shifts demand integrated design teams that thrive on complexity. Stantec's response to these shifts has been to develop expertise and teams that work with clients to address these changes, centered on innovative and creative approaches to urban redevelopment projects.

Our creative and inspired team understands the balance of driving leading innovation with implementable development outcomes and financial viability. Our approach is inherently holistic and focuses on all components of turning engineering into fit-for-purpose technology applied to projects,

people and places.

Smart Buildings paired with technology design are more than just a collection of technical skills—it's an integrated approach that connects the dots between innovation and its use, places and the use of areas, with a holistic view across an entire development. Bringing together our best minds in multiple disciplines allows us to solve complex problems and unlock bigger urban opportunities with our clients.

Infrastructure design and implementation for development requires a creative approach that prioritises how infrastructure systems can work together to achieve a future-forward, flexible, comprehensive and cohesive solution that will enable a site to evolve over time.

Our approach is tailored and personalised to your project. We seek to identify and establish a consultative process and a stepwise methodology whereby we continuously assess an idea's cost-benefit impact. For example, optimising the design development during planning and construction can minimise future retrofit costs, help attract tenants early and enhance a property's reputation.

Ultimately, we aim to retain a clear line of sight on the overall process and provide an end-to-end analysis of performance and added value in end-user/tenant experience and owners' return on investment. Additionally, we seek to benchmark with similar properties and advise on possible scenarios that can lead to high-performance operations, improved space utilisation, better sustainability gains, and enhanced tenant attractiveness. We compile technology development briefs, technical reports and design documents in a range of areas relevant to Smart Buildings.

Our expertise extends to:

- Smart Building strategy, technology masterplan and roadmap for implementation
- Precinct-wide digital strategy workshops and technical sessions
- Digital building technology design development
- Building technologies integration and interoperability
- Digital user journeys mapping, user stories and scenario analysis
- Smart Buildings Digital Technology market scan.

WHAT MAKES US UNIQUE?

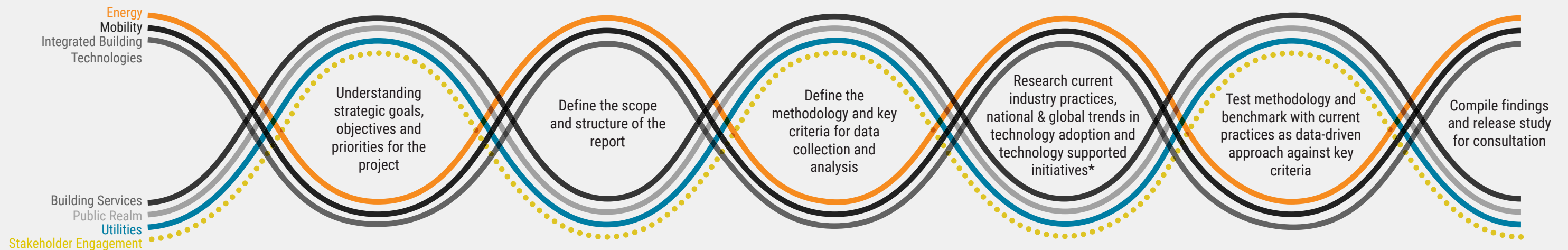
We believe that the main measure of value from technology is the extent to which it advances broader industry vision and sustainability, creating vibrant communities that promote health and well-being. To us, this means creating welcoming, inclusive, diverse, innovative, sustainable, and equitable buildings in a thriving neighborhood, ensuring a high quality of experience and life for all.

We approach everything we do with:

- A robust technology design methodology, workflow and actions required, based on our experience and expertise in similar projects to deliver an integrated Smart & Sustainable Technology design. We bring to the table our local, national, and international capabilities on technology, specialist services and engagement.
- A unified, cohesive framework and concept planning strategy for building services and technology interventions, able to carry forward our ambitious

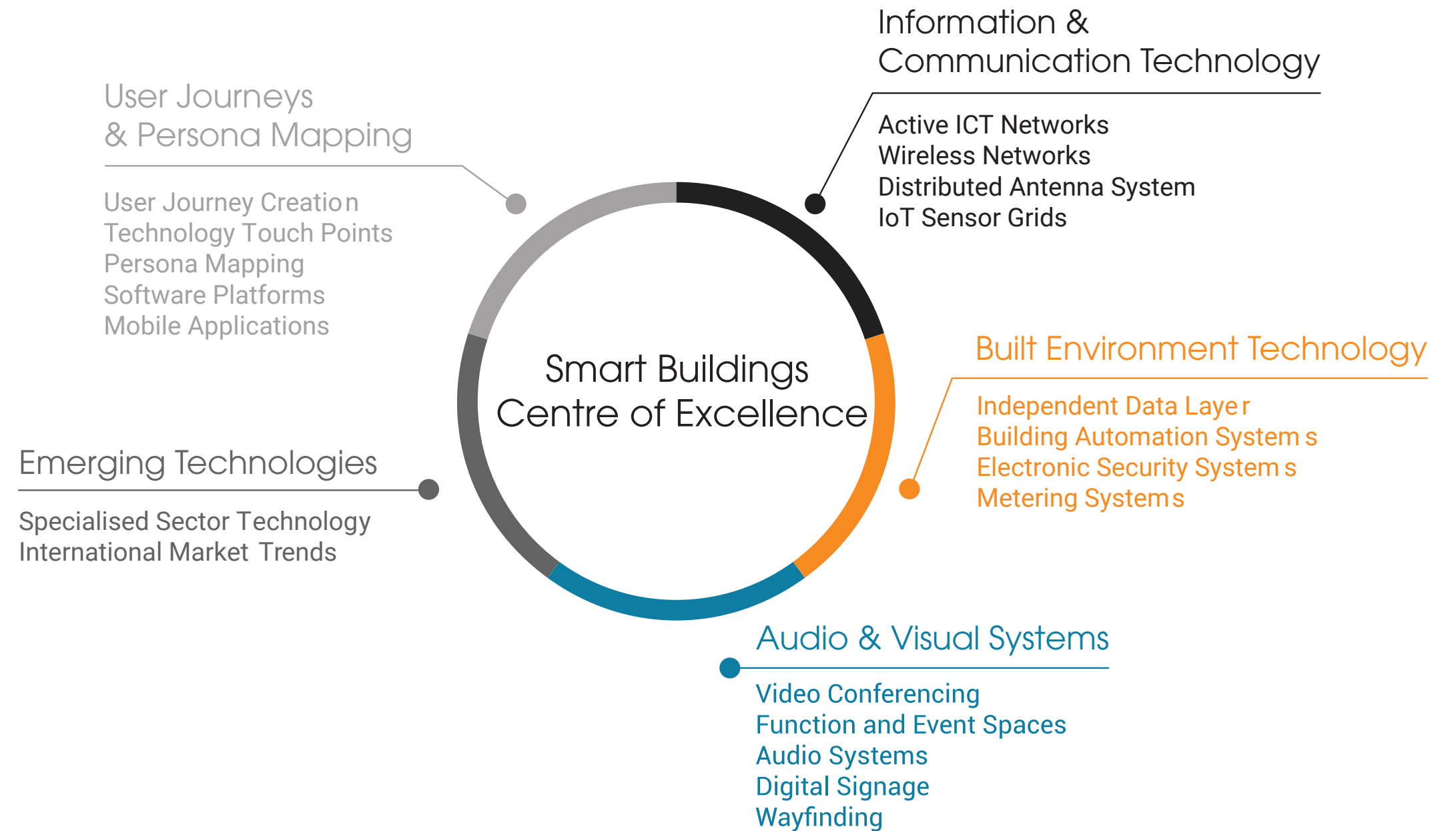
vision for Smart Buildings.

- A solid team and coherent set of in-house specialist knowledge and services targeting up-front key principles and criteria for a robust roadmap into the later stages of technology engineering design. We have a strong team of specialist services in Smart Building design and pathways for technology support in achieving the ambitious sustainability targets.
- A structured program with a stepwise, consultative and collaborative approach. We seek to place significant emphasis on the front end of the project, relying on ideas and evidence that converts existing analysis into insights, allowing for ideation and benchmarking.



* User experience; enhanced building performance; flexibility; scalability; impact and cost benefit criteria

SMART BUILDINGS CENTRE OF EXCELLENCE DOMAINS



WHAT DEFINES A SMART BUILDING?

Buildings of the future not only utilise integrated technology but are centred on creating reactive environments. It's about understanding the people and how they will use these structures now and in the future. By determining the functionality that will maximise your business and support building occupants, we can help you choose the technologies that best deliver that functionality.

Smart Building designs should reflect the business' needs for today and tomorrow. A Smart Building will provide:

- Flexibility for continually changing business models, needs, and environments of the buildings use
- Invisibly embedded building systems for seamless functionality
- Advanced technologies creating self-sustaining ecosystems that manage the demand and supply of utilities on site
- Integrating sensors, automation and monitoring systems into a central building control system will catch each motion, allowing the facility to adjust its surroundings and continually self-tune room temperatures, lighting, shading, energy and water utilisation.



KEY BENEFITS OF SMART BUILDINGS



Indirect benefits

Improved safety and reduced casualties/incidents—Smart Buildings employ a variety of innovative solutions to protect their tenants and those who work to maintain the facilities. In addition, Smart Buildings facilitate safer working conditions and more effective first responder responses, including high-performance access control systems, advanced fire management systems and sensors, and predictive algorithms of real-time data and conditions, all before arrival on the scene.

Community benefits

Effective community engagement channels—with advanced digital and communications infrastructure, Smart Buildings provide additional mechanisms for engaging the community. For example, digital signage systems can be used to provide news, events information, public transportation information, and other critical messaging to tenants, employees and visitors in real-time. In addition, the Smart Building's digital infrastructure may also deliver personalised content directly to the user through their smart mobile device. The ability of the Smart Building to engage more now and provide timely and vital information to the community is a critical outcome.



Smart processes

Smart Buildings enable precinct planners and inspectors to perform more accurate inspections with fewer resources in less time. Additionally, initial reviews to annual safety checks, Smart Building sensors, systems, and algorithms can visualise, facilitate and automate (to the extent permitted by local regulations) inspections and compliance reviews and audits.

Increased citizen, community accessibility & inclusion

The ability to digitally connect citizens of all ages, genders, sociodemographics and cultures is a crucial outcome. Smart Buildings can contribute indirectly to inclusion by leveraging their robust communications capabilities to provide public wi-fi in open public spaces. They may indirectly bring a fibre infrastructure into a nearby neighbourhood or community when planning a fibre infrastructure to support the building needs. They may leverage their building and digital infrastructure to host a variety of telecommunications systems.



Increased precinct infrastructure resilience

Smart Buildings are equipped with robust power, digital and telecommunications infrastructure. Smart Buildings bring a resilient communications infrastructure from in-building small cell networks, to satellite, wi-fi and IoT connectivity technologies. Smart Buildings may be equipped with various power generation capabilities (solar, batteries, generators), reducing dependence on external sources, and may act as a microgrid. Smart Buildings leverage data, algorithms, and sensors to inform, augment and support human responses in critical situations (e.g. location of an incident, wayfinding). From a resilient precinct perspective, Smart Buildings provide communications and operational functionality during unplanned emergencies and incidents.

Increased city & community vibrancy

Smart Buildings attract new businesses and digital workforce talent creates demand for new jobs. This unique and growing economic vitality creates optimism, drives further growth in the surrounding communities, and brings new supporting businesses and a continuous influx of new residents to the civic ecosystem.



INNOVATION BENEFITS

Extending the technology ecosystem to a smart city or precinct

Effective new city services

Smart Buildings will leverage their digital and communications infrastructure and the data collected to create new insights and services that are invaluable to a precinct. An example is a Smart Building that can host various sensors. These sensors may monitor weather conditions, vehicle and pedestrian traffic patterns, and building conditions and contribute to the value of data collected in a precinct or a city wide smart technology initiative.

A digital twin can be used by planners to model and simulate various initiatives, for example, to see how changing traffic signals may impact accident rates, air quality levels, pedestrian foot traffic and impact on surrounding businesses. Information from the digital twin can then be used to design a program, where it can be tested and evaluated. We can develop many services using the data collected from inside and outside the Smart Building.

A new digital innovation ecosystem

Over the next few years, it's predicted that Smart Buildings will require a unique ecosystem of services and skills to design, build, support and operate. Equally important, the Smart Building is a platform for future innovation, with many of these future services not yet discovered or enabled. These future innovations and services, built on top of the existing Smart Building infrastructure, capabilities and skills, will be even more transformational. These innovations will attract new talent, skills and businesses, accelerating the expansion of the ecosystem of companies needed to support Smart Buildings and a smart city.

Enhanced precinct of Smart City reputation

Smart Buildings enhance the reputation of a city as innovative and forward-thinking. By supporting lasting economic value, technology in buildings attract a new ecosystem of tenants and businesses, helping businesses align to the 21st century needs.

Benefits

Direct

- Lower operating cost
- Decreased greenhouse emissions
- Increased tax revenues
- Attraction & retention of new and targeted tenants/business

Indirect

- New digital jobs to service, support, maintain and operate Smart Buildings
- Improved safety, reduced casualties and accidents
- Enhanced precinct management of Smart Buildings planning, permits, audits
- Increased precinct infrastructure resilience (power, comms, etc)
- More effective community engagement channels
- Increased citizen, community accessibility and inclusion
- Increased precinct vibrancy

New & Innovative

- More effective deployment of precinct level services using Smart Buildings as a platform for growth
- New digital innovation ecosystem supporting and leveraging Smart Buildings data
- Enhanced precinct reputation

Smart Buildings Technologies

Primary Functions

Smart Building Operations

Tenant Business Operations

Supporting Functions

Building Infrastructure

Building Technologies

3rd Party Commercial Services

3rd Party Digital Services

Precinct provided Services

Telecommunication Services

Utilities and Essential Services





SMART TECHNOLOGY FOR GREYSTAR AUSTRALIA BUILT-TO-RENT

Melbourne, Victoria

Australia's largest build-to-rent project by Greystar and Fender Katsalidis aims to provide the community with industry-leading housing. A crucial part of the building's design required smart functionality to support our client's goal for data transfer between all engineering services on-site, reducing the amount of cabled infrastructure while creating a secure and comfortable atmosphere for building occupants.

We delivered an embedded communication network (ECN) and integrated services platform (ISP) connecting all building services and systems. Achieved through ISP, we created a structure that enables data from various building systems to be collected, consolidated, processed, analysed, presented and made available for other enterprise and mobile applications.

Our solution gives the client a clear vision of the building operation through a single mobile first platform, accommodating the two dominant forms of data infrastructure in use.

The mobile application provides oversight in the following areas:

- Abilities to report any faults and incidents
- Receive notifications prioritised by criticality level
- Prioritise notifications from life safety/critical systems, like the Fire Indicator Panel
- Resolve or escalate incidents
- Remotely isolate plant and equipment where appropriate
- Extract and analyse video surveillance CCTV footage to assist in the post-incident evaluation
- Monitor and maintain compliance with relevant KPIs based on live data
- Monitoring of plant and equipment performance to be used for maintenance strategy and regular planning

- Asset optimisation
- Based on actual performance, utilisation and benchmark analysis continuously incorporate controls optimisation for plant and equipment
- Transition to a predictive maintenance regime
- Future capability for predictive maintenance analytics

While at home or away, occupants can:

- Make service facility bookings
- Receive parcel delivery notifications
- Allow access for visitors

Our Smart Building services support the longevity of equipment, services and provide building occupants with control of their indoor environments.

Project Value: Confidential

Disciplines: Electrical, Mechanical, Smart Buildings.



FLINDERS HEALTH AND MEDICAL RESEARCH BUILDING (HMRB)
Adelaide, South Australia

The 25,000 sqm project includes wet and dry labs, an animal house and office spaces. We were required to complete a peer review to identify areas of potential improvements and inform the evolution of building services design towards an integrated approach. We focused our effort on a range of value-based initiatives that will improve the facility's overall performance, coordination, buildability, and operational outcomes.

Our scope included reviewing building services design documentation as per the current design phase. We also prepared an integrated peer-review report, as well as specialist queries to test the design assumptions, and attended design presentation workshops. Stantec were required to summarise a range of scenarios and options for improvement and evolution of the current design, to be discussed with the client and nominated cost consultant. Finally, we participated in discussions and provided input regarding the cost impact of alternative design scenarios.

The technical report identified critical areas of improvement and a prioritised list of recommendations. A significant dedicated effort towards modern technology integration, infrastructure, and systems readiness aims to propose clear strategies and pathways for Smartscore certification.

The Health and Medical Research Building is currently undergoing WiredScore Certification for best in class digital connectivity, with a target assessment for WiredScore Platinum rating. Flinders University is pioneering the technology led development, with HMRB being the first Health and Medical Research Institute to undertake formal Smart Building certification, globally.

Project value:
\$255 million

Disciplines:
Mechanical, Electrical, Hydraulic, Fire Protection, ICT, Smart Buildings



FLINDERS UNIVERSITY—NEXUS BUILDING
Adelaide, South Australia

With plans to build an innovative and smart Nursing and Health Science Facility (NEXUS) on a greenfield site within their established campus, Flinders University sought an experienced and forward-thinking consultant to integrate learning, research and focused health services/clinics. The goal is to make NEXUS an inter-professional living laboratory complex that will also become part of the vibrant university community, promoting health and wellbeing.

Appointed to contribute to the concept planning for NEXUS, Stantec's specialists reviewed the brief, engaged with stakeholders and investigated to fully understand the functions, services and requirements of the new building. Careful conceptual and spatial planning in the early stages will be critical to providing safe, energy-efficient, flexible accommodation.

Our multi-disciplinary consultants helped develop an integrated concept design and functional brief, considering current and potential future requirements, leading to the preparation of the project business case by Flinders University.

Project value:
Confidential

Disciplines:
Acoustics, Electrical, Mechanical, Hydraulics, Fire Protection, Fire Engineering, Sustainability, Vertical Transportation, Specialist Security Risk Assessment, ICT, Audio Visual, Advanced Technologies (for both digital connectivity and technology foundation for enhanced user experience).



AUSTRALIAN BRAGG CENTRE (SAHMRI 2)

Adelaide, South Australia

The latest addition to Adelaide's 'BioMed City' on North Terrace is the Australian Bragg Centre for Proton Therapy and Research - the first facility of its kind in the southern hemisphere. Stantec is providing technical advice for the electrical, mechanical, hydraulic, fire protection, fire engineering and vertical transportation aspects of a clinically-demanding brief.

Specialist proton therapy technology is incorporated into the three underground levels of the centre's design to facilitate safe operation within purpose-built accommodation. Arranged over 15 levels, the 32,000sqm building design provides the latest in high quality research and laboratory space, along with office accommodation and clinical trial rooms.

Once construction and extensive testing are completed, the \$500m facility can treat up to 700 patients a year, providing vital non-invasive radiotherapy treatment to South Australians and creating opportunities for international research.

Project value:
\$500 million

Disciplines:
Electrical, Fire Engineering, Fire Protection, Hydraulics, Mechanical, Vertical Transportation.



WESTERN POWER SMART FACILITIES

Perth, Western Australia

Western Power required assistance in consolidating a technology strategy to improve connectivity and monitor their silo building systems across Western Australia. In addition, they wanted to implement a smart facilities management platform through a step-wise approach within the initial stages and performance of Stage 1.

Our role involved selecting technologies for existing facilities on the basis of their suitability, scalability and safety.

Our Smart Buildings team conducted a holistic review of the entire technology portfolio, including baseline recommendations for an upgrade, refresh, or replacement, creating a pathway to better plan and assess asset management. As a result, stage 1 sees methods and functionalities to be considered for deployment in Western Power's facilities and subsequently scaling across multiple sites to allow a staged approach towards a more extensive technology deployment program.

Through an integrated building services framework, our team set high-level principles in the baseline review to define the connectivity, data exchange and aggregation required to establish a data-driven approach for facility management, support resilient and efficient operation, and be inherently flexible to allow future technology developments. This integrated design will create efficiencies during the construction as networking and computing hardware duplication will be avoided. The architecture used for the integrated environment provides flexibility and scalability for continuous expansion. The ISP also allows data from a single source of truth to be used for many purposes.

Our team's Smart technology initiatives also support our client's commitment to addressing climate change by overseeing their carbon footprint analysis and other operational performance indicators.

Project value:
Confidential

Disciplines:
Smart Buildings



OUR SMART BUILDING ACCREDITATIONS

Our Smart Buildings consultants have extensive experience in the assessment of building services, systems integration and data analysis required to assess the potential for Smart Building Certification using the WiredScore Certification process and rating tools. As a result, our Smart Building Consultants are Accredited for both Development & Occupied assessments under the WiredScore framework. This framework assesses, certifies and improves digital connectivity and smart technology in commercial real estate on a global scale. The methods of measurement and scoring are fair, thorough, and independently verified to empower landlords to understand, improve, benchmark and promote their building's digital infrastructure. We use the framework and its critical criteria to incorporate optimisation strategies in our holistic end-to-end design. With or without the certification as a pathway, our service reflects strong coordination between disciplines, ensuring that the building and broader precinct infrastructure and connectivity requirements are met and support the deployment of current and future technologies.

[Click here](#) to view our Stantec WiredScore and SmartScore accredited professionals.



What is WiredScore?

WiredScore is the digital connectivity rating system for a building. The scorecard measures five critical aspects for a building's digital capabilities:

- The resilience of the property's connectivity
- A seamless internet connection experience
- Uninterrupted mobile coverage
- Choice of providers at competitive pricing
- Capacity to adapt to new technology infrastructure.

Why is it important?

We can identify strategies in our holistic end-to-end design with or without the certification as a pathway. Our service reflects strong coordination between disciplines, ensuring that the building and broader precinct infrastructure and connectivity requirements are met and support the deployment of current and future technologies.



What is SmartScore?

SmartScore validates the extent to which modern and advanced technology supports users, activities and spaces:

- Sets a global standard for Smart Buildings
- Identifies exceptional user-experience
- Drive cost efficiency
- Leads sustainability initiatives
- Future-ready.

Why is it important?

SmartScore provides a global standard to identify if a Smart Buildings' technology strategy and investment is achieving critical outcomes and expected results. This includes delivering the best user-experience, driving cost efficiency, meeting sustainability expectations, and future-proofing to meet the needs of tomorrow.

Working together

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.



Connect with us



stantec.com/australia