



ACT
Government

Chief Minister, Treasury and
Economic Development

Freedom of Information Publication Coversheet

The following information is provided pursuant to section 28 of the *Freedom of Information Act 2016*.

FOI Reference: CMTEDDFOI 2022-329

| Information to be published | Status |
|---|-----------|
| 1. Access application | Published |
| 2. Decision notice | Published |
| 3. Documents and schedule | Published |
| 4. Additional information identified | No |
| 5. Fees | Waived |
| 6. Processing time (in working days) | 24 |
| 7. Decision made by Ombudsman | N/A |
| 8. Additional information identified by Ombudsman | N/A |
| 9. Decision made by ACAT | N/A |
| 10. Additional information identified by ACAT | N/A |

From: [REDACTED]
To: [EPSDFOI](#)
Cc: [REDACTED]
Subject: FOI Request | Copy of a Study
Date: 4 October 2022 15:43:55

Good Afternoon,

RE: FOI REQUEST – CANBERRA STADIUM AND ARENA PRECINCT STUDY

I write to request under the *Freedom of Information Act 2016* a copy of the *Canberra Stadium and Arena Precinct* study, undertaken by *MI Associates* in 2017.

I ask that my request is forwarded to the relevant directorates, should they hold the relevant documents.

Should you require any further information or clarification about my request, please contact my office on [REDACTED].

Best,





ACT
Government

Chief Minister, Treasury and
Economic Development

Our ref: CMTEDDDFOI 2022-329



FREEDOM OF INFORMATION REQUEST

I refer to your application under section 30 of the *Freedom of Information Act 2016* (the Act), received by the Chief Minister, Treasury and Economic Development Directorate (CMTEDD) on 20 October 2022, in which you sought access to *A copy of the Canberra Stadium and Arena Precinct study, undertaken by MI Associates in 2017.*

Authority

I am an Information Officer appointed by the Director-General under section 18 of the Act to deal with access applications made under Part 5 of the Act.

Timeframes

In accordance with section 40 of the Act CMTEDD was required to provide you a decision within 20 working days of receipt of your request, however following an extension sought under section 41 in addition to third-party consultation, a decision on your access application is due 29 December 2022.

Decision on access

Searches were completed for relevant documents and one document was identified that falls within the scope of your request.

I have decided to grant full access to the relevant document. The document released to you is provided as **Attachment A** to this letter.

Charges

Pursuant to *Freedom of Information (Fees) Determination 2017 (No 2)* processing charges are applicable for this request because the total number of pages to be released to you exceeds the charging threshold of 50 pages. However, the charges have been waived in accordance with section 107(2)(e) of the Act.

Online publishing – Disclosure Log

Under section 28 of the Act, CMTEDD maintains an online record of access applications called a disclosure log. Your original access application, my decision and documents

released to you in response to your access application will be published in the CMTEDD disclosure log. Your personal contact details will not be published. You may view CMTEDD disclosure log at <https://www.cmtedd.act.gov.au/functions/foi>

Ombudsman Review

My decision on your access request is a reviewable decision as identified in Schedule 3 of the Act. You have the right to seek Ombudsman review of this outcome under section 73 of the Act within 20 working days from the day that my decision is published in CMTEDD disclosure log, or a longer period allowed by the Ombudsman.

We recommend using this form [Applying for an Ombudsman Review](#) to ensure you provide all of the required information. Alternatively, you may write to the Ombudsman:

The ACT Ombudsman
GPO Box 442
CANBERRA ACT 2601

Via email: actfoi@ombudsman.gov.au

ACT Civil and Administrative Tribunal (ACAT) Review

Under section 84 of the Act, if a decision is made under section 82(1) on an Ombudsman review, you may apply to the ACAT for review of the Ombudsman decision. Further information may be obtained from the ACAT at:

ACT Civil and Administrative Tribunal
Level 4, 1 Moore St
GPO Box 370
Canberra City ACT 2601
Telephone: (02) 6207 1740
<http://www.acat.act.gov.au/>

Should you have any queries in relation to your request please contact me by telephone on 6207 7754 or email CMTEDDFOI@act.gov.au.

Yours sincerely



Katharine Stuart
Information Officer
Workforce and Information Services
Chief Minister, Treasury and Economic Development Directorate

22 December 2022

CANBERRA STADIUM AND ARENA PRECINCT

PRECINCT DEVELOPMENT PRINCIPLES
NOVEMBER 2017



CONTENTS

| | |
|---|----|
| EXECUTIVE SUMMARY | 1 |
| RECOMMENDATIONS | 4 |
| NEXT STEPS 8 | |
| 1. SCOPE AND PURPOSE..... | 9 |
| 1.1. THE NEED | 9 |
| 1.2. PROPOSED VISION FOR THE PROJECT..... | 10 |
| 1.3. PRECINCT FACILITIES..... | 10 |
| 2. LOCAL CONTEXT | 13 |
| 2.1. IMPORTANCE OF SPORT IN AUSTRALIA..... | 13 |
| 2.2. IMPORTANCE OF TOURISM AND MAJOR EVENTS..... | 15 |
| 2.3. AUSTRALIAN SPORTS AND ENTERTAINMENT FACILITIES CONTEXT | 16 |
| 2.4. CANBERRA..... | 17 |
| 2.5. RELEVANT ACT STRATEGIES..... | 18 |
| 3. EXISTING FACILITIES | 20 |
| 3.1. CANBERRA STADIUM..... | 20 |
| 3.2. AIS ARENA | 22 |
| 3.3. CURRENT DEVELOPMENT PROPOSALS | 23 |
| 3.4. STAKEHOLDERS & DEVELOPMENT OPPORTUNITIES | 27 |
| 4. FACILITY PRECINCT PLANNING PRINCIPLES | 28 |
| 4.1. LAND ALLOCATION AND PRECINCT..... | 31 |
| 4.2. OTHER CO-LOCATED INFRASTRUCTURE..... | 34 |
| 4.3. CAPACITY..... | 36 |
| 4.4. LOCATION..... | 37 |
| 4.5. PARKING AND TRANSPORT | 39 |
| 4.6. CENTRALISED PREMIUM STAND..... | 40 |
| 4.7. FAN EXPERIENCE | 41 |
| 4.8. KITCHEN & CATERING SERVICES DESIGN | 44 |
| 4.9. CIRCULATION, ACCESS AND EGRESS | 46 |
| 4.10. ROOF DESIGN IMPROVING EXPERIENCE | 47 |
| 4.11. SECURITY | 51 |
| 4.12. TECHNOLOGY AND DIGITAL STRATEGY..... | 52 |
| 4.13. ENVIRONMENTAL DESIGN | 55 |
| 4.14. MIXED USE DEVELOPMENT AND COMMERCIAL | 58 |
| 4.15. TYPICAL AREA AND COST CONSIDERATIONS | 66 |
| 5. OPERATIONAL MODEL CONSIDERATIONS | 67 |
| 5.1. GOVERNMENTS ROLE IN STADIUMS IN AUSTRALIA..... | 70 |
| 6. DELIVERY OPTIONS | 73 |
| 6.1. MARKET AND COMMERCIAL CONTEXT..... | 73 |
| 6.2. ALTERNATIVE PROCUREMENT AND FINANCING OPTIONS..... | 73 |
| 6.3. PROCUREMENT AND FINANCING OPTIONS FOR SPORTS FACILITIES | 74 |
| 6.4. RISK ANALYSIS AND RISK TRANSFER..... | 74 |
| 7. DEVELOPMENT STEPS | 78 |
| APPENDIX 1 CANBERRA CONTEXT | 79 |
| APPENDIX 2: AUSPLAY PARTICIPATION DATA FOR THE SPORT SECTOR..... | 82 |
| APPENDIX 3 SPORTS UTILISATION FOR RECTANGULAR VENUES IN AUSTRALIA..... | 83 |
| APPENDIX 4 PPP / PSP APPROACHES, POTENTIAL BENEFITS AND DISADVANTAGES | 84 |

EXECUTIVE SUMMARY

Venues Canberra are in the process of establishing a brief to inform the location of a major event and entertainment precinct (The Precinct) close to the city of Canberra. The Precinct would be designed to attract new events, visitors and locals, increasing the quality of offering to current attendees and maximise economic benefits to the city and surrounds. This investment would enhance Canberra's brand and drive growth in the visitor economy while also supporting liveability for the people of Canberra and the ACT.

The proposed Precinct is intended to comprise of a rectangular stadium (30,000), an arena (10,000), shared services and broadcast compound, plaza and concourse connections, public transport hub, parking and other supporting commercial opportunities. These other asset classes could include elements such as a hotel, sports administration offices, sports medicine, education (such as a university) and elite sports training facilities.

Over the last decade there has been a shift away from the development of single-purpose focused spaces to the creation of flexible spaces that cater for a more diverse event calendar, focused on live entertainment rather than purely sport. Consumers are also demanding events that provide them with a higher quality and more authentic experience. The experience of going to an event needs to exceed the convenience and quality of watching at home. Over the last decade other states have made significant investment into major sport infrastructure to be competitive and attract and host major sports events for their cities. This trend is also seen in other parts of the world and within Asia.

Canberra is a relatively small market in Australia. This is in part due to its population size and local demand drivers for facilities and program. As such careful consideration for planning the facilities need to be grounded in a strategy that allows for a diversified event and non-event program mix and the inclusion of efficient multipurpose facilities. Canberra has several relevant strategies including the ACT Government Business Development Strategy 2015, the 2020 Tourism Strategy and 2025 Major Event Strategy. These strategies intend to build a portfolio of inspirational and distinctive major events that are key drivers to growing the visitor economy, and promoting Canberra as a vibrant, dynamic, creative and inclusive city for all people.

Canberra Stadium (currently known as GIO Stadium Canberra) has a seating capacity of 25,000. It was constructed in 1977 and at 40 years old is approaching the end of the practical asset life. It is used primarily to host National Rugby League(NRL) and Rugby Union (Super Rugby). Typical attendances at these events are 12,000, but with peak attendances in the 20,000 to 25,000 range. It also hosts a small number of other entertainment events which have average attendances of 12,000-15,000. The AIS arena is of a similar vintage built in 1980 and is 37 years old. It is a multi-purpose arena that has a seating capacity of 5,200.

As part of a future Business Case, the capacity and functional constraints of the existing facilities should be assessed and tested as a 'do nothing' option. This option should be compared with the

alternative new facility options to quantify the sport, commercial and market constraints associated with the existing facility and tested within the business case.

Any facility that increases capacity and or functionality must be supported by an enriched event and commercial program that will increase venue hire and utilisation opportunities. Consideration for alternative models of operation should also be considered to manage risk associated with the realisation of enriched programs.

There have been a number studies to investigate redevelopment opportunities Canberra Stadium. The Canberra Stadium and Manuka Oval Master Plan Options Consultation Report (Purdon, 2009) noted that there was considerable community support for a major redevelopment of the existing stadium. However, the KPMG business case for the Canberra Stadium masterplan identifies that a redevelopment without additional new content will not be self-sustaining. The inclusion of an A-League franchise would enable a positive net return. In selecting a site, it must have the opportunity to develop other asset classes such as the hotel, commercial, retail, education and or a centre of sports excellence. These would likely be delivered in partnership with other institutions, private sector developers and/or operators. Government funding would be required to support the overall development of a precinct concept to attract private investment, and to realise the potential.

Several different potential new stadium sites have been examined, including the Civic site (central city location), the current Canberra Stadium site and the Exhibition Park in Canberra (EPIC) site. In particular, the Civic site has been examined in some detail. Further assessment of all the sites and their potential to accommodate precinct facilities will need to be assessed at a further stage of review.

There are growing trends toward the use of multi-purpose arenas to support the development of diversified commercial, corporate, sports competition, training and sports development facilities and programs. The Strategic Leisure Group completed the ACT Indoor Sports Facilities Study for ACT Government Sports and Recreation in December 2015. It reported that structural constraints on the existing facilities limit their ability to increase multiple use or to host events. Issues related to event parking, adequacy to new sport standards, lack of spectator space, poor player amenity and constrained sites. The report also identifies the need for new facility development which would support the potential for development of community and sports development programs that could utilise a new indoor arena.

The aim in creating commercial sustainability for sport facilities is to increase the utilisation and attractiveness of the venues. This can be achieved by retaining expenditure in the region from residents and attracting new expenditure to the region from tourists and visitors.

Economic and social benefits that should be recognised as a part of a future detailed business case development include but are not limited to:

- Increased benefit to sports tourism and out of region economic impacts

- Increased functional and commercial opportunities for operators and hirers
- Increased benefit from/to new stadia and indoor sport development programs to the local community that can be hosted year-round
- Increased benefit to community programs
- Increased benefit to health for the community
- Provision of a large-scale entertainment events that could attract new event programs to Canberra.

Successful facility design is achieved if clear objectives for the facilities are agreed from the start. This includes having a shared and agreed vision of the essential performance or functional criteria with key stakeholders, developers, local authorities and operators. Key factors in determining the scope for design for a facility is understanding the potential event calendar and aspirations for the use of the facility including the market context, climate and culture. This understanding can then be used to guide the feasibility assessment of potential sites by determining their respective opportunities and limitations.

Key principles in relation to facilities planning include the following:

- Land Allocation, Capacity, Location and Precinct requirements
- Centralised Premium Stand (Single Stacked Stand) considerations
- Fan Experience
- Kitchen & Catering Services Design
- Circulation, Access and Egress requirements
- Roof Design Improving Experience
- Security and Centralised Systems
- Technology and Digital Strategy
- Environmental Design
- Mixed Use Development opportunities.

This document outlines the key benefits, design considerations and benchmarks under each of these headings and makes recommendations for further consideration, studies and potential incorporation into the business case. These are outlined in the section below.

The following table maps each of the recommendations made within this report to the facility planning principles that need to be considered as part of the next steps.

| RECOMMENDATIONS | FACILITY PRECINCT PLANNING PRINCIPLES | | | | | | | | | | | | | |
|---|---------------------------------------|---------------------------|----------|----------|---------------------|---------------------------|----------------|------------------------------------|------------------------------|----------------------------------|----------|-------------------------------|----------------------|------------------------------------|
| | LAND ALLOCATION & PRECINCT | CO-LOCATED INFRASTRUCTURE | CAPACITY | LOCATION | PARKING & TRANSPORT | CENTRALISED PREMIUM STAND | FAN EXPERIENCE | KITCHEN & CATERING SERVICES DESIGN | CIRCULATION, ACCESS & EGRESS | ROOF DESIGN IMPROVING EXPERIENCE | SECURITY | TECHNOLOGY & DIGITAL STRATEGY | ENVIRONMENTAL DESIGN | MIXED USE DEVELOPMENT & COMMERCIAL |
| As a priority a multi-purpose facilities and precinct strategy should be determined in consultation with appropriate stakeholders to agree the opportunities, principles and intentions of a precinct and its facilities. Once a shared vision is established this should be used to guide the development of an integrated and efficient precinct and the resulting facilities design brief. | | | | | | | | | | | | | | |
| The inclusion of mixed non-sport use event facilities should be considered for Canberra as part of this development. Underpinned by the development of an integrated event calendar to leverage partnerships commercial venues facility operators, such as hotels, convention centre and other event and entertainment providers to drive the sustainable design of the facilities and its utilisation. As a result, a master plan for the precinct can be determined to logically design and phase the development of integrated facilities. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Innovative building design is considered and leveraged to position the new facility as a lead example in its class to connect to the innovation industry in the ACT and with the five internationally renowned higher education and research institutions to grow Canberra's innovation ecosystem. | | | | | | | | | | | | | | |
| Once a shared vision and strategic intent is determined then the stakeholder engagement strategy, delivery method and operating model impacts and options should be reviewed and identified to be assessed and determined for the project(s). | | | | | | | | | | | | | | |
| Production capability should be considered within the design and business model development to reduce risks to future program attraction from other entertainment uses. | | | | | | | ● | | | | | ● | | ● |
| The future feasibility assessment should include the resale value of land associated with the proposed sites to test the potential value which can be used to inform a business as an offset to the development costs. | ● | ● | ● | ● | | | | | | | | | | ● |
| Investigating additional land area development opportunities adjacent to the proposed sites to enable the planning of an integrated sport/entertainment precinct with potential development partners. | ● | ● | ● | ● | | | | | | | | | | ● |
| Proposed use of the facilities and future city program aspirations are reviewed to determine the surrounding land use to enable expansion flexibility to service future events. The capacity of any new permanent buildings being considered should be sufficient to accommodate the regional short-medium term demand. A global city such as Canberra should also consider securing land within the immediate site of the facility to enable future expansion and / or capacity 'flex' to support the hosting of mega events. This should align and support the ACT's 2025 Major Event Strategy. | ● | ● | ● | ● | | | | | | | | | | ● |
| Further consideration should be given to developing a 10,000-seat indoor arena on the city Civic site, a combined stadium and an in-door facility (on any site), or as part of an overall redevelopment of the Bruce Campus in partnership with the AIS to compliment a sport, entertainment and education city fringe destination. In addition, further consideration should be given to making the indoor arena flexible with multi-capacity seating modes of 2,500/5,000/10,000 to maximise utilisation. | ● | ● | ● | ● | ● | | | | | | | | | |

| RECOMMENDATIONS | FACILITY PRECINCT PLANNING PRINCIPLES | | | | | | | | | | | | | |
|---|---------------------------------------|---------------------------|----------|----------|---------------------|---------------------------|----------------|------------------------------------|------------------------------|----------------------------------|----------|-------------------------------|----------------------|------------------------------------|
| | LAND ALLOCATION & PRECINCT | CO-LOCATED INFRASTRUCTURE | CAPACITY | LOCATION | PARKING & TRANSPORT | CENTRALISED PREMIUM STAND | FAN EXPERIENCE | KITCHEN & CATERING SERVICES DESIGN | CIRCULATION, ACCESS & EGRESS | ROOF DESIGN IMPROVING EXPERIENCE | SECURITY | TECHNOLOGY & DIGITAL STRATEGY | ENVIRONMENTAL DESIGN | MIXED USE DEVELOPMENT & COMMERCIAL |
| Review the opportunity of redeveloping Canberra Stadium and the Bruce Campus together in partnership with AIS and other potential key tenants, such as the Canberra Institute of Technology. This would enable an integrated and complementary education, conference and sport centre of excellence to reposition the profile of sports and the venues in Canberra. | ● | ● | ● | ● | | | | | | | | | | ● |
| The design process needs to challenge the solution development to improve the 'good service' paradigm and create innovation in efficiency. Sport venues should be one form of overlay for a cities place making that is complimented with commercial and business places, parks, museums, theatres and other public spaces. This should align and support the ACT Transport Strategy, 'Transport for a Sustainable City 2012-2031'. | | ● | | | ● | ● | ● | | | | | | | ● |
| Review the desire for a fixed 30,000-seat stadium in consideration of the event program mix, event calendar and current attendances and the number of contracted sports tenants. Should Canberra not be able to secure an additional team to its current sports portfolio it is unlikely that the current tenants could demonstrate future demand for an increased seating capacity what is the opportunity for a flexible seating bowl to make the venue scalable. A good benchmark to model is Children's Mercy Park. | ● | | ● | | | | | | | | | | | |
| Future feasibility studies and the business case should compare the city and the city fringe offerings to assess the potential uplift associated with the event use of the facility. This needs to be compared with the overall precinct utilisation of non-sport asset, which in effect should only be scoped and included in the development if it can provide value and increase the financial and or economic benefits of the business case. | ● | ● | ● | ● | ● | | | | | | | | | ● |
| The business case should include the confirmation of the proposed event profile, calendar and programming of the proposed facility to understand the likely revenues, operational costs, associated risks and the opportunity for stakeholder partnerships. | | ● | | | | ● | ● | | | | | ● | | ● |
| The business case should review alternative private sector participation arrangements and financing options that could potentially be applicable to the facility. In so doing, a further review of procurement benchmark options for sport facilities should be undertaken to guide the assessment of risks and associated mitigation strategies. | | ● | | ● | | | | | | | | | | ● |
| As Canberra is considered a drive market, the readiness program for any new facilities should include a change campaign to increase the use of public transport and reduce congestion. This approach would also maximise the value of existing government investment in transport such as the light rail. | | ● | | | ● | | ● | | | | | | | |
| The design of the facility should include an option for a centralised premium stand to increase efficiency and provide a hub of activity for non-event days. | | | | | | ● | ● | ● | ● | | ● | ● | ● | ● |

| RECOMMENDATIONS | FACILITY PRECINCT PLANNING PRINCIPLES | | | | | | | | | | | | | |
|--|---------------------------------------|---------------------------|----------|----------|---------------------|---------------------------|----------------|------------------------------------|------------------------------|----------------------------------|----------|-------------------------------|----------------------|------------------------------------|
| | LAND ALLOCATION & PRECINCT | CO-LOCATED INFRASTRUCTURE | CAPACITY | LOCATION | PARKING & TRANSPORT | CENTRALISED PREMIUM STAND | FAN EXPERIENCE | KITCHEN & CATERING SERVICES DESIGN | CIRCULATION, ACCESS & EGRESS | ROOF DESIGN IMPROVING EXPERIENCE | SECURITY | TECHNOLOGY & DIGITAL STRATEGY | ENVIRONMENTAL DESIGN | MIXED USE DEVELOPMENT & COMMERCIAL |
| The future design brief should require the concept design to include world’s best practice fan experience principles to ensure the facility meets current and future event hire expectations. The Australian comparable benchmarks that should be used to test the future design include Western Sydney Stadium, the Perth Stadium, Adelaide Oval and Etihad Stadium developments. | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| The future feasibility assessment and concept design should include the consideration for a roofing solution (in full or part) to maximise the utilisation of the facility and inform a business case options. This option should consider the return on investment considering the potential up-lift of attendance from current tenants and future event programming opportunities afforded with a part or full roof. | | | | | | | ● | | | ● | | | | ● |
| The future feasibility assessment and concept design should consider the development of an integrated city and precinct security solution, developed in consultation with other agencies such as police and transport, as well as other co-located facility operators. Security by Design should be a key principle for the design and operation of any proposed facilities. | ● | ● | | ● | ● | | | | | | ● | | | ● |
| A digital strategy should be developed as part of the digital concept design to enable the opportunity to incorporate technology within the facility design. Further options for sponsorship and in-source and out-source capital and operational models should also be considered in the business case. This should align with the ACT Government’s Digital Strategy 2016-2019. | | ● | | | | | | | | | ● | ● | | ● |
| World’s best proactive sustainability principles should be included within the brief and suitably assessed as part of any value engineering process of the design development. The principles should be assessed on their merit to showcase sustainable design (LEED gold standard), but also enable cost efficiency. Sports stadia and indoor facilities due to their size are increasing challenged to rising utilities costs. Since the early 2000’s there has been a growing trend towards the development of green stadiums. This should align with the ACT Governments policy and initiatives for reducing greenhouse gas emissions. | | | | | | | | | | | | | ● | |
| Key commercial and operational strategies that should be considered include: | | | | | | | | | | | | | | |
| Activation within the ‘last mile’ supported with appropriate services reticulation and access. This would help enable the fan experience to and from the stadium, providing variety and increasing revenue and showcasing opportunities from events. These activations should be aligned to the goals of the ACT City Renewal Authority that aims to create a vibrant city heart through the delivery of design-led, people-focused urban renewal. | ● | ● | | ● | ● | | ● | | | | | ● | | ● |
| With any sponsorship commercial program consideration for the trade-off between exclusive to non-exclusive rights. Generally, the more exclusive the higher the value of the rights deal, however this could compete with other precinct, venue and event sponsor programs. | ● | ● | | | | | | | | | | ● | | ● |

| RECOMMENDATIONS | FACILITY PRECINCT PLANNING PRINCIPLES | | | | | | | | | | | | | |
|--|---------------------------------------|---------------------------|----------|----------|---------------------|---------------------------|----------------|------------------------------------|------------------------------|----------------------------------|----------|-------------------------------|----------------------|------------------------------------|
| | LAND ALLOCATION & PRECINCT | CO-LOCATED INFRASTRUCTURE | CAPACITY | LOCATION | PARKING & TRANSPORT | CENTRALISED PREMIUM STAND | FAN EXPERIENCE | KITCHEN & CATERING SERVICES DESIGN | CIRCULATION, ACCESS & EGRESS | ROOF DESIGN IMPROVING EXPERIENCE | SECURITY | TECHNOLOGY & DIGITAL STRATEGY | ENVIRONMENTAL DESIGN | MIXED USE DEVELOPMENT & COMMERCIAL |
| Precinct commercial, event and venue sponsor programs can be complex and present program conflicts that require a require sophisticated design and contractual protection mechanisms across different venue contracts to manage. For example, a major event may require a venue to be provided commercially clean and these provisions need to feature in any contracts. | ● | ● | | | | | | | | | | ● | | ● |
| Creating economies of scale in service arrangements across facilities, partners and tenants. | | | | | | ● | | ● | ● | | ● | ● | ● | ● |
| Working to build brand equity in existing, planned and proposed new venues. | | | | | | | ● | | | | | ● | | ● |
| Providing ongoing funding commitments to sport facilities (such as high-performance training facility) in return for revenue sharing arrangements to offset the ongoing venue maintenance and operational costs. | | | | | | | | | | | | | | ● |
| Reward customer loyalty within sport venues to establish and enhance venue brands | | | | | | | ● | | | | | ● | | ● |
| Encourage the development of competitive advantage through the reward of commercial innovation by establishing a sport venue industry award program. | | | | | | | ● | | | | | | | ● |
| Ensure the scale of commercial operations is appropriate to the scale of the sport venues | ● | ● | ● | ● | | | ● | | | | | | | ● |
| Ensure marketing and advertising expenses are proportional to revenue opportunities and appropriate for the size and nature of the commercial opportunities within each facility. | | | | | | | | | | | | | | ● |
| Collate, report and share venue data across all management teams to develop research to support future industry analysis and business planning efforts. | | ● | | | | | | | | | | ● | | ● |
| Incorporating stakeholder design considerations during new facility concepts and detailed design processes in return for increased revenue share arrangements (either through an increased percentage of share or increased length of the agreements) | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Agreeing to share supply chain arrangements to create economies of scale in all sport/arena venue operations. | ● | ● | | | | | | | | | | | | ● |

NEXT STEPS

Section 7 discusses the development steps involved for a project of this type. To progress the design into the next phase we would recommend the following:

Strategy and Vision

Strategic Intention and Brief

- Development of high level design principles and documentation of the strategic objectives of the development for Government.
- Development of event calendar and multi-use programme.
- Exploration and high-level analysis of preliminary commercial, sport and event program for the facilities to ensure the precinct can be self-sustaining.
- Preliminary engagement with key stakeholders.
- Market sounding to assess the appetite for other asset types such as hotel and commercial premises.
- Procurement and delivery strategy including a high-level development timeline.

Site Feasibility

- Establish the site requirements and develop the assessment criteria to be used in the site evaluation based on the previously agreed development principles.
- The identification of potential 3-4 sites, to cover each of the location types – city/urban sites and city fringe/semi-urban sites.
- Develop massing diagrams showing potential facility arrangements based on the shortlisted sites (this would require architectural support).
- Develop high level cost plans based on the massing diagrams.
- Document the key risks and mitigation strategies.

Definition and Feasibility

Following the completion of the Strategy, Vision and Site Feasibility, the project should proceed with the next stage of works and the preparation of a concept design and business case. This will require an expanded consultant team and include elements such as architecture, traffic, civil, cost planner, etc.

1. SCOPE AND PURPOSE

1.1. THE NEED

Venues Canberra are in the process of establishing a brief to inform the location of a major event and entertainment precinct (The Precinct) close to the city of Canberra. This Precinct would include a replacement Stadium and Arena. The Precinct would be designed to attract new events, visitors and locals, increasing the quality of offering to current attendees and maximise economic benefits to the city and surrounds. This investment would enhance Canberra's brand and drive growth in the visitor economy while also supporting liveability for the people of Canberra and the ACT.

The proposed Precinct is intended to comprise of the following elements:

- Stadium: Designed to host rectangular sports with 30,000 capacity with the flexibility for future expansion and potential addition of a roof
- Arena: 10,000 capacity
- Shared outside broadcast compound
- Shared venue services reticulation
- A public transport hub (light rail, buses)
- Public parking facility
- Hotel
- Plaza and concourse connections
- Commercial opportunities
- Sustainable development and operational options
- An appropriate security exclusion zone around the venues.

This report enables an understanding of the key considerations and footprint requirements for the Precinct along with connections to other surrounding infrastructure.

It will inform the future 'Location Study' which will consider massing and assess potential locations. The locations may include the existing Canberra (GIO) Stadium and Australian Institute of Sport (AIS) site, the Civic Pool site or the Exhibition Park in Canberra (EPIC) site. This report will also inform the development of briefs for a detailed Location Feasibility Study, Business Case and the design of the Precinct.

1.2. PROPOSED VISION FOR THE PROJECT

The Precinct will be able to host major events to showcase Canberra and support the economic growth of its visitor economy. The new facilities will also act as a catalyst for vibrancy, diversity and regeneration of the city and, more widely, the ACT.

It is recognised that live entertainment and events create a ‘unique experience’ for every visitor, evoking an emotional response not just from the performance itself, but one derived from the anticipation of the event, the journey to and from the venue, and the memories that can only be generated from sharing the experience with others.

The Precinct has the potential to draw the Canberra community together creating unforgettable experiences. A critical mass of visitors must be established to enable the sustainable use of the facilities on a day to day basis. The Precinct should consider supporting the two major venues (stadia and indoor arena), a National Sporting Institution (Hall of Fame or Sports Museum and Education Centre(s), and Head Office accommodation for sporting organisations). In addition, other facilities such as commercial hotel and retail facilities, recreational facilities and parking should be considered and designed to increase the utilisation of all the facilities and the day-to-day foot traffic.

1.3. PRECINCT FACILITIES

Successful facility design is achieved if clear objectives for the facilities are agreed from the start. This includes having a shared and agreed vision of the essential performance or functional criteria with key stakeholders, developers, local authorities and operators.

A collaborative approach with stakeholders helps design teams reach the best solution and improve a project’s chance of success as stakeholders become committed to the success of the end facility.

Key factors in determining the scope for design for a facility is understanding the potential event calendar and aspirations for the use of the facility including the market context, climate and culture. This understanding can then be used to guide the feasibility assessment of potential sites by determining their respective opportunities and limitations.

1.3.1. STADIUMS

Stadiums, due to their larger scale, have structural sensitivities that drive design considerations and costs. Traditional outdoor stadiums have event programs that are generally focused on the needs of one or two home team tenants. Due to their size and limited flexibility, traditional stadia generally have lower levels of utilisation due as they feature fewer other types of events in their program.

The scale of event to be hosted largely determines quality of the facility surfaces and service level requirements for constituents. These drive decisions such as the number of seats and type of hospitality experience, media and broadcast overlay requirements, security and boundary needs as well as the overall site expansion and service needs.

A stadium roof can enable better utilisation for concerts and cultural events as it eliminates the risk of adverse weather. However, the cost benefit for a roof must be carefully considered, as it represents a significant capital investment.

With or without a roof the stadium needs to offer an excellent experience. The experience is king, if it cannot be guaranteed then event proponents will not provide content.

1.3.2. INDOOR ARENAS

Traditionally indoor arenas accommodate a variety of uses and feature diverse event programs. These facilities have a higher potential to maximise their utilisation as due to their flexibility for both content and capacity. These requirements translate to flexibility in their design by means of moveable seating, curtains to change capacity, enhanced roof-loading capacity for production, greater environmental control and high-quality acoustics. These facilities operationally require quicker turnaround between events, and therefore provide efficient, direct access to the event floor for efficient bump in and bump out.

It is vital to have an appreciation of the flexible content, diverse user groups and event frequency during the design phase to ensure the “end clients’ needs” can be accommodated and safeguarding its long-term sustainability.

1.3.3. TRENDS, INNOVATION AND THE BUSINESS CASE

The design process must be pragmatic, and demand innovative thinking focused on adding value. This can be achieved both through the creation of efficient solutions, to reduce the operating and management costs, and by creating new revenue streams, such as additional branding space or collateral. Once an overall design concept has been agreed on, a business case will be commissioned to assess the options and include benefit and risk management plans to assist the facility owner and operator to leverage the business benefits and manage operational risks.

The size and functions of the facilities should be determined based on a realistic event calendar, as well as the project’s budget and return aspirations for different stakeholders. It is important to also understand how multiple venues within a precinct interact, including how they will be configured for different events and coincident events.

Over the last decade there has been a shift away from the development of single-purpose focused spaces to the creation of flexible spaces that cater for a more diverse event calendar, focused on live entertainment rather than purely sport.

Consumers are also demanding events that provide them with a higher quality and more authentic experience. The experience of going to an event needs to exceed the convenience and quality of watching at home.

The relationship with the consumer now extends beyond the boundaries of the facility. The engagement and interface with the consumer now starts before their arrival at a facility and finishes after they leave. Technology and multimedia is transforming the experience models.

This has marked a diversification in the stakeholder mix in sports and entertainment precincts. This opens the potential for new asset classes to be considered within the precinct and the development and operating models to include commercial development partnerships. Recent developments feature other community asset types such as education, science and technology, medical, hotels, and parklands. All of which have specialist needs and considerations.

This means the business case options become much more dependent on commercial integration opportunities and the creation of precincts. These hubs need to be integrated with the city and feature multipurpose destinations that act as catalysts for regeneration and/or as anchors for surrounding urban areas. The focus is on improving the commercialisation of the facilities and precinct to increase revenues, reduce costs and emphasise agreed strategic business opportunities.

It has been identified that there is a need to make these large asset groups more sustainable through greater utilisation and that success has come where "existing sites previously used for sport venues or adjacent to other existing venues are more sustainable because the site is already integrated into the urban context with a good connectivity and proximity to existing mixed-use areas (e.g., retail, commercial, recreation, residential, etc.) resulting in synergy effects and extended catchment areas."¹

¹ Sustainable Design of Sports Stadiums Case Studies of Olympic Games in Sydney, Athens, and Beijing Sven Schmedes Cardiff University, United Kingdom, 2014

2. LOCAL CONTEXT

2.1. IMPORTANCE OF SPORT IN AUSTRALIA

It is well established that that Australia loves sport. It has always been and will continue to be part of our cultural identity. The sport and recreation sector hold economic significance to Australia, accounting for approximately 1.5% of GDP² and provides for:

- A combined value \$12.8 billion to the economy in 2011/12³
- Employment for just over 127,000 in the Sports and recreation activities industry⁴
- Significant long-term health and social benefits, particularly in the areas of mental illness, childhood obesity and diabetes prevention management
- Spending on sport also accounted for over 12% of total leisure and recreation spending.
- Sport and physical recreation organisations attracted the largest number of volunteers with 2.3 million people (14% of the adult population) in 2010⁵
- 43% of the adult population or 7.6million people aged 15 years and over attended at least one sporting event as a spectator in the year before (2009-2010)⁶.
- Large match day attendances, with two Australian codes appearing in the world table of top leagues by average attendances; at #4 AFL with 35,207 (2017 season) and at #7 Big Bash League (BBL) with 30,114 (2015-16 season)⁷.

Additionally, a recent study by The Boston Consulting Group (BCG)⁸, identified that success in sports and events are important to Australians and it requires the strengthening the high-performance systems to ensure continued interest and improved performance on the international stage.

BCG further identified the importance of building a world-leading sport industry to support the ongoing economic diversity of Australia. This involves growing sport's contribution to Australian GDP, exports and foreign direct investment, and increasing the percentage of the workforce employed by the sector. The Sports and recreation facility operations for Australia was valued at \$1.4 Billion.⁹

² Value of Sport, Australia 2013, ABS

³ Value of Sport, Australia 2013, ABS

⁴ Arts and Recreation Services 2014-2015, ABS - at 30 June 2014-15

⁵ Value of Sport, Australia 2013, ABS

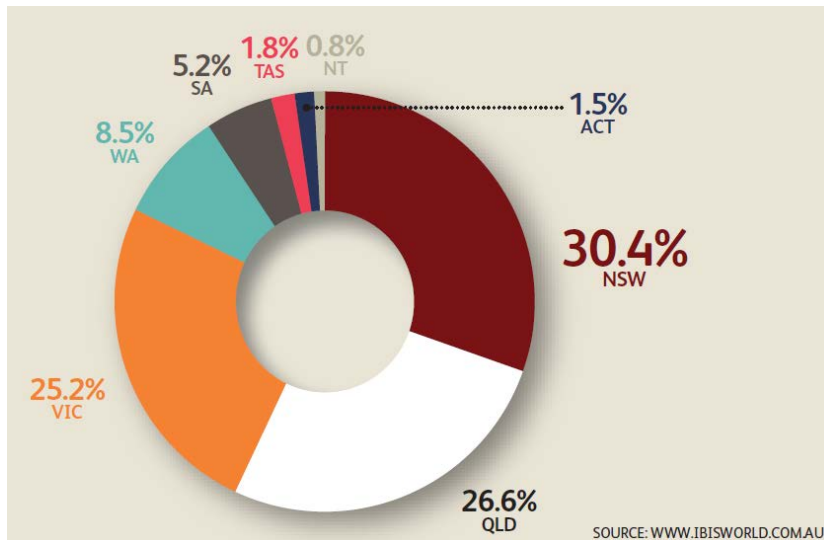
⁶ Spectator Attendance at Sporting Events, Australia 2010, ABS

⁷ List of Sports Attendance Figures, wikipedia.org

⁸ Intergenerational Review of Australian Sport, The Boston Consulting Group, 2017

⁹ IBIS World Sports and Recreation Facilities Operation in Australia June 2016

The Sports and Recreation Facilities Operation industry has performed modestly over the past five years, with a large part of its growth driven by rising spectator sport participation and increasing expenditure on recreational and cultural activities. The percentage breakdown by state was reported as:



The above diagram illustrates that Canberra is a relatively small market in Australia, like the Northern Territory. This is in part due to its population size and local demand drivers for facilities and program. As such careful consideration for planning the facilities need to be grounded in a strategy that allows for a diversified event and non-event program mix and the inclusion of efficient multipurpose facilities.

2.1.1. COMPARATIVE SPORTS UTILISATION OF RECTANGULAR SPORTS STADIA

Overall large sports stadia are not financially sustainable based on their primary sports use and require integrated precinct and diversified program mix of secondary uses to improve their commercial and economic sustainability. By comparison, Canberra Stadium preforms well for its size, market demographic and population. It has an average primary sports utilisation of 12% (average crowd/capacity to potential match day) which is above the average of 8% for Australian rectangular stadiums. It is only out performed by AMMI Park at 20% and Lang Park at 15%.

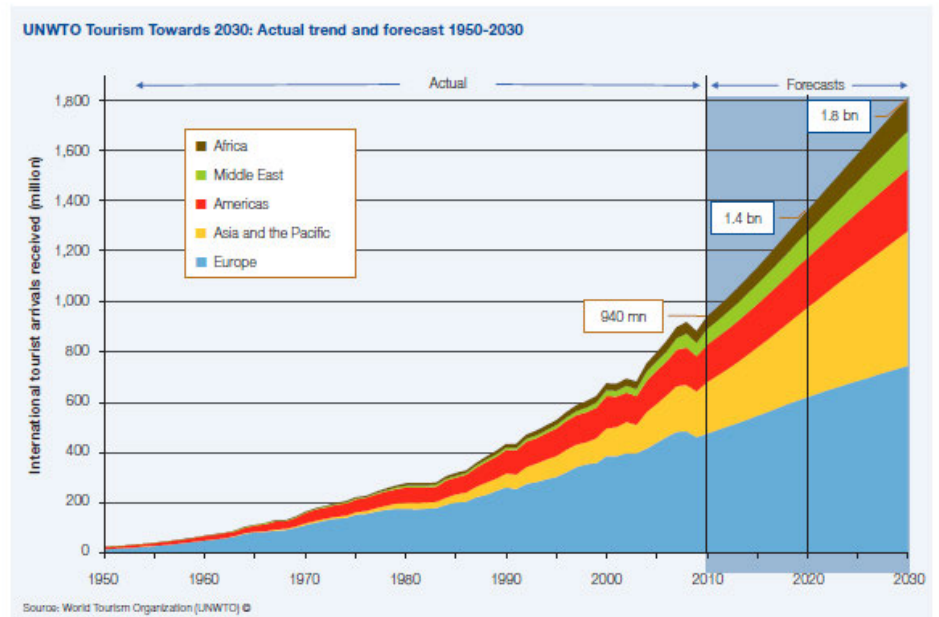
Further details refer to the Australian Rectangular Stadium data in Appendix 3.

Recommendation: *As a priority a multi-purpose facilities strategy should be determined in consultation with appropriate stakeholders to agree the principles and intentions of the facilities development to guide the development of the facilities brief. This will assist in maximising the utilisation of the proposed facilities to ensure their longer term financial and economic sustainability.*

2.2. IMPORTANCE OF TOURISM AND MAJOR EVENTS

At a national level, the stretch goal under the Tourism 2020 framework is to grow overnight tourism expenditure from \$70 billion in 2009 to \$140 billion in 2020.

An ever-increasing number of destinations worldwide are investing in tourism. It is a key driver of socio-economic progress for cities and creates jobs, increases export revenues, and stimulates infrastructure development.



Over the past six decades, tourism has experienced continued expansion and diversification to become one of the largest and fastest-growing economic sectors in the world and particularly in Asia and the Pacific.¹⁰

The impact of events and major event is well established both internationally and nationally, with studies dating back to the mid 1990's. The type of events that add value are broad and include in addition to sports events, trade fairs and exhibitions, cultural and arts events and conferencing events. There is also a growing trend in events that sees diversified program capability in events such as is seen in the Tamworth Country Music Festival and the Screen Producers Australia Awards. These events combine industry awards, conferences, trade shows and broader consumer programs to attract visitors and increase the economic value of their events.

Events are a driver of place making, economic stimulus, industry and sector development whilst also increasing city awareness and appeal through media and sponsorship. Research shows events help to align sector and business growth in a city, attract private-public partnerships, drive growth in the population, visitation and trade, enable urban renewal and in some cases environmental remediation.¹¹ New research into stadium operations and design trends shows that those focused

¹⁰ UNWTO Tourism Highlights, 2017 Edition

¹¹ Local Development Benefits from Staging Global Events, OECD 2008.

solely around sports needs and sport related match day expenditure limit the ability to create sustainable assets.¹²

More and more tourism strategies are including events (sport and non-sport) as strategic tourism products that help activate cities and position the city/region as a destination as attractive places live and visit. The value to the economy is in driving visitation and visitation expenditure. This requires places that can accommodate and facilitate quality experiences for visitors, be they local or from out of region.

2.3. AUSTRALIAN SPORTS AND ENTERTAINMENT FACILITIES CONTEXT

2.3.1. DEVELOPMENT IN OTHER STATES AND TERRITORIES

Over the last decade other states have made significant investment into major sport infrastructure to be competitive and attract and host major sports events for their cities. This trend is also seen in other parts of the world and within Asia.

Many states have and are investing in world class sporting venues and facilities to secure new sporting events and invest in developing their local visitor economies. Development (delivered / planned) include:

- The Melbourne Cricket Ground (MCG) \$465 million Northern Stand redevelopment set a new benchmark for member facilities in Australia.
- 2010 - Melbourne AAMI Park, \$270 million development, 30,000 seats, it is home to Rugby League, Rugby Union and A-League teams
- Adelaide Oval developed in 2014, \$535 million multi-purpose refurbishment, 53,500 seats, home to BBL team the Adelaide Strikers, the Adelaide Crows and Port Adelaide AFL teams
- Suncorp Stadium (formerly Lang Park – Brisbane) a \$280m redevelopment of 52,500 seats. It is considered one of the best rectangular stadia in the world for Rugby League and Rugby Union, due to the features steep seating arrangements for closer views, a low floating roof providing cover to 75% of the seats, integrated public transport facilities including a 12-bay bus station, large public forecourt and public space, and a range of high quality corporate facilities and catering options providing fine dining to over 1,900 guests simultaneously.

¹² The economics of stadium design – December 2014, Coffey

- Perth Stadium (60,000-65,000 capacity), \$1.1 billion, multi-purpose facility, featuring advanced led façade programmable lighting system and first field club hospitality in Australia. Opening in early 2018.
- Western Sydney Stadium, \$300 million, multi-purpose facility, 30,000 seats. Opening in early 2019.

Outside of Australia, in the last 10 years other countries within Asia and Oceania have also been investing in sports facilities and providing compelling alternatives for events that may look to travel to Australia.

2.4. CANBERRA

Canberra is located 150km inland approximately 280km from Sydney and 660km from Melbourne. It is the Nation's Capital, being a place of influence and decision makers.

OECD World Regional wellbeing ratings identifies Canberra has the highest level of well-being not only in Australia, but in the 362 regions across the 34 OECD member countries ranking. Canberra topped the table in six of the eight benchmarks: education, employment, disposable income, safety, healthcare and accessibility to services in Australia.

The economic growth outlook¹³ is positive with 3% growth p.a. over last 5 Years and GDP \$31 Billion. The economic growth is expected to be 2.25% in 2016-17 before returning to trend growth of 2.5% from 2017-18 onward.

Population grew by 8.6% from 2009, compared to a national average of 8.2%. It is estimated to grow by 10.3% to 2061.

Canberra is connected by road, air and rail. It has a new international air capability to Singapore and New Zealand through direct services the Government is discussing future internal access growth opportunities.

By air, flight time from other key capital cities comprise: Sydney 50 minutes; Melbourne 70minutes, Brisbane 100 minutes and Adelaide 75 minutes.

Stage 1 of Canberra Light Rail is underway which will provide an efficient and convenient link between Gungahlin and the CBD, running close to the potential Civic site and EPIC. The Stage 2 Light

¹³ ACT Treasury Economic Outlook, 2017

Rail proposals include a westerly link close to the existing site and provides an opportunity to capitalise on these public transport upgrades.

Canberra, as a destination is still largely a drive market. The current noted ratios for attendance to the GIO Stadium is 80% self-drive. Manuka Oval has had some success increasing the use of public transport at 60% self-drive. The manuka Oval site is constrained by its surrounding urban context.

2.5. RELEVANT ACT STRATEGIES

2.5.1. ACT GOVERNMENT BUSINESS DEVELOPMENT STRATEGY 2015

The ACT Government identifies that a strong and sustainable economy is essential for Canberra to meet the needs of the community now and into the future. Through its Business Development Strategy it will focus on continuing to create the right business environment and using competitive strengths to accelerate innovation and investment.

The strategy aims to support investment, accelerate innovation and create and keep jobs in the ACT. Working with the business community and university sector to create a city with its own distinct economic identity for the future which builds on the work completed as part of the 2012 strategy, which saw:

- The creation of the CBR Innovation Network –brings together five nationally and internationally renowned higher education and research institutions to work with the ACT Government to grow Canberra’s innovation ecosystem. The Network is unique and sees the collaboration between five world-class research and education institutes in the ACT: the ANU, University of Canberra, Data61, CSIRO and UNSW Canberra.
- The establishment of Invest Canberra – to lead the ACT Government’s international promotion initiatives and develop international networks and partnerships.
- The launch of Brand Canberra - to support business and promote Canberra as Confident, Bold and Ready.
- Growth, diversification and jobs driving broader policy directions across government in relation to enterprise and the digital economy, transformation in services and access to the Government. This can be seen in major Government initiatives, such as Access Canberra, iConnect and the Digital Canberra Action Plan.

2.5.2. TOURISM AND MAJOR EVENTS STRATEGY



The ACT Government is committed to growing Canberra’s visitor economy through its 2020 Tourism Strategy 2014-2020, which identifies Canberra as a tourism destination which has changed significantly over the past decade. New tourism-related products and infrastructure have enhanced the experiences on offer and have also opened new ways of engaging and welcoming both domestic and international visitors. Consistent with this approach, the aim of the ACT’s 2020 Tourism Strategy is to achieve overnight visitor expenditure of \$2.5 billion by 2020 (from \$1.58 billion).

The newly released 2025 Major Events Strategy for the ACT aims over the next decade, to position Canberra as an event-friendly city. It aims to reinvent and grow the portfolio of major events, leveraging the benefits of hosting major events which reflect the capital’s essence and personality. It intends to build a portfolio of inspirational and distinctive major events that are key drivers to growing the visitor economy, and promoting Canberra as a vibrant, dynamic, creative and inclusive city for all people. It further notes a coordinated and collaborative approach from industry and government is intended to be developed to ensure that Canberra is recognised as an innovative and creative destination renowned for its world-class major events.

Canberra as a national capital has a relatively small population and industry base. Specialist production capability, both equipment and workforce, must be transported to the region to support the staging of many events. For promoters this becomes an additional cost base that increases the risk of staging productions in region. Whilst other states have seen increased concert and entertainment product in their facilities this has not been the trend in existing Territory asset, with only two bookings hosting in the last seven years.

Recommendation: *The inclusion of mixed non-sport use event facilities should be considered for Canberra as part of this development. Underpinned by the development of an integrated event calendar to leverage partnerships commercial venues facility operators, such as hotels, convention centre and other event and entertainment providers to drive the sustainable design of the facilities and its utilisation.*

Recommendation: *Innovative building design is considered and leveraged to position the new facility as a lead example in its class to connect to the innovation industry in ACT together five nationally and internationally renowned higher education and research institutions to work with the ACT Government to grow Canberra’s innovation ecosystem.*

Recommendation: *Once a shared vision and strategic intent is determined then the stakeholder engagement strategy, delivery method and operating model impacts and options should be reviewed and identified to be assessed and determined for the project(s).*

Recommendation: *Production capability is considered within the design and business model development to reduce risks to future program attraction.*

3. EXISTING FACILITIES

3.1. CANBERRA STADIUM

Canberra Stadium (currently known as GIO Stadium Canberra) has a seating capacity of 25,000. It was constructed in 1977 and at 40 years old is approaching the end of the practical asset life. The stadium is owned by the Australian Sports Commission (ASC), leased to the ACT Government and managed by Venues Canberra. However, we understand that there have been some

initial discussions on the potential sale of the Stadium and the surrounding land to the Territory.

This facility is located on Commonwealth-owned land in the suburb of Bruce, within the broader 65 hectares site AIS campus (see below). The facilities are located 5.5km east of Belconnen Shopping Centre, 3.5km west of Dickson Shopping Centre, 7km north-west of the city center (Civic), 4.6km north-east of Jamison Shopping Centre, 2.6km north of Calvary Hospital and 3.8km east of the University of Canberra.



The overall AIS Bruce campus features the Canberra Stadium co-located with two arenas, an indoor swimming center, a gymnastics hall, soccer and hockey fields, multi-purpose indoor training facilities and a sport science building incorporating the famous AIS biomechanics dome.

The facility is primarily used for professional National Rugby League (NRL) and Rugby Union (Super Rugby) sports programs and is home to the Canberra Raiders (NRL Team) and ACT Brumbies (Rugby Union Team). It also hosts a small number of other entertainment events.

The average usage reported during consultation from 2012 to 2017 comprises:

| Use | Period | Attendance Average | Attendance Peak |
|--|--|--------------------|-----------------|
| National Rugby League | Seasonal | 11,000 | 25,000 |
| Rugby Union | Seasonal | 12,000 | 20,000 |
| Entertainment (Circus / Crusty Demons) | Occasional (4 events in past 5 years) | 12,000 | |
| Entertainment – Concerts (Elton John & Keith Urban) | Occasional (2 events in past 7 years) | 12,000-15,000 | |

In the past, the stadium has also hosted athletics, AFL, cricket and football. Its last major redevelopment was prior to the 2000 Sydney Olympic Games where the oval field was replaced, and a dedicated rectangular stadium was developed to host preliminary football matches for the Games.

Key perceptions of the Canberra Stadium¹⁴ include:

- The community likes watching sport at the facility
- Its functional though the spectator experience is uncomfortable
- There is inadequate covered seating and that it can be very cold.
- The community believes that improving the stadium facilities would attract more people to events and increase the number / type of events held.

¹⁴ Canberra Stadium and Manuka Oval Master Plan Options Consultation Report, Purdon, 2009

- Mixed sentiment to the rating of visibility and ease of access, though generally were rated as good.

Other key operating challenges identified by internal Canberra Stadium staff during consultation and echoed across other states in Australia include:

- The stadium is underutilised, and community access is limited.
- The existing facilities are ageing and need upgrading to remain viable and competitive in the market, especially to bid for events (nationally and internationally).
- The lack of in-house production facilities increases the cost of participation for most producers and limits the amount of touring content to the ACT. This is further impacted by limited local production service expertise within the local market.
- Conflicting utilization and operational requirements to service the population of Canberra Vs major events such as a future rugby union test or world cup.
- Lack of commercial and retail program / facilities to increase the day to day use of the facility.
- Increasing security threat and requirements.
- Increasing costs of operation.
- Parking and traffic management can be challenging for larger events and affects the spectator experience.

As facilities age, they become increasingly difficult to maintain and keep up with the expectations of the modern sports patron (fan, premium hospitality, hirer etc). In addition, user expectations in areas such as digital technology are becoming more demanding and in much shorter cycles (say 5-10 years) than the functional capabilities of the longer-term asset (20-30 years). This is especially important when considering the significant investment being made in other states such as WA, SA, NSW and QLD to ensure their venues are competitive in the events market.

3.2. AIS ARENA

The AIS arena is of a similar vintage built in 1980 and is 37 years old. It is a multi-purpose arena that has a seating capacity of 5,200.

The AIS Arena regularly hosts Australian Boomers and Australian Opals basketball matches as well as the Australian Netball Diamonds. The AIS Arena was is home to the Canberra Capitals who play in

the Women's National Basketball League (WNBL), who have recently shifted home games to a new \$250,000 court at the National Convention Centre¹⁵.

The arena has also been used for the Canberra Roller Derby League, futsal, netball, concerts, exhibitions and gala dinners. It is the main facility used for hosting leading artist concerts in Canberra, such as Culture Club, Lady GaGa, Pink, Midnight Oil and Jessica Mauboy. It has been reported in the media that the AIS may be reviewing the use of the facility and looking to develop a volleyball high performance centre.¹⁶ The final decision on the future of these facilities should be discussed and determined with the AIS and ASC.

3.3. CURRENT DEVELOPMENT PROPOSALS

3.3.1. CANBERRA STADIUM MASTER PLAN

There have been a number of studies to investigate redevelopment opportunities for Manuka Oval and Canberra Stadium. The Canberra Stadium and Manuka Oval Master Plan Options Consultation Report, Purdon, 2009, noted that there was considerable community support for a major redevelopment of the existing stadium.

The KPMG business case for the Canberra Stadium masterplan identifies that a redevelopment without additional new content will not be self-sustaining. However, the inclusion of an A-League franchise would enable a positive net return post the consideration for lifecycle maintenance costs.

Whilst soccer as a team sport nationally has the highest participation for both adults and children,¹⁷ and it is reported that there are more than 31,000 soccer participants in Canberra¹⁸ the region has struggled to secure an A-league franchise. The closure of Football Federation Australia's Centre of Excellence at the end of 2017 does not assist to position the sport in the National Capital.¹⁹

A stadium development by itself is unlikely to provide a fully self-funding investment stream. In selecting a site, it must have the opportunity to develop other asset classes such as the hotel, commercial, retail, education and or a centre of sports excellence. These would be delivered in partnership with other institutions, private sector developers and/or operators. Government funding would be required to support the overall development of a precinct concept to attract private investment, and to realise the potential.

¹⁵ "Canberra Capitals to get new \$250,000 basketball court at National Convention Centre", Chris Dutton, June 6 2017 Canberra Times

¹⁶ "AIS Arena survives radical overhaul to be multi-purpose venue", Canberra Times, June 28 2017, Chris Dutton

¹⁷ AusPlay Participation data for the sport sector, ASC, September 2016

¹⁸ <http://www.canberratimes.com.au/sport/act-sport/capital-football-chief-phil-brown-confirms-canberra-a-league-bid-rumours-20170325-gv6cox.html>

¹⁹ <http://www.theroar.com.au/2017/04/28/remembers-contributions-ais-mens-football-socceroos/>

The opportunity to partner with property and / or development investors should be considered to both off-set the development costs and, to drive the marketing, uptake and ongoing utilisation of the site. Though these benefits would need to be assessed against the risks, where a private developer may look to seek short-term high-yield outcomes that compromise the sports, tourism and community values of the precinct.

An integrated precinct development could also provide an opportunity for AIS to re-establish the Sports Centre of Excellence that would drive a level of demand from attending sports participants (from out of the area and region), sports researchers and educators. It would also provide strong community value for the destination.

Whilst stakeholder consultation supporting the Canberra Stadium Master Plan identified limited support to create a precinct at Bruce, the reality is that in a competitive tourism market a single large-scale stadium asset is unlikely to be self-sustaining by itself. There is also reluctance from the community to consolidate the asset and use between Manuka Oval and Canberra Stadium, though the different sport requirements of cricket and AFL are not congruent with a rectangular pitch. Noting that there is a preference not to share oval and rectangular facilities as there is a view that seating configurations compromise the fan experience due to the distance of standard seating from the edge of the rectangular pitch. Some facilities overcome this issue by using moveable seating however is still considered to compromise the fan experience.

It was identified in the media in April 2017 that the leasing arrangements for the stadium have been extended until 2024 under a leasing arrangement of \$350,000 per annum. It is assumed that the owner would retain the responsibility to maintain and or upgrade the existing facility. Further consideration may be given to looking at an option to buy the facility to either develop or sell to fund the development of new facilities elsewhere.

Recommendation: The future feasibility assessment should include the resale value of land associated with the proposed sites to test the potential value which can be used to inform a business as an offset to the development costs.

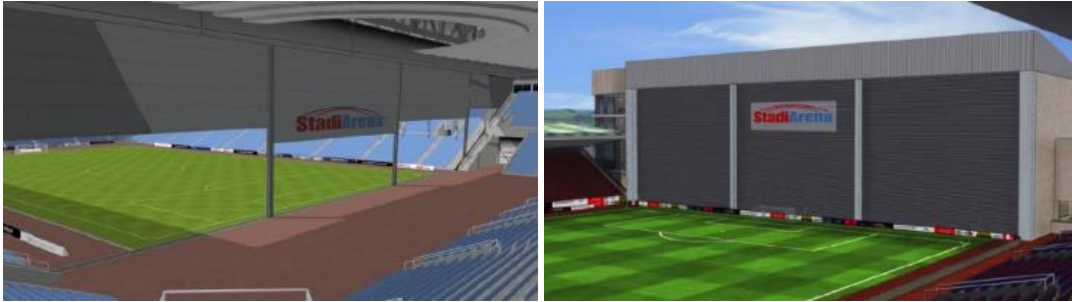
3.3.2. POTENTIAL NEW STADIUM LOCATIONS

Several different potential sites have been discussed, including the Civic site (central city location), the current Canberra Stadium site and the Exhibition Park in Canberra (EPIC) site. Further assessment of the sites and their potential to accommodate facilities will be assessed at a further stage of review. The opportunity of note for the Civic site is now discussed.

Civic Location

Several ideas have been reported for a new facility for Canberra located in Civic:

- It has recently been reported in the media that StadiArena Australia²⁰ has shown interest in working with the ACT government to build a state of the art 30,000-seat stadium in Civic which can be sectioned off as a smaller 7000-seat indoor arena (Canberra Times, October 2017). It is unknown if any formal proposal has been made.



- The Land Development Agency for the ACT Government have been overseeing 'City to the Lake', which is a transformational urban renewal project and report investigating options to deliver a new convention and exhibition centre, a city stadium, the realignment of Parkes Way to facilitate enhanced public access to West Basin and Commonwealth Park.²¹ The projects are at various stages of investigation. An update on the agency website reports that the site could accommodate a 30,000-seat stadium. However, there is no detail provided supporting this assessment.
- A Legislative Assembly inquiry into a new convention centre proposal in 28th August 2017 attracted tri-partisan support in the Assembly, though it is still in its early planning stage. This noted that the small indoor arena on the site of the Civic Pool instead of a new stadium is being investigated. (Canberra Times, October 2017).



The indicative plan of the project under the City to Lake does not appear to indicate that any integrated efficiency between asset has been considered.

Recommendation: *Investigating additional land area development opportunities adjacent to the proposed sites to enable the planning of an integrated sport/entertainment precinct with potential development partners.*

²⁰ <http://www.canberratimes.com.au/act-news/stadiarena-wants-canberra-as-flagship-indooroutdoor-venue-for-new-civic-stadium-20170929-gyrapt.html>

²¹ <http://suburbanland.act.gov.au/citytothelake/stadium-entertainment-centre>

3.3.3. INDOOR SPORTS FACILITY DEVELOPMENT NEEDS IN CANBERRA

There are growing trends toward the use of multi-purpose arena to support the development diversified commercial, corporate, sports competition, training and sports development facility and program.

The Strategic Leisure Group completed the ACT Indoor Sports Facilities Study for ACT Government Sports and Recreation in December 2015. It was identified that demand for access during peak hours to multi court facilities is highly competitive. Compounding this is the need for training space and access to court hours for training.

A new club facility to accommodate continued growth is warranted and consideration should also be given to a study to determine if a state/regional facility that could support elite level training/competition is feasible in the ACT.

It was also reported structural constraints on existing facilities limited their ability to increase multiple use or to host events. Issues related to event parking, adequacy to new sport standards, lack of spectator space, poor player amenity and constrained sites.

This suggests that there is interest for these sports and event competition in Canberra. The report further identified that sports use other key assets such as the AIS Indoor Arena and the National Convention Centre as places utilised, with appropriate overlay. It also identifies the need for new facility development which would support the potential for development of community and sports development programs that could utilise a new indoor arena.

Recommendation: *Further consideration be given to developing a 10,000-seat indoor arena, on the city Civic site, a combined stadium and an in-door facility (on any site), or as part of an overall redevelopment of the Bruce Campus in partnership with the AIS to compliment a sport, entertainment and education city fringe destination. In addition, further consideration should be given to making the indoor arena flexible with multi-capacity seating modes of 2,500/5,000/10,000 to maximise utilisation.*

3.4. STAKEHOLDERS & DEVELOPMENT OPPORTUNITIES

3.4.1. AUSTRALIAN INSTITUTE OF SPORT

The Australian Institute of Sport (AIS), is a division of the Australian Sports Commission (ASC). It is Australia's strategic high-performance sport agency.

Since 1981, the AIS has been the hub of Australia's national sports system and recognised the world over for its ability to identify, develop and produce world, Olympic and Paralympic champions. It has been home to multiple sports centers of excellence including Basketball Australia Centre for Excellence, Netball Australia Centre for Excellence, Football Federation of Australia Centre of Excellence, Rowing Australia National Training Centre, Volleyball Australia Centre of Excellence and Swimming Australia National Training Centre.

As part of the Australian Sports Commission 2015-19 Corporate Plan they identify the desire to establish AIS facilities as world-recognised Centres of Excellence, though recognise that to do this there are challenges due to aging facilities and high competition for public funds to underpin asset development, meeting current and future programming needs.²²

These challenges, changes to the development requirements and competitive sports development trends are intensifying as is evident by:

- The AIS Bruce Campus was included as a Designated Area under the National Capital Plan. As a result, requirements for facility planning have changed.
- The 2015 \$363 million Melbourne Park Redevelopment featuring the National Tennis Centre incorporating eight new indoor courts and 13 outdoor courts for elite training and public use as well as change rooms, player facilities and a gymnasium.²³
- Football Federation Centre of Excellence closure at the end of 2017.²⁴

As reported in ASC Annual Report 2016-2017 the development of a long-term strategy for the management of depreciation and capital and the AIS Bruce Campus facility master plan commenced in 2015–16, however factors such as the AIS Future Directions project and designation of lands under the National Capital Authority have resulted in the suspension of these projects.

²² http://www.ausport.gov.au/annual_report/attachments/ASC_2015-16_Annual_Report.pdf

²³ <https://www.tennis.com.au/about-tennis-australia/melbourne-park-redevelopment>

²⁴ <http://www.theroar.com.au/2017/04/28/remembering-contributions-ais-mens-football-socceroos/>

It is noted in the media that the AIS are in a process of auditing their facilities and will further work under the leadership of Peter Conde, as newly appointed as the CEO²⁵ to plan and lead the AIS and Australia's high-performance sport system to a new level of excellence.

The Institute's world class facilities and services are also used by touring international teams and overseas athletes, national, state and regional sporting organisations and visitors from within and outside the ACT.

With international competition intensifying all the time, the AIS links sports investment to performance targets and provides world-class expertise and services — ensuring Australia's current and emerging high-performance athletes have access to the right support at the right time in their pursuit of excellence.

***Recommendation:** Review the opportunity of redeveloping Canberra Stadium and the Bruce Campus together in partnership with AIS and other potential key tenants, such as the Canberra Institute of Technology. This would enable an integrated and complementary education, conference and sport centre of excellence to reposition the profile of sports and the venues in Canberra.*

4. FACILITY PRECINCT PLANNING PRINCIPLES

The aim in creating commercial sustainability for sport facilities is to increase the utilisation and attractiveness of the venues. This can be achieved by retaining expenditure in the region from residents and attracting new expenditure to the region from tourists and visitors.

Economic and social benefits that should be recognised as a part of a future detailed business case development including but not limited to:

- Increased benefit to sports tourism and out of region economic impacts;
- Increased benefit from/to new stadia and indoor sport development programs to the local community that can be hosted year-round;
- Increased benefit to community programs;
- Increased benefit to health for the community; and
- Provision of a large-scale entertainment events that could attract new event programs to Canberra.

²⁵ http://www.ausport.gov.au/news/asc_news/story_663581_peter_conde_appointed_new_ais_director

General built form considerations for stadia and indoor facilities include:

- Air conditioning and climate control to ensure patron comfort.
- Structural beams and load capacities to support event rigging, staging and production facilities.
- Operable walls (compartmentation) that can convert a large open space into smaller exhibition and event spaces. This could comprise division of the main arena and /or concourse area. In a stadium context operable walls between suites can provide larger event spaces on non-event days.
- Service reticulation and control system suited to enable compartmentation of spaces (separable and joined). Services including but not limited to lighting, air-condition and in-house production services.
- Power and ICT reticulation and access to enable flexible space orientation for events.
- Ceiling, floor and walls that can be dressed up or down to cater for differing event styles and ability to enable event overlay for different style of events.
- Concourse utilisation for functions, foyer or reception areas that can also be used as a pre/post function area, gathering and egress/ingress.
- Acoustic treatments to reduce sound reverberation and increase potential multi-purpose usage through concerts.
- Retractable seating to provide greater flexibility, enabling tier and flat floor.
- Player and entertainment change rooms with direct access to the field of play or performance areas, with exclusive entrances.
- Roof height should have appropriate clearance to allow for multi-use.
- Environmental and sustainable development principles
- Seating design to maximise viewing quality.
- Glass walls/windows to maximise spectator-viewing.
- Outdoor area for seating and socialising and inside social spaces to meet, eat, socialise.
- Use of well-designed technology throughout the facility, aiding in promotion, sponsorship and sports and event management.

Facility planning for major stadia, indoor arena and their respective precincts also need to consider the business program and operating model to consider:

- Multi-tenant facilities and accommodation – sport and non-sport accommodation and event hosting.
- Additional event overlay spatial requirements to proposed program aspiration.
- Access to mass transport hubs, parking and pedestrian connections. Systems of mass transport should usually be within a walking distance of typically 500m to 1000m from the primary venue(s). Further parking within walking distance or in reach of auxiliary park and ride services must be sufficient to cater for various constituent groups who will use the facility in its various mode of operation.
- Utilisation to increase flexible multi-use – considers compartmentation for simultaneous multi-use, acoustic treatments, flexible surface overlay for sports and protection, and service systems separation to isolation and efficiency.
- Event / Entertainment venues (regardless of their programming for sport or otherwise) require at least two major points of access, one Front of House (FOH) and one Back of House (BOH), though ideally have redundancy in the FOH access to accommodate different visitor experience and evocation. A site must have clear and distinct back of house (BOH) for service enablement, accommodation of accredited constituent groups and accommodation for event support systems and vehicles. A site must also have distinctive front of house (FOH) zones to accommodate spectators Integrated facilities that support the development of a sustainable precinct, promoting positive community sentiment, lifestyles, activity and general participation in sport, leisure and social interaction used for general recreation and leisure, conference, meeting, and hospitality, and entertainment and cultural uses. Creating hubs of social and recreational activity for residents and visitors increases the overall utilisation of venue. Not only does it improve the general public’s awareness and confidence in using these facilities, it encourages general participation in sport and recreation.

We will now discuss some key principles in relation to facilities planning which includes:

- Land Allocation and Precinct
- Capacity
- Location
- Centralised Premium Stand (Single Stacked Stand)
- Fan Experience

- Kitchen & Catering Services Design
- Circulation, Access and Egress
- Roof Design Improving Experience
- Security and Centralise Systems
- Technology and Digital Strategy
- Environmental Design
- Mixed Use Development.

4.1. LAND ALLOCATION AND PRECINCT

For assets of this type the land allocation must strategically be positioned to enable its attraction and sustainable use, balancing its day to day utilisation demand and its expansion and full operation for major events. The proposed events, their size and type are the key factors governing the land size to adequately cater for a venues expansion and contraction. Ideally the site would allocate enough land for the hosting of medium and large tier events today whilst also support the future growth and event hosting capability for Canberra.

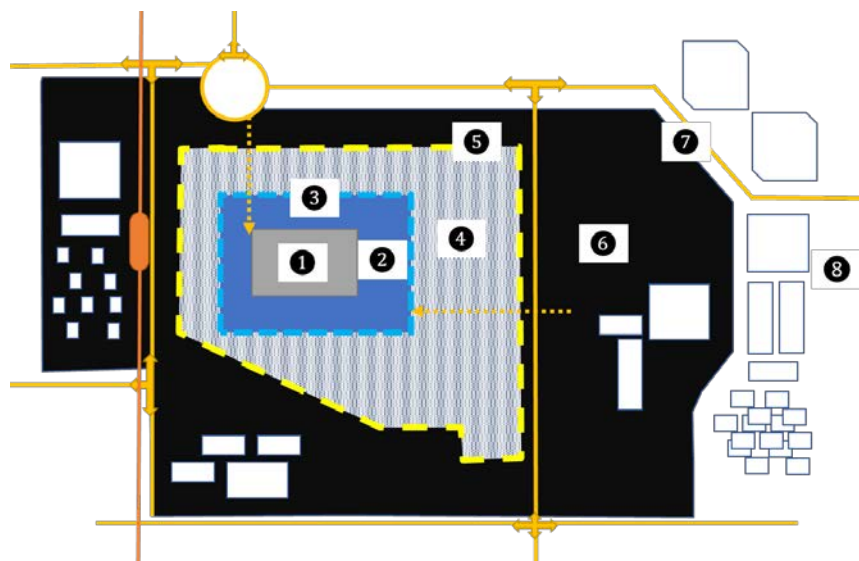
The site and development options feasibility will need to consider:

- Asset types to support the strategic use of the project:
 - Events (sporting and non-sporting)
 - Sport development and high-performance training.
 - Community use and recreation.
 - Other related precinct development such as sports administration, hotel, retail and commercial.
- The physical constraints of the site
- Public and private transport mix
- Service access
- Topography
- Security planning/risks

- Site services (high level desktop)
- Site flooding/storm-water (high level desktop)
- Synergetic neighbour relationships
- Neighbouring use conflicts
- Site planning control constraints (DCP/LEP)
- Land ownership.

Land Massing considerations for major venues include:

- Field of Play (the main sports and performance platform meeting the requirements of Sport and other significant event/production use requirements). Figure reference ①
- The audience facility (seating and amenities). Figure reference ②
- Secured Venue (Immediate boundary). Figure reference ③
- Venue Buffer & Domain (immediate surrounding area to enable venue capacity expansion and primary land mass). Figure reference ④
- Site Perimeter (securing boundary to the primary land mass)). Figure reference ⑤
- Adjacent property to be enable extended domain operations for major and/or mega events (if desired). Figure reference ⑥
- Extended Site Boundary Major Event Operations (“Last Mile”). Figure reference ⑦
- Surrounding urban context. Figure reference ⑧



It is difficult to benchmark against other sports precincts as the strategic programming requirements of the asset as well as its site constraints, determine the facility mixes on a case by case basis. For reference some benchmark precincts and the gross area allowances are provided in the table below:

| Name | Capacity | Facility Type | Gross Site Area |
|---|--|--|---|
| Jinan Sports Centre, Shandong, China | 58,000 | Stadium | 154,000 m ² |
| Jinan Sports Centre, Shandong, China | 12,000 | Indoor Arena | 59,000 m ² |
| Jinan Sports Centre, Shandong, China | 4,000 | Swimming Centre | 40,000 m ² |
| Jinan Sports Centre, Shandong, China | 3,000 | Tennis Centre | 30,000 m ² |
| Jinan Sports Centre, Shandong, China | NA | Commercial & Public Buildings | 60,000 m ² |
| Singapore Sports Hub | National Stadium: 55,000 Singapore Indoor Stadium: 12,000 Aquatics Centre: 6,000 Multi-sport Arena: 3,000 41,000 m ² commercial development. | Fully integrated sports, entertainment and lifestyle hub | 350,000 m ² |
| Melbourne Sports and Entertainment Precinct (Melbourne Park, Olympic Park and Yarra Park) | Multiple Venues: MCG (100,00), Arenas (15,000 seats, 10,000 seats, 7,500 seats), National Tennis Centre, Melbourne Park Function Centre (1800 m ²), AAMI Park (30,050 seats), Olympic Park Oval. Training fields (oval and rectangular) and tennis courts (36 outdoor, 2 show courts, 6 indoor) Administration and training facilities Australian professional sports teams and codes. | Sports and Entertainment Precinct. | Melbourne and Olympic Parks have a combined area of approximately 400,000 m ² Yarra park (which contains the MCG) has an area of 350,000 m ² |

| | | | |
|--|---|------------------------------------|------------------------|
| | It also includes a Sports Museum and Parklands. | | |
| Sydney Cricket and Sports Ground Trust | <p>Multiple Venues: SCG (46,000), Allianz Stadium (44,000)</p> <p>Training fields, rectangular and oval (in adjacent Moore Park)</p> <p>Administration and training facilities for Australian professional sports teams and codes.</p> <p>Sports related industries such as education (University of Technology Sydney) and sports medicine.</p> <p>Car Park (700 spaces)</p> | Sports and Entertainment Precinct. | 150,000 m ² |
| Sydney Olympic Park | <p>ANZ stadium (83,500), Qudos Bank Arena (15,000-20,000), Sydney Showground (24,000), Athletic Centre (5,000), Aquatic Centre (10,000), Tennis Centre (10,000), Hockey Centre (8,000), State Sports Centre (5,000).</p> <p>Car parking (10,000 spaces)</p> <p>6 Hotels, 2 to 5 stars (820 rooms)</p> <p>Office accommodation</p> <p>Residential developments (towers up to 30 stories)</p> <p>Other recreational facilities include a netball centre, action sports and a 430,000m² parkland.</p> | Sports and Entertainment Precinct. | 640,000 m ² |

4.2. OTHER CO-LOCATED INFRASTRUCTURE

Existing cultural, recreational and entertainment sites and their functional relationship to sport facilities must be reviewed to consider the local demand for these services and to identify opportunities to collocate facilities or services to drive utilisation and efficiencies.

Current design trends are focused on experiences²⁶. Experience for spectators, players, partners and users:

- **Investing in creating good journey and experiences²⁷.** This means making the access to and from the venue engaging, welcoming and safe. This sentiment is shared by the ACT community as noted in the Canberra Stadium and Manuka Oval Master Plan Options Consultation Report, Purdon, 2009.
- **Improved connection with the surrounding infrastructure and beyond-the-gate revenue opportunities.** Stadiums are being integrated in vibrant mixed-use city developments creating revenue (event and non-event) and city showcasing experiences.
- **Ensuring services meet the growing needs of hirers, partners and sponsors so they can activate the venue adequately.** This includes engaging them in the design process to influence the design experience and ensuring experiences are integrated and not intrusive afterthoughts.
- **Provide spaces that are varied, flexible, and enable integrated technology.** Seamless connectivity and engagement is increasing. Including via personal smart devices (phones, tablets), interactive display and exhibition stands, delay relay and broadcast, flexible and programable digital signage. The patron of today and tomorrow not only look for immersive experiences digital connection to explore, share and participate in experiences.

***Recommendation:** As a priority a multi-purpose facilities and precinct strategy should be determined in consultation with appropriate stakeholders to agree the opportunities, principles and intentions of a precinct and its facilities. Once a shared vision is established this should be used to guide the development of an integrated and efficient precinct and the resulting facilities design brief.*

The inclusion of mixed non-sport use event facilities should be considered for Canberra as part of this development. Underpinned by the development of an integrated event calendar to leverage partnerships commercial venues facility operators, such as hotels, convention centre and other event and entertainment providers to drive the sustainable design of the facilities and its utilisation. As a result, a master plan for the precinct can be determined to logically design and phase the development of integrated facilities.

***Recommendation:** The design process needs to challenge the solution development to improve the ‘good service’ paradigm and create innovation in efficiency. Sport venues should be one form of overlay for a cities place making that is complimented with commercial and business places, parks, museums, theatres and other public spaces. This should align and support the ACT Transport Strategy, 'Transport for a Sustainable City 2012-2031'.*

²⁶ ITB World Travel Trends Report 2016 / 2017 And; UNWTO Tourism Highlights, 2017 Edition

²⁷ Amadeus2016, Shaping the Future of Luxury Travel | Future Traveller Tribes 2030

4.3. CAPACITY

A facility needs to be big enough to accommodate all those fans who wish to attend matches, but not so big as to leave empty seating that will detract from the atmosphere. The atmosphere will be at its best when the stadium is full and humming with excitement. It is noted that sports have identified they prefer to host matches in smaller facilities to maximise the experience for both attending fans and broadcast. A good example of a facility that is well utilised because of its size constraint and maximised experience is Children's Mercy Park it has a capacity of 18,500 seats but regularly achieves attendances of over 20,000, accommodated with surplus standing areas.

There are no set formulas outside of mega sport guidelines to correctly gauge and determine the right size capacity. The decision to host these mega events often will be supported by the expansion of temporary extensions to the facility. The day to day optimal capacity depends on a variety of factors such as the status and popularity of the home teams, the population base, the location and land availability, and proposed event program and alternative uses planned.

***Recommendation:** Proposed use of the facilities and future city program aspirations are reviewed to determine the surrounding land use to enable expansion flexibility to service future events. The capacity of any new permanent buildings being considered should be sufficient to accommodate the regional short-medium term demand. A global city such as Canberra should also consider securing land within the immediate site of the facility to enable future expansion and / or capacity 'flex' to support the hosting of mega events. This should align and support the ACT's 2025 Major Event Strategy.*

***Recommendation:** Review the desire for a fixed 30,000-seat stadium in consideration of the event program mix, event calendar and current attendances and the number of contracted sports tenants. Should Canberra not be able to secure an additional team to its current sports portfolio it is unlikely that the current tenants could demonstrate future demand for an increased seating capacity what is the opportunity for a flexible seating bowl to make the venue scalable. A good benchmark to model is Children's Mercy Park.*

4.4. LOCATION

There are broadly three types of precinct locations including city/urban, city fringe/semi-urban and out-of-city greenfield development. The types of location being considered for this project are city/urban, city fringe/semi-urban locations only. Where:

- City/urban sites:** usually will have ease of access to existing public transport networks. However, the Venue Buffer & Domain, and external boundary including car parking may be problematic due to a lack of available space and/or the high cost of land. On event days, the streets around the facilities may require rigid access control or closure. This will need to be clearly understood and coordinated with the local authorities and community.

Whilst a city facility be an anchor to the city, such a facility will tend to be more iconic in nature and will need to have a compact design due to the restricted land area and high land prices. The venue would also need to integrate with the city surrounds. Lords, London is such an example.



In Canberra the stadium would also need to meet the development constraints in relation to a dual planning system (Territory and Federal Process) Typically, City/urban sites will capitalise on existing public transport networks, and minimise onsite parking. Melbourne and Olympic Parks are envied for their ease of access due to the multiple tram and rail options. Other Australian city venues include Lang Park, Etihad Stadium, Adelaide Oval and Western Sydney Stadium.

The new Western Sydney Stadium is a \$360 million development of an existing stadia. It looks to provide a 30,000-seat stadium with 3,000 premium seats, 54 suites, 100% roof coverage for all seated areas, and high-quality food and beverage facilities that will be used for a range of sports including rugby league, football, rugby union and a range of other events such as concerts, markets and fairs.

It looks to deliver 1,200 jobs during construction and between 600 and 900 jobs once operational for sporting event days and major events, and will cater for a range of sporting and community uses within the precinct. Noting ²⁸:

Direct city access to the east, excludes club and other facilities that will be a part of separate private development by the leagues club and its partners.

Showcase technology features for external fan zone and arrival with external amenities, merchandising and activation platform.



- City fringe / semi-urban sites:** These sites may attract lower land costs and should still have good, or at least reasonable, access to the public transport network. Cheaper land costs may make it possible to acquire a larger site, which will provide greater scope for the inclusion of multiple facilities and on-site car parking.

If a precinct is in a less densely populated area will also reduce the impact on the existing surrounding environment and neighbours. This will limit the potential risk of curfews, event day limits, and future disputes with the local community.

This type of site also allows for the future growth and enables more flexibility incorporate design partners such as the AIS, university and other commercial developers. The current Canberra Stadium location is considered as a City fringe location.

Recommendation: Future feasibility studies and the business case should compare the city and the city fringe offerings to assess the demand potential uplift associated to with the event use of the facility. This needs to be compared with the overall precinct utilisation of non-sport asset, which in effect should only be scoped and included in the development if they it can provide value and increase the financial and or economic benefits of the business case.

²⁸<http://www.news.com.au/national/nsw-act/construction-of-western-sydney-stadium-officially-underway/news-story/08ff1b2bb83ab28b156b232c12aead97; sport.nsw.gov au>;

4.5. PARKING AND TRANSPORT

Parking is generally provided onsite on flat levels, though is generally considered an inefficient use of land. Aston Villa Football Club, Birmingham, UK provides an example where parking is shared with surrounding city commercial, industry and retail facility. Many venues in Australia provide park and ride facilities for commuters and other visitors which also provides a stable additional revenue stream. The key risk occurs at peak use times during match days, and thus agreements need to consider these clashes.

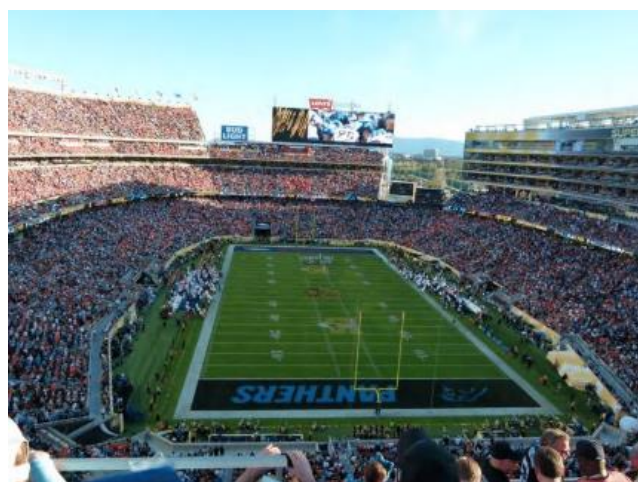
Current trends to improve parking in and around the venues is the use of pre-booking and apps that help spectators locate parking, monitor traffic conditions and plan and track public transport options.

Stadiums and cities can encourage the use of public transport options by selling integrated ticketing and ticketing discounts through networked partnership models with third party parking providers and the use of park and ride services.

In cities where there are significant cultural challenges with the use of public transport, temporary infringement to surrounding roadways has been applied which overtime has resulted in increasing uptake of provided options.

Benchmark's to note:

- After playing for over 60 years in one of the most transit-oriented cities in the United States, in 2014 the 49ers moved to Levi's Stadium a \$1 billion facility one hour south, in the highly-congested and car-oriented Silicon Valley. Two years after its opening public transport uptake is roughly double what was predicted. However light rail capacity has proven to be an issue with up to 10,000 people waiting after games for light rail trains that only hold 300.



Recommendation: As Canberra is considered a drive market the readiness program for any new facilities should include a change campaign to increase the use of public transport and reduce congestion. This approach would also maximise the value of existing government investment in transport such as the light rail.

4.6. CENTRALISED PREMIUM STAND

Benefits include:

- Maximise operational efficiency
- Creation of non-match day activity hub
- BOH space efficiency
- FOH and BOH compartmentation to create utilities efficiency and multi-use spaces.

Design considerations include:

- Singular stacked stand with premium hospitality offering
- Membership services (creche/gymnasium, etc)
- Singular front door (non-match day)
- Creating a flexible concourse design with compartmentation and services reticulation capability.

Benchmark's to note:

- Western Sydney Stadium incorporates a stacked west-stand with premium program offering suites, boxes, field club, broadcast, lounges, conference facility and extensive precinct for fans pre- and post-match activity.²⁹ Further, capital cost efficiency was achieved in the design by the exclusion of the iconic façade resulting in an exposed structure and seating bowl (see below):



²⁹<http://www.news.com.au/national/nsw-act/construction-of-western-sydney-stadium-officially-underway/news-story/08ff1b2bb83ab28b156b232c12aead97; sport.nsw.gov.au>;

- Levi’s Stadium has revenues exceeded expectations, costs were lower than anticipated and it generated nearly \$3 million in extra funding for the local city’s operating fund³⁰. This increased revenue has been partly attributed to the attraction of higher yield patrons and its stacked premium stand enabling both service efficiencies and improved premium product:



Recommendation: The design of the facility should include an option for a centralised premium stand to increase efficiency and provide a hub of activity for non-event days.

4.7. FAN EXPERIENCE

Target benefits include:

- Increased attendance, activation and vibrancy
- Increased engagement and comfort
- Creation of non-match day activity hub
- Increased visitation and visitor expenditure in region

Design considerations include:

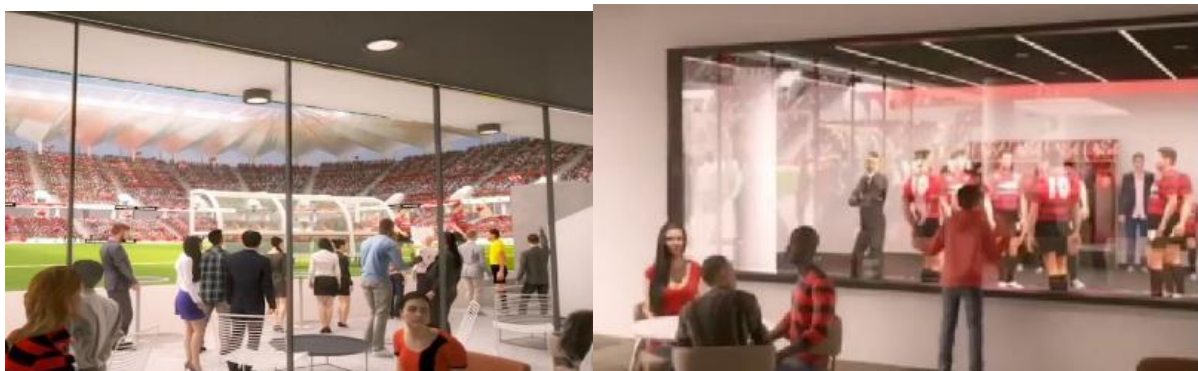
- The modern sophisticated patron expects a spectrum of seating and experience options at multiple price points
- Quality sightlines, unobstructed views, comfortable seating and premium seating options.

³⁰ <http://www.mercurynews.com/2015/09/12/santa-clara-gives-first-financial-accounting-of-levis-stadium/>

- Typical ratios of premium seating range between 10-20% and typically provide up to 30% of revenue for match day activity. The design cost impact can be significant. Average cost of stadium builds varies from \$10,000 to \$18,000 per seat (note some US venues such as Levi's stadium are more than \$25,000 per seat). Many facility operators cite the 80-20 rule; 80% of the revenue comes from 20% of the attendees.
- Exclusive areas with restricted access such as club lounges, fine dining, lounge seating, field clubs, and field or courtside suites. Courtside and field suites are suites placed right down in the front row, bringing the fans even closer to the action.
- Nightclub style bars provide fashionable, lounge style environments. One trend has been to use traditionally difficult locations (such as corners) for these exclusive experiences. They alternatively can be used as non-event commercial entertainment facilities.
- Food offerings need to provide variety and experience (see Kitchen and Catering Services below).
- The lounge seat concept, growing in popularity, takes the suite out of the suite and into the bowl, including comfortable office / lounge style chairs, a dining counter top for in-seat food service, dedicated televisions/screens, and sometimes a small refrigerator.
- Suites and lounges that have no view into the seating bowl or event floor, but afford a large environment that provides all the finishes, amenities, and services of a suite or lounge.

Benchmark's to note:

- Field club facilities are growing in popularity in Australia. Both Western Sydney Stadium (below) and Perth Stadium offer these facilities with direct field views and catered services. These areas provide exclusive experiences such as views to players' warm-up areas and field access and views of media areas. Other examples include Children's Mercy Park, Kansas and Seattle's Quest Field.



- Hard Rock Stadium, Florida (formerly Sun Life) after many years as a compromised venue for NFL and MLB, the current renovations have changed the field and bowl to NFL only, and will

soon move the lower bowl seats closer to the field. It adds a roof to protect patrons from the sun and rain and new technology for improved showcasing and attracting of events. Whilst the renovation reduced the overall capacity to 65,000 hospitalities improved as well as offerings within a single stacked premium stand created servicing efficiencies and increased revenues from \$2.5m to \$14m USD.

- Within the US most new venues that include premium experience facilities and program that diversify the offering for different fan groups and price points, typically experience more than a 50% increase in revenue targets the first year a new stadium is open.



Children's Mercy Park, Kansas is a boutique soccer only stadium of 18,500 which opened in 2011 at a cost of \$200 m USD. It has been a highly successful and profitable venue: all the suites are sold out for the next 70 games. 54 straight sell outs of its Major League Soccer team (by March 2015) and average crowds of more than 20,000 (i.e. greater than the venue seated capacity).

It incorporates the latest in sports technology aiding in fan connectivity and player development. The reaction to the venue has been universally positive: Children's Mercy Park is iconic, fun, intimate, authentic and awe-inspiring. Program offers includes a diverse range of general admission premium product again providing different patron offers at different price points.

The signature 145,000 square-foot roof canopy polycarbonate panels create an intimate, yet grand scale while amplifying crowd noise to increase the ambiance of the game experience. Its material was specifically selected to allow sunlight to penetrate through to the pitch to support the maintenance of the natural turf.

In 2013, the stadium hosted the MLS All-Star Game, the United States men's national soccer team, and the MLS Cup, three of the most prestigious matches in the United States, and is the only stadium to host all three in the same year

The new stadium was the winner of the 2012 "Venue of the Year Award" and "Community Award" – The Stadium Business Awards 2012.



Recommendation: The future design brief should require the concept design to include world’s best practice fan experience principles to ensure the facility meets current and future event hire expectations. The Australian comparable benchmarks that should be used to test the future design include Western Sydney Stadium, the Perth Stadium, Adelaide Oval and Etihad Stadium developments.

4.8. KITCHEN & CATERING SERVICES DESIGN

Target benefits include:

- Increased revenue streams
- Creation of non-match day activity hub
- BOH space efficiency

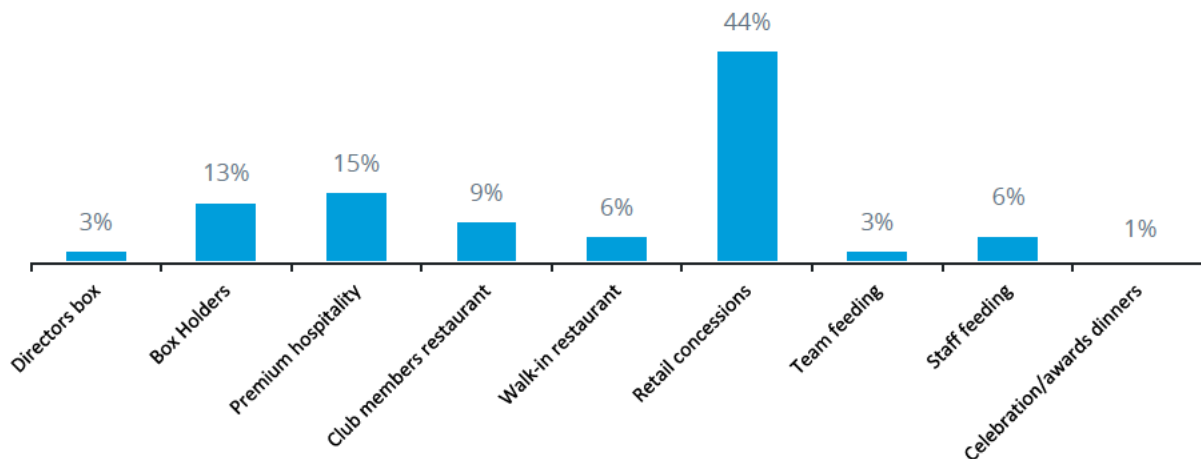
Design considerations include:

- Early stakeholder partnership
- Flexible spaces and service reticulation

- Kitchen and service design appropriate to the level of service expectation

Other points to note:

- Defining the appropriate desired mix and experience informs spectator and supplier needs. This is critical for determining the space and function needs to achieve desired levels of service for different products. Research identifies that 32% of all food and beverage sales are attributable to non-match day activities.
- Typical match day food and beverage revenue streams comprise³¹:



- Increasingly, food and beverage experience is becoming a critical feature for all events be they sport, cultural or community festivals. The advent of increasing expectation for formal, informal and the gourmet street food dining experience is influencing satisfaction and event experience.
- It is not only a question of the quality of the food but the perceived experience, and ability to engage with its production. Such as featuring the chef to cook food in front of the patron.
- Creating meeting places in lounges, bars and pop-up along the ‘last mile’. These are generally temporary in nature and supplied by accredited outsourced operators who connect trucks, vans and marquees to reticulated power, water and waste services.
- Whilst there has been increased interest in the use of pre-ordering system direct to seat. These present equally challenging demands on service levels. Whilst a ‘great idea’ its value to both the spectator and the provider are questionable and should be limited appropriately to diversify the offering and enable tiered service levels. For example, Levi stadium in Santa

³¹ A Blueprint for Successful Stadium Development, KPMG 2013

Clara implement direct to seat ordering, but have since limited these services to club areas only as the resourcing challenges made its implementation not feasible for general admission areas. However, by contrast pre-ordering systems provide convenience of pick-up without queuing.

4.9. CIRCULATION, ACCESS AND EGRESS

Target benefits include:

- Integrated surveillance and crowd management systems enable efficient incident response.
- Improved crowd control and flow management.
- Reduced requirement for managed solutions, requiring increased steward and marshal staffing.
- Equitable and safe access.
- Ensure control integrity, whilst minimising distribution to the spectator experience.

Design considerations include:

- Greater circulation efficiency due to singular stacked stand with Premium program offering.
- Participant and spectator separation including premium patrons and VIPs.
- Accreditation, VIP and media provisions
- Internal and external concourse width requirements including efficient ingress, egress and queuing for amenities.

Other points to note:

- Vehicle and pedestrians must not pose threats to the facility and its operations and appropriate accreditation, screening and vetting facility will need inclusion (see also Security below).
- Circulation, access and egress design influences spectator behaviour and flow, inefficient design can have significant operational cost impacts for the resourcing and management controls to be implemented to manage crowd control. Different constituent groups also need planned access and separation to ensure safe and timely operations.
- Circulation, access and egress design influences all operational functions and the appropriate level of services for program. Each design requirement needs to consider the overall program intent and user experience desire.

4.10. ROOF DESIGN IMPROVING EXPERIENCE

Target benefits include:

- Decreased risk of event cancellation (mainly entertainment events) and poor crowd turn-up
- Increased comfort (modern Australian stadia typically aim for 80-100% coverage)
- Creation of non-match day activity hub
- Increase space flexibility, use and efficiency
- Enable increased use for non-match day services for conference, events and hospitality. All-weather arenas provide an ideal solution because they can be used for entertainment purposes when they are fully closed. The acoustics are improved and the experience better for the fan and production equipment.

Design considerations for stadia include:

- Roofing systems over stadia can create large shadow effects that impact turf and grass growth.
- Roofing systems can demand significant engineering resources to create a bespoke solution.
- Roofing system due to their span and or flexibility requirements add significant cost to stadium construction budgets. Option analysis to verify the increased revenue can offset the roof capital, operational and maintenance cost.
- Sports preference for natural turf surfaces and consideration for alternatives.

When considering roofing or enclosure the biggest risk to the use of the facility is the preferred playing surface, which for rectangular sports is still natural grass or a hybrid. Ultimately grass is affected by shading and sunlight as well as airflow. Fully enclosed facility will not typically feature natural grass, except for arena with retractable roof or where transparent materials such as is seen in Forsyth Barr Stadium, Dunedin, New Zealand are implemented.

Benchmark's to note:

- Forsyth Barr Stadium, Dunedin, New Zealand, was built for the 2011 Rugby World Cup and cost \$198 million NZD. It was the first permanently covered stadium with a hybrid natural grass field (strengthened by synthetic fibres). A key challenge for the design was to ensure that the turf would not be negatively affected under a fixed roof. The solution featured a 20,500m² ETFE (ethylene tetrafluoroethylene) roof covering. The facility should have been developed to face north to optimise the Southern Hemisphere winter sunlight, however it was constructed facing a north-east direction. Rainwater is collected and recycled to irrigate the pitch and the design features natural air openings to the lower bowl of the stadia to

allow airflow directly to the pitch. This material has been used in other projects such as the Eden Project, England and the Beijing National Aquatics Centre, China (Water Cube).



- Wembley Stadium, England provides an example of a partly-retractable roof structure. It features retractable roof panels that open over stands on three sides exposing the grass to sunlight, the north side is covered by the fixed roof. This maximises the sunlight to the hybrid turf from the south. Grow lights used to maintain healthy grass growth and under soil heating is used to keep the surface playable even in the coldest weather.



- In the past, multi-purpose facility roofs were simply domed. Increasingly retractable roofs are being employed so they can convert to be opened to let the sun shine in on good weather days, and closed during bad weather. It balances the need for improved fan comfort and weather protection during winter and rainy periods while maintaining preferred play conditions, for optimum natural grass maintenance and growth.

- An example of a retractable roof is the Warsaw National Stadium, Poland which was refurbished in 2012. The redevelopment of the stadium cost EUR 465 million. The cost of the roof is estimated at EUR 95 million for a fully retractable roof, with a 15-minute transition time to a fully open-air facility. The weight of the roof 14,5000 tonnes and constructed with steel cable, tube and membrane cover. The lightweight design is built to bear heavy snow loads and features a translucent membrane to allow daylight through unobstructed to the pitch.



- Etihad Stadium, Melbourne has a seating capacity of 52,000 seats during sports matches and up to 70,000 seats for concerts. It features a naturally ventilated stadium under a fully retractable roof with a transition period of 8 minutes. The natural turf is kept in a healthy condition through the large opening of the roof, but there are portions of the grass that remain shaded when the roof is open. As part of the grass management process, localised “grow lights” are used to supplement the daylight.



- Ōita Bank Dome (Stadium) has a current capacity of 40,000 and comprising a building area of 51,830 sqm. Also known as the Big Eye is a world-class multi-purpose stadium. The stadium is used for soccer, rugby, track and field and a host of other sports, along with concerts and exhibitions of all types. The wall curtains can be used to divide the stadium 10,000 or 20,000 seating capacity allowing flexibly for small and larger size events. It's an all-weather stadium featuring a titanium sheet fixed roof with a retractable Teflon-film panel (25% optical transparency) and has natural turf laying surface with subsurface heating and wall curtain systems.



- There are multiple structural solutions to stadia roofs. One of the most common in smaller regional venues is the cantilever roof system. Cantilevered roof systems are generally considered efficient for smaller spans, but not cost effective for larger stadia. Stadia with moving or fixed complete roofs use different structural systems such as trusses, arch and cable nets. Roof designs are unique and need to be assessed on a case by case basis. Examples of stadium that use a cantilevered roof include Selangor Turf Club, Malaysia, and the Husky Stadium, Seattle.



Recommendation: *The future feasibility assessment and concept design should include the consideration for a roofing solution (in full or part) to maximise the utilisation of the facility and inform a business case options. This option should consider the return on investment considering the potential up-lift of attendance from current tenants and future event programming opportunities afforded with a part or full roof.*

4.11. SECURITY

The issue of security at high profile stadiums and major sporting events has gained considerable attention in the wake of the terrorist attacks in Paris (2015), Manchester (2017) and most recently in Los Vegas.

Key design considerations for facilities and their operation include:

- Improved stadium design and security will inhibit attackers, although the evolving terrorism threat will require event specific mitigation planning and strategies.
- Continued assessment and improvement of stadiums physical security, procedures and crowd control measures increase financial and logistical challenges for event planners and organisers.
- Heightened security at high profile events will become standard procedure.
- Increased stadium security may reduce the risk of an attack in the facility but will likely expand the risk to crowds gathering in main access routes and or nearby hubs and facilities. Placing increased pressures upon public resources, for incident management and emergency response planning.
- Centralised monitoring, control, and access systems can be integrated with city systems with strategic monitoring devices enabled in and around facility structures, building perimeters, parking lots, points of entry, concourses, seating environments, and other back of house areas.
- Hard keyed entry is being supplemented or replaced by electronic access control stems.
- Increased space and services requirements to support scalable command centres are expected.
- Other services can also be integrated into the design such as lighting and climate control to achieve efficiency and to turn off services to unoccupied areas.
- To determine the Security by Design and related Crime Prevention Through Environmental Design principles the security brief should be determined following the completion of a risk assessment for the proposed facility. The principles for the operational, maintenance and the infrastructure design (permanent and temporary event overlay) should be agreed with relevant agency stakeholders, providing a complementary approach to whole-of precinct and city security design and operations.
- Key considerations for external and internal precinct environments:
 - Day to Day and Event infrastructure, systems and operations

- Event Boundaries outside of the immediate precinct
- Surveillance
- Reinforcement and protection of boundaries
- Lighting and CCTV
- Access and intruder detection
- Tenancy safety and public safety
- Use of landscaping
- Transport and traffic
- Building line and shell
- Recesses and climbing access
- Doors, locks, windows and glazing other access points
- Utilities including services, pits and data risers
- Integration with security control centre / systems
- Target vulnerabilities and risks.

***Recommendation:** The future feasibility assessment and concept design considers the development of an integrated city and precinct security solution, developed in consultation with other agencies such as police and transport, as well as other co-located facility operators. Security By Design should be a key principle for the design and operation of any proposed facilities.*

4.12. TECHNOLOGY AND DIGITAL STRATEGY

Technology trends for facilities is tied to new revenue opportunities and enables more efficient turnaround of multi-purpose facilities to increase utilisation by multiple users.

Online facilities can enable sales and reservations and ordering to improve the visitor experience and can change the way in which crowd flows work within events.

Social networking continues to grow and therefore the scope for commercialising an online presence growth, though much of this revenue is tied to sports organisation and their programs. Facilities as places of cultural and historic value must develop engagement programs to enable this activity.

Wi-Fi-enabled stadiums, provide spectator access to a wide variety of online information on matchdays, including statistics, match report and replay. This is accessible via computers, mobile telephones, PDAs and other portable devices.

Advertising revenue has become increasingly important for new technology. On matchdays, large video walls, TV screens, LED displays and digital hoardings can all be used help to deliver a visual message to the onsite spectator as well as those watching it remotely via broadcast or streaming online.

Upcoming trends:

- Unique coverage streaming of venue cameras could be enabled for the fan to create their own visual display and mix as a package option or included in membership packages.
- 3D displays, and capabilities are available and only just being seen being implemented in the UK and the USA.
- Facility lighting and projection systems are also being implemented in new design such as is seen in the new Perth Stadium and the Western Sydney Stadium.

Specialist commercial technology providers are featuring on the market place that offer specially designed and revenue share arrangements. This can include arrangements to offset capital costs for operating rights where they take the risk on multi-media installations such as video walls, TV screens and automated information systems. It is a balance on risk and return. Whilst it is likely these will continue to become more and more sophisticated and versatile, the future revenue opportunities will also become more attractive to operators.

Alternatively, this is a growing sponsorship segment for facilities where providers supply the fit-out technology. This usually has exclusivity arrangements and may also be an area to be addressed in clean venue policy for major events.

Mobile Apps are quickly becoming an efficient and profitable tool to engage and activate fans at live events. Some apps developed include features to let fans find parking spots, purchase premium seat upgrades, check-in and locate their seats, order food and beverages to be delivered to their seats, find the closest restroom with the shortest line, watch high-definition instant replay videos and close-up videos, view exclusive content, promotions, coupons and statistics, and get traffic information and the fastest route home after the game. In the US it is reported that 20 of the 30 MLB stadiums have already implemented these systems and feature beacons to enable this functionality within the stadia.

Evolution and innovation need to be within the DNA of operating models to ensure the right service opportunities are taken up as demographics change. Currently the spotlight customer group is the

‘Millennials’ who are a large market segment who are reported to have special characteristics such as the desire for authentic cultural experiences and who use technology intensively³².

The most intense technology use within new format entertainment such as esports which will continue to feature worldwide. Since 2015 it has been one of the fastest growing sectors with 51.7% growth in 2016 and 41.3% growth in 2017. It is estimated revenues will grow to reach \$1488 million by 2020. In 2016, there were 424 esports events held worldwide. ³³



In the US and Europe 80,000 stadia are being filled with fans to these events and this event format is starting to develop in Australia, noting:

- Intel Extreme Masters hosted the 12th season at Qudos Bank Arena in May and experienced record sell-out for 10,000 fans.
- Also announced in May the Adelaide Football Club was the first Australian club to enter into an agreement to acquire a professional eSports team. AFL has also shown interest in establishing a base in Etihad stadium. ³⁴

Benchmark’s to note:

- Part of Adelaide Oval’s redevelopment vision in 2014 was to build a modern stadium, while retaining the facility’s heritage and unique features. Technology played a significant role in the new stadium design, including three giant replay screens, two levels of ribbon boards and a major upgrade of the stadium’s mobile phone and wireless infrastructure. These technological improvements were to ensure fans have an enjoyable, interactive sporting experience.

Adelaide Oval was a market leader in fan experience, led by utilizing all LED screens as one integrated canvas, allowing for new, modern, engaging content creating activations, pre-game entertainment, and moments of exclusivity. Additionally, full social media integration and engagement has enabled social posts to be displayed on any LED screen as well as the ability to run social media campaigns on game-day, including live polling.

Adelaide Oval’s success has brought a variety of achievements, including winning of ‘Event of the Year 2016’ at the Stadium Business Awards, claiming the international award for the 2016 Hyundai A-

³² UNWTO Tourism Highlights, 2017 Edition

³³ newzoo 2017 ESPORTS MARKET REPORT, 2017

³⁴ <http://www.afc.com.au/news/2017-05-17/crows-strike-esports-agreement>

League Grand Final. Economically, the stadium redevelopment been a success for the South Australian Government.

In 2015-16, SA attracted record high 6.2 million domestic overnight visitors, including 327,000 domestic visitors to Adelaide’s River Torrens Precinct, which includes Adelaide Oval. Since AFL matches moved to the redeveloped Adelaide Oval from Football Park, attendances are up 44 per cent, accommodation revenue is up 36 per cent and room nights are up 25 per cent.

Adelaide Oval continues to upgrade its technology, with a recent installation in 2017 of coloured LED lights will be installed throughout the grandstands and audio-visual equipment for more spectacular sound and light shows.



Recommendation: A digital strategy should be developed as part of the concept design to enable the best opportunity to incorporate technology within the facility design. Further options for sponsorship and in-source and out-source capital and operational models should also be considered in the business case. This should align with the ACT Government’s Digital Strategy 2016-2019.

4.13. ENVIRONMENTAL DESIGN

Increasingly environmental design is becoming a benchmark with Green-star and LEED ratings the accepted minimum standard. In Australia the concern for sustainability is a normal consideration as too is the attainment of an environmental rating a recent example is the International Convention Centre in Sydney which recently achieved LEED gold standard. Sports stadia and indoor facilities due to their large expanse are increasing challenged to rising utilities costs. Since the early 2000’s there has been a growing trend towards the development of green stadiums. Typical initiatives include:

- On site electricity generation from wind turbines or solar panels (photo voltaic panels)
- Water efficiency measures, rainwater harvesting and water recycling.
- Use of energy efficiency lighting including LED sports lighting.

- Energy efficient facades and shading.
- Energy efficient mechanical systems including the use of natural ventilation where possible (for example in atriums).
- Maximising waste recycling through waste management and alternatives including compostable food packaging.

Benchmark's to note:

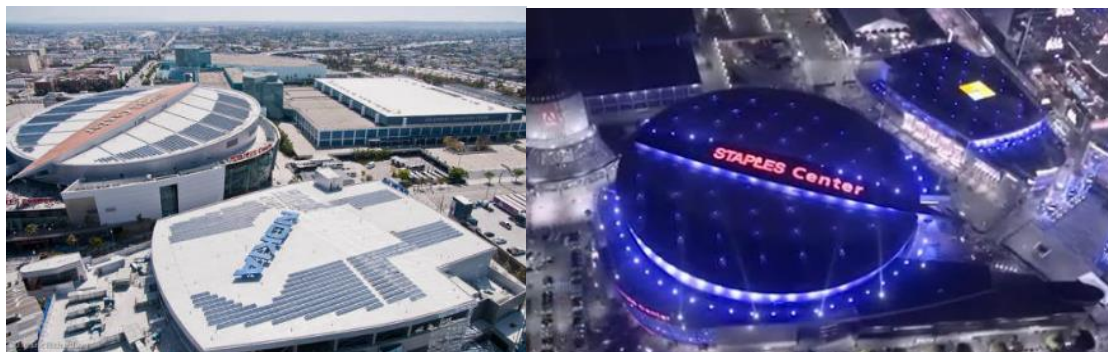
- In 2003, the Philadelphia Eagles, part of the National Football League, partnered with the Natural Resources Defence Council (NRDC), city officials, and other businesses, to develop a greening program for their newly constructed Lincoln Financial Field. As a result, some of the Philadelphia Eagles' primary sustainability accomplishments at Lincoln Financial Field include:
 - generating 30 percent of the stadium's total energy needs through 14 on-site wind turbines and 11,000 solar panels built into the stadium's exterior walls.
 - purchasing 100 percent of the stadium's remaining energy needs from off-site renewable energy sources.
 - planting a 6.5-acre urban forest within Neshaminy State Park with over 4,000 native trees, to fully offset the team's annual carbon dioxide emissions from jet travel.
 - accomplishing a 99.8 percent waste diversion rate through various recycling and composting programs that prevents over 140 tons of waste from reaching landfills each season.
 - converting used fryer oil from concession stands into biodiesel used in the stadium's maintenance vehicles and equipment.
 - eliminating the use of 169 gallons of chemical cleaning agents annually in favour of environmentally friendly products.
 - conserving 21 percent of the stadium's annual water usage through increased monitoring, better management practices, and updated field infrastructure.



- AAMI Park was completed in 2010, and hosts rugby and soccer games. The stadium has many impressive environmental features including a rainwater collection system that saves as much as 500,000 gallons of water every year and the system can also provide four other venues in the precinct with water.



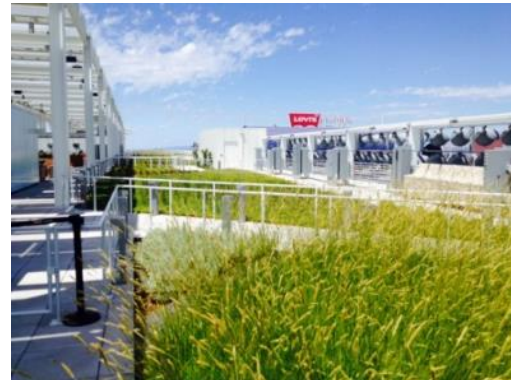
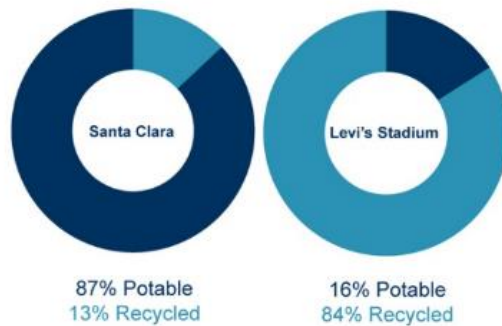
- STAPLES Centre, Los Angeles 35 is one of the busiest arenas in the world, hosting more than 250 events and nearly 4 million guests each year. It is home to four professional sports franchises. It cost \$407 USD Million to build in 1999. The STAPLES Centre has become a leader in energy-smart practices and has ISO 14001 certification. They feature a 1,727-panel solar array; high-efficiency lighting (3,000 LED lights saving ~\$80,000 USD PA); equipment and energy management systems reduced the venue's electricity consumption by 12 %; and 178 Falcon waterless urinals, resulting in savings of more than 7 million gallons of water and \$28,200 USD in direct water costs annually.



- Levi's stadium is the home of the San Francisco 49ers and is arguably the most high-tech stadiums in the world. It is a LEED Gold certified building where: 85% of its water comes from recycled sources and achieves 15-20% reduced overall consumption from lighting due to LED use. Levi's Stadium is also proud of its local food sourcing with 78% of suppliers of stadium

³⁵ Game Changer: How the Sports Industry is Saving the Environment,

food located within 150 miles of the stadium, and 85% located within California. It proudly leads by example to the city statistics:



***Recommendation:** World's best proactive sustainability principles should be included within the brief and suitably assessed as part of any value engineering process of the design development. The principles should be assessed on their merit to showcase sustainable design (LEED Gold Standard), but also enable cost efficiency. Sports stadia and indoor facilities due to their size are increasing challenged to rising utilities costs. Since the early 2000's there has been a growing trend towards the development of green stadiums. This should align with the ACT Governments policy and initiatives for reducing greenhouse gas emissions.*

4.14. MIXED USE DEVELOPMENT AND COMMERCIAL

Higher returns may be achievable from other commercial, residential or community land uses that can increase the utilisation of the shared precinct facility on non-match days.

- Traditional sports programming alone does not see high utilisation of sport precincts and this has been evident through the growing trend worldwide to better connect and integrate these asset types into the city landscape to create vibrant precincts every day of the week.
- Requires integrated multi-year calendar planning for events with the city.
- Requires prioritised partnership development to secure tenants and users with multi-year medium term arrangement and options for the longer term.
- Requires early engagement and communication with partners.
- These could include looking at club and or museum facilities, hotel and conferencing facility, office and commercial accommodation. Restaurants and food and beverage outlets, sport and sport medical facilities, leisure facilities, retail and or education.

This idea targets the inclusion of day to day high utilisation business models that attract more regular revenues and can sustainably be included within the precinct. The best way to decide on the inclusion of such development is to look at conducting a market sounding to seek expressions of interest from potential development or future tenant partners who are willing to make medium to long term commitments to be part of the new development.

The risks and benefits for financing the capital costs, rental or revenue share arrangements and risk must be considered within the business case and operational constraints reviewed with a feasibility assessment of potential sites.

The possible resulting commercial revenue opportunities that could be applied to any venue and as they may relate to user groups comprise:

| Spectator / Fan / Attendee |
|--|
| <p>Ticketing</p> <p>Food & Beverage</p> <p>Merchandising</p> <p>Membership & Services (Hospitality, Creche, Gymnasium)</p> <p>Note: Providing facilities commercially clean is an obligation known as the ‘clean venue principle’ for some major events and would need to be addressed in the following types of arrangements and could compromise the venues ability to attract and maintain its own sponsorship program:</p> <ul style="list-style-type: none"> • Sponsorship and advertising agreements • Naming rights agreements • Lease agreements • Reserved seating arrangements • Utilisation and supply agreements • Merchandising agreements • Hospitality and catering agreements • Food, beverage and catering agreements • Ticketing arrangements. <p>Many venues conduct successful membership programmes that provide significant revenues in terms of upfront payments and subscription revenues. For example, the Sydney Cricket and Sports Ground Trust had membership revenue of 26 million or approximately 28% of total revenue in 2016/2017³⁶.</p> |
| Commercial Leases |

³⁶ Sydney Cricket and Sports Ground Trust, Annual Report 2016/2017

Office Accommodation

High Performance Training

Retail

Types would include: Sports: Medical, University / education, High Performance Training Facility.

Sports Administration & Services.

Community sports facilities and training programs.

Commercial (Gymnasium) including creche facilities.

Conference & Exhibition (Venue Management Accommodation - outsource)

Retail such as sports retail and restaurants and cafes.

Special events

Facility Hire Rental

Facility Service Fees

Production / video Facility / Services

Temporary stall / activation Hire

Corporates

Seats

Boxes, field clubs, and suites

Premium hospitality

Membership packages

Sponsorship

Naming Rights

Technology Partner(s)

Services Partner(s)

Sponsorship Activation Fees/Revenue Share

Other

Museum

Tours

Visitor Centre

Parking

Benchmarks to note:

- In 2014 the University of Notre Dame, South Bend, Indiana, USA³⁷ announced the development of the Campus Crossroads Project a 750,000 square feet \$400 USD million development comprising three new buildings attached to the west, east and south sides of the University's existing iconic football stadium. It was identified that the stadium was a high traffic area during match day but had enormous potential to better service the university outside of the football season. The university had the need to expand its academic program to include student lounges, the anthropology, psychology, and music departments, a media centre, meeting rooms, food courts, classrooms, a performing arts centre, and include improved terraces and exclusive club amenities, premium parking and priority access improvements to enhance the football game experience. These facilities allow the stadium to be used year-round compared to the 10 to 12 times it was previously used on an annual basis. Development is reported to be partially occupied from September 2017 with full occupancy expected by January 2018.



³⁷<https://crossroads.nd.edu/news/biggest-notre-dame-project-ever-a-crossroads-of-academics-student-life-and-athletics/>

- The Sydney Cricket & Sports Ground Trust has partnered with the University of Technology Sydney (UTS)³⁸ to create fully embedded teaching and research facility and programs at Moore Park which are due to open in 2018. The new purpose-built facilities for sport and exercise science and management students, and related research activities, will be located inside the new Australian Rugby Development Centre (ARDC) at the precinct. The partnership is the first of its kind in Australia and looks to bring the next generation of sports scientists and administrators near the elite sports already based at Moore Park. It is seen that this partnership will create a competitive advantage for both partners attracting national and international competition, as well as creating a must-visit destination for study groups from industry, government and academia from growth markets such as India and China.



³⁸ <http://newsroom.uts.edu.au/news/2015/03/scg-and-uts-partner-create-sports-central-campus>

- The Rams stadium, Los Angeles³⁹, "City of Champions Revitalization Project", is due to open in 2019, designed as a 'destination'. It comprises a 300-acre development in Inglewood featuring an 80,000-100,000-expandable stadium, host a 6,000-seat performance venue, more than 1.5 million square feet of retail and office space, 2,500 homes, a 300-room hotel, and 25 acres of parks. reported to cost \$2.6 Billion. The investment is a community investment to act as a catalyst for neighbourhood redevelopment.



³⁹ <http://edition.cnn.com/style/article/new-nfl-stadium-los-angeles/index.html>

- St. Louis Cardinals redevelopment was not focused on the sport facility but in building the experience outside and to support revenue from the last mile on both game day and year-round. The expansion of the experience examples the development of new city hubs and the attraction of joint development partnerships. The St. Louis Cardinals baseball stadium is going through a developmental process to become more integrated into the surrounding community. The Ballpark Village project sees the redevelopment of soft-ball practice pitches and car parking in a 10-acre site north of Busch Stadium. It is reported that the first phase cost \$100 USD million created more than 1,000 construction jobs and 1,700 permanent new jobs. The Ballpark Village opened in 2014 and has successfully created a home of sports that is integrated with multi-phase mixed use development that includes the Cardinals Hall of Fame and Museum, dining, nightlife, retail and parking. There are future to include luxury residential and office spaces.



- The second phase of Ballpark Village is progressing and has recently attracted a deal with Loews Hotels & Co who announced in October 2017⁴⁰ that Live by Lowe will be the first hotel in the phase two expansion that is estimated to cost \$260 USD million, creating 1,500 construction jobs and more than 1,000 permanent new jobs.

⁴⁰<http://www.strealestate.news/loews-hotels-co-announce-first-st-louis-property-hotel-will-part-ballpark-villages-260-million-expansion/6271>; <http://news.stpublicradio.org/post/cardinals-will-again-look-for-approval-to-build-ballpark-village#stream/0>

Recommendation: *Key commercial and operational strategies should be considered include:*

- *Activation within the ‘last mile’ supported with appropriate services reticulation and access. This would help enable the fan experience to and from the stadium, providing variety and increasing revenue and showcasing opportunities from events. These activations should be aligned to the goals of the ACT City Renewal Authority that aims to create a vibrant city heart through the delivery of design-led, people-focused urban renewal.*
 - *With any sponsorship commercial program consideration for the trade-off between exclusive to non-exclusive rights. Generally, the more exclusive the higher the value of the rights deal, however this could compete with other precinct, venue and event sponsor programs.*
 - *Precinct commercial, event and venue sponsor programs can be complex and present program conflicts that require a require sophisticated design and contractual protection mechanisms across different venue contracts to manage. For example, a major event may require a venue to be provided commercially clean and these provisions need to feature in any contracts.*
 - *Creating economies of scale in service arrangements across facilities, partners and tenants.*
 - *Working to build brand equity in existing, planned and proposed new venues.*
 - *Providing ongoing funding commitments to sport facilities (such as high-performance training facility) in return for revenue sharing arrangements to offset the ongoing venue maintenance and operational costs.*
 - *Reward customer loyalty within sport venues to establish and enhance venue brands*
 - *Encourage the development of competitive advantage through the reward of commercial innovation by establishing a sport venue industry award program*
 - *Ensure the scale of commercial operations is appropriate to the scale of the sport venues, where large scale investments*
 - *Ensure marketing and advertising expenses are proportional to revenue opportunities and appropriate for the size and nature of the commercial opportunities within each facility*
 - *Collate, report and share venue data across all management teams to develop research to support future industry analysis and business planning efforts.*
 - *Incorporating stakeholder design considerations during new facility concept and detailed design processes in return for increased revenue share arrangements (either through an increased percentage of share or increased length of the agreements).*
 - *Agreeing to share supply chain arrangements to create economies of scale in all sport/arena venue operations.*
-

4.15. TYPICAL AREA AND COST CONSIDERATIONS

The following table identifies typical asset types, their area and cost considerations. It is noted that these values are indicative of an asset type and cannot be relied upon to determine the footprint or cost of a specific design at this stage. To reliably develop an area and cost model the strategic intention for the facility development must be agreed and a concept brief identified to inform future feasibility assessments. From this the development of a precinct concept design and associated cost plan can be completed.

| Asset Type | Typical Area Consideration | Typical Cost Consideration ⁴¹ |
|-------------------------|--|--|
| Stadium | Capacity: 30,000 Seats Area allowances per seat including accommodation provision: <ul style="list-style-type: none"> World's Best 2.9m² / seat Typical World Class 2m² / seat Other 0.8-1.2m² / seat | Australian benchmarks: \$10,000 – \$15,000 (AUD) Per seat Mix allowance: Premium facilities vary between 10-15%. International benchmarks: \$15,000 – 27,000 (AUD) Per seat Mix allowance: Premium facilities vary between 15-20%. |
| Indoor Arena | Capacity: 10,000 Seats Area allowances per seat including accommodation provision 0.8-1.2m ² / seat | Australian benchmarks: \$15,000 – \$33,000 (AUD) Per seat Note: Prior to Perth Arena, the range was \$15-000 to \$20,000 (AUD) – Iconic in nature, several designs, build and contract issues associated with the project. |
| Car Park | 30-40m ² per space (gross) Australian Stadiums (Similar size Newcastle & WSS stadia (30,000 – 33,000) allowance 800 spaces. Note: Subject to transport access, space, cost, non-event day use and cultural aspects. | Open deck multi-story \$40,000 – \$70,000 (AUD)/space. |
| Hotel | 40-110m ² per room (including Common area) Note: Subject to hotel rating and quality aspects & investment pipeline). | \$3000- \$5000 (AUD)/m ² . |
| Office Buildings | Varied – subject to investment opportunity in market, number and type of accommodation requirements, quality of fit out and/or finish, level of efficiency, type building (walk-up or multistorey). | Varied: Non-CBD \$1,420-2,720m ² (AUD) (walk-up-multi-story to 25 storeys & efficiency from 71-87%). CBD \$2,670-4,245m ² (AUD) (walk-up-multi-story to 25 storeys & efficiency from 71-87%). |
| Retail | Varied depending on type of retail, space accommodation, market demand and investment/partnership opportunity. | \$1,200-\$3,200m ² (AUD) (type speciality shop/mall). |

⁴¹ RLB National Football Stadium Feasibility, 2017 & for non-sport RLB Riders Digest 2017, Australian Edition (4th Quarter 2016 rates, Canberra rates).

5. OPERATIONAL MODEL CONSIDERATIONS

Operational models will need to be reviewed and considered in the business case.

Whilst there is no single Governance / Management arrangement which can be applied to all sports facilities, the options comprise of:

- Not for Profit sports facilities - managed by clubs.
- Public sports facilities owned and operated by Government (with an Agency Group, Trust or Outsourced Management).
- Privately owned and operated commercial sports facilities.

Of these, the not for profit facilities are generally limited to small facility assets and are often constrained by resource expertise and /or capacity to run larger scale venues such as stadium and or commercial facility. Privately owned and operated commercial sports facilities are generally not represented within the Australian market. That said stadium operations in isolation are unlikely to be self-sustaining and hence are not attractive to privately owned operators.

Of the Public sports facilities owned and operated by Government the models generally include internal, external or hybrid models of operation.

The Australian Sports Commission identified that “large sports facilities that provide for major economic impacts, such as stadia facilities that are used by professional sports teams may be planned and financed by State/Territory Governments but are generally better managed by a corporate entity, trustee, or a sporting organisation.”⁴²

These large sports facilities are not generally considered as community facilities but as ‘commercial’ facilities that have the ability through their use to draw large numbers of spectators and may provide significant community impact. They are seen to be used for professional competition and places where major events are hosted. They are rarely seen to be used solely for grassroots sports participation.

The management and operation of major sports infrastructure in Australia is trending towards models where a specialist corporate entity or trustee is appointed, and where they demonstrate the capability to maintain and/or to commercially operate the facilities.

Current Australian stadia and their ownership and operating entities feature mixed models and as is identified in the following table, for noted stadia over 17,000:

⁴² *Play,Sport,Australia. Australian Sports Commission 2015*

| Stadiums in Australia | Currently known as: | Current Capacity | City | Australian State | Property owner | The statutory authority | The (Venue) Operator |
|-------------------------------------|-------------------------------------|------------------|--------------|-------------------|--|--|--|
| Hindmarsh Stadium | Coopers Stadium | 17000 | Adelaide | South Australia | South Australia Government | South Australia Government | Adelaide Venue Management Corporation |
| Campbelltown Stadium | Campbelltown Stadium | 20000 | Campbelltown | New South Wales | Campbelltown City Council | Campbelltown City Council | Campbelltown City Council |
| Leichhardt Oval | Leichhardt Oval | 20000 | Leichhardt | New South Wales | Inner West Council | Inner West Council | Inner West Council |
| Central Coast Stadium | Central Coast Stadium | 20060 | Gosford | New South Wales | Central Coast Council | Central Coast Council | Central Coast Council |
| Perth Oval | nib Stadium | 20500 | Perth | Western Australia | Government of Western Australia | VenuesWest | VenuesWest |
| Jubilee Oval (Kogarah) | Jubilee Oval (Kogarah) | 20505 | Kogarah | New South Wales | Kogarah City Council | Kogarah City Council | Kogarah City Council |
| Endeavour Field (Shark Park) | Shark Park | 22000 | Sutherland | New South Wales | Cronulla-Sutherland Rugby League Football Club | Sutherland Shire Council | Cronulla-Sutherland Rugby League Football Club |
| Penrith Stadium | Penrith Stadium | 22500 | Penrith | New South Wales | Panthers Leagues Club | Penrith City Council | Panthers Leagues Club |
| Brookvale Oval | Lottoland | 23000 | Brookvale | New South Wales | Northern Beaches Council | Northern Beaches Council | Manly Sea Eagles |
| Wollongong Stadium | Wollongong Stadium | 23000 | Wollongong | New South Wales | Government of New South Wales | VenuesNSW | VenuesNSW |
| Canberra Stadium | GIO Stadium | 25011 | Canberra | ACT | Federal Government (AIS) | National Capitol Authority | Venues Canberra, ACT Government |
| Willows Sports Complex (Townsville) | 1300SMILES Stadium | 26500 | Townsville | Queensland | Queensland Government | Townsville Council | Major Sports Facilities Authority |
| Robina Stadium (Gold Coast) | Cbus Super Stadium | 27400 | Gold Coast | Queensland | Queensland Government | Stadiums Queensland | Stadiums Queensland |
| Melbourne Rectangular Stadium | AMMI Park | 30050 | Melbourne | Victoria | Government of Victoria | Melbourne & Olympic Parks Trust | Melbourne & Olympic Parks Trust |
| Hunter Stadium (Newcastle) | McDonald Jones Stadium | 33000 | Newcastle | New South Wales | Government of New South Wales | VenuesNSW | VenuesNSW |
| Brisbane Cricket Ground | The Gabba | 42000 | Brisbane | Queensland | Queensland Government | Stadiums Queensland | Stadiums Queensland |
| Subiaco Oval | Patersons Stadium | 43500 | Perth | Western Australia | Western Australia Government | Subiaco Council | West Australian Football Commission |
| Sydney Football Stadium | Allianz Stadium | 44000 | Sydney | New South Wales | Government of New South Wales | Sydney Cricket and Sports Ground Trust | Sydney Cricket and Sports Ground Trust |
| Sydney Cricket Ground | Sydney Cricket Ground | 48000 | Sydney | New South Wales | Government of New South Wales | Sydney Cricket and Sports Ground Trust | Sydney Cricket and Sports Ground Trust |
| Queen Elizabeth II Stadium | Queensland Sport & Athletics Centre | 49000 | Brisbane | Queensland | Queensland Government | Stadiums Queensland | Stadiums Queensland |

| Stadiums in Australia | Currently known as: | Current Capacity | City | Australian State | Property owner | The statutory authority | The (Venue) Operator |
|--------------------------|--------------------------|------------------|-----------|-------------------|---|--------------------------------|--|
| Football Park | AAMI Stadium | 51240 | Adelaide | South Australia | South Australian National Football League (SANFL) | Adelaide Council | SANFL |
| Lang Park | Suncorp Stadium | 52500 | Brisbane | Queensland | Queensland Government | Stadiums Queensland | AEG Ogden (Brisbane) Pty Ltd (agent for Stadiums Queensland) |
| Adelaide Oval | Adelaide Oval | 53583 | Adelaide | South Australia | South Australia Government | South Australia Government | Adelaide Oval SMA Ltd |
| Docklands Stadium | Etihad Stadium | 56347 | Melbourne | Victoria | Government of Victoria | Places Victoria | Melbourne Stadiums Limited |
| Perth Stadium | Perth Stadium | 60000 | Perth | Western Australia | Government of Western Australia | VenuesWest | VenuesLive Management Services |
| Stadium Australia | ANZ Stadium | 83500 | Sydney | New South Wales | Government of New South Wales. | Sydney Olympic Park Authority | VenuesLive Management Services |
| Melbourne Cricket Ground | Melbourne Cricket Ground | 100016 | Melbourne | Victoria | Government of Victoria | Melbourne Cricket Ground Trust | Melbourne Cricket Club |

As can be seen in the above table Australian stadium owners are either State/Territory Governments or Councils. The operating models adopted typically include:

- internal management model – completely self-managed
- internal management model – outsourced commercial functions
- external management model under a lease arrangement
- external management model under a management agreement

The high-level description and benefits and draw backs for these models include:

| Internal Management Model | Internal Management Model with Outsourced Commercial Functions | External Management Model – Lease | External Management Model – Management Agreement |
|---|---|--|--|
| <p>Benefits:</p> <ul style="list-style-type: none"> Improved transparency in operation Complete control of asset Full control of program Improved integration with other agencies <p>Drawbacks:</p> <ul style="list-style-type: none"> Increased administrative process, less efficient Not an aggressive commercial approach Resource intensive and risk remains solely with Government | <p>Benefits:</p> <ul style="list-style-type: none"> Maintained transparency in operation Control of asset maintenance and standards via contract Part control of program Improved commercial knowledge for sales Balanced risk <p>Drawbacks:</p> <ul style="list-style-type: none"> Hybrid model requiring improved Governance, contract management and reporting Less integration with other agencies | <p>Benefits:</p> <ul style="list-style-type: none"> Owners lease for a fixed rent and transfer the operational responsibility to a tenant Owner leases for fixed rent Low risk to owner Guaranteed lease income <p>Drawbacks:</p> <ul style="list-style-type: none"> No profit uplifts Less integration with other agencies Limited program control Owner still maintains asset | <p>Benefits:</p> <ul style="list-style-type: none"> Likely improved commercial focus Option for improved profit share Operator may take responsibility for the maintenance in full or part <p>Drawbacks:</p> <ul style="list-style-type: none"> Less control of program and use Reduced transparency in operations Potential high management fees Less integration with other agencies Limited program control |

5.1. GOVERNMENTS ROLE IN STADIUMS IN AUSTRALIA

Government can fulfil many valid roles in respect of major facilities (of both land and venues) and supporting major events, including the following:

- Government as policy, defining the wider and equally legitimate objectives for major facilities and major events (social, regional, sports competition, major events and others).
- Government as owner/operator, operating the land and venues as businesses.

- Government as funder/owner and outsources operations in accordance only with sound industry policy principles.
- Government as funder only, in accordance only with sound industry policy principles.
- Government as legislator and regulator, on a level playing field, and ensuring transparency.
- Government as “champion” of the region - proactively promoting the brand and competitiveness of the region.

The management and operation of major sports infrastructure in Australia is trending towards models where a specialist corporate entity or trustee is appointed, and where they demonstrate the capability to maintain and/or to commercially operate the facilities.

5.1.1. ESTABLISHING A TRUST MODEL

Trusts area established under governing legislation as a statutory authority and typically their function should comprise:

- Providing for the planning, development, promotion, management, operation and use of facilities and services for the hosting of sports competition and major events, commercial, recreational and community use of the lands and the facilities.
- Accepting appointment and acting as a committee of management of Crown/Public lands (Use & Development)
- Being responsible for the care, improvement, use and promotion of the land and/or facilities for major events, other sports, other events, recreation and entertainment.
- Making certain the use of the land and/or facilities are suitable for the purposes of major events, other sports, other events, recreation and entertainment.
- Operating the land and / or facilities efficiently and effectively to obtain a balanced and best possible use of the facilities.
- Being responsible for proper maintenance of the lands and / or facilities.
- Being responsible for proper financial management and commercialisation of the lands and / or facilities.

Benefits of a Trust

There are many benefits associated with the Trust Model including:

- A Trust is a social enterprise that provides a balance towards meeting the broader goals of Government to nurture industry growth, showcase the city and provide services to meet the needs of the broader community.
- A Trust has ability to leverage the wider government services to deliver a wider program of benefits than a commercial or not-for profit organisations.
- The performance of the program should be measured for the Trust to be financially sustainable whilst ensuring economic benefits are attained.
- It reduces the cost to Government by providing a focused service delivery. The Trust manages the asset for both social and commercial outcomes, making it more sustainable.
- Other Government Authorities retain influence via the board of Trustees to ensure broader interests are prioritised and managed.
- Other Government Authorities retain control by agreeing to the authority's objectives and working in partnership, as may be relevant, where service level agreements would be established.
- It creates a perceived middle ground for industry and the community.
- It will utilise shared government services opportunities to offset operating subsidies, if relevant.

Where possible, the Trustees should represent the key agencies and have a financial, commercial, legal or business expertise providing input and oversight at no additional cost to the entity to support the decisions taken to manage key matters.

Drawbacks of a Trust

In addition, the key drawbacks of a Trust Model are:

- Additional cost and time to establish the entity.
- Perceived loss of control by user groups.
- Success or failure dependant on the ability to recruit a suitable Board of Trustees with appropriate skills, experience and knowledge to provide appropriate strategic direction and leadership for the facility.
- Initial financial hurdles to establish operations and new arrangements with Tenants.
- Financial and reputational risk to the Government if the Trust fails.

6. DELIVERY OPTIONS

Key considerations in determining the delivery and procurement approach for projects include:

6.1. MARKET AND COMMERCIAL CONTEXT

In assessing procurement and financing options, a key consideration will be the potential commercial performance of the facility, since this will influence the level of private sector interests. The commercial performance of the facility is also dependent on the proposed event profile and programs as well as the positioning of the facility.

Recommendation: The business case should include the confirmation of the proposed event profile and programming of the proposed facility to understand the likely revenues, operational costs, associated risks and the opportunity for stakeholder partnerships.

6.2. ALTERNATIVE PROCUREMENT AND FINANCING OPTIONS

Conventional public work programs (PWP) contracting arrangements are common. These often involve “design-led”, “design, build, operate and transfer” and any other variations. These conventional approaches rely purely on the Government Budget for financing. However, under the conventional PWP approach, the Government bears the risks of cost overrun, project delay, etc.

Involving the private sector in the delivery of what traditionally are public services is a worldwide and on-going trend. Private sector involvement is wide ranging, from simple outsourcing of cleaning contracts to public floatation (divestiture) of former nationalised industries.

Public private partnership (PPP) is a subset of the various forms of private sector involvement. Different jurisdictions and different sectors tend to have slightly different definitions and use slightly different terminologies; there is no hard and fast rule as to what is strictly a PPP and what is not, particularly given the myriad of variations on a basic form that could be incorporated into an individual contract.

In general:

- PPP is about the sharing of risk and responsibility between the public and private sectors in service delivery.
- PPP involves a contract between the public and private sectors, over a medium to long term timescale.
- PPP involves arrangements which capitalise on private sector management skills incentivised by the risk profile in private finance.

6.3. PROCUREMENT AND FINANCING OPTIONS FOR SPORTS FACILITIES

Delivery of entertainment and sports facilities with different degrees of private sector participation yields various results. Experience of the Sydney 2000 Olympic facilities, the Darwin Convention Centre, the Tokyo Dome, the Singapore Sports Hub, O2 in London, Pert Stadium and LA Live in Los Angeles have illustrated the different possible modes and outcomes of private sector participation.

The Singapore Sports Hub presents an interesting case of alternative procurement and financing options. The Sports Hub was tendered as a PPP project where bidders had to submit proposals under Design – Build – Finance – Operate (“DBFO”) arrangement over a 25-year concession period based on a series of output specifications. Under the DBFO agreement, the Singaporean Government agreed to make annual payments that commence upon operation and the successful bidder was required to procure funding for the capital and operating costs. Payments are linked to the level of agreed service / availability parameters⁴³.

The Taipei Dome Complex, on the other hand, is procured using Build-Operate-Transfer (BOT) to tap into the private sector’s more innovative take on the integration of Taipei Dome and neighbouring communities and flexible approach to project delivery. In this case, the BOT approach was estimated to be HKD 5 billion less expensive than the public-sector comparator on capital cost.

Recommendation: the business case should to review alternative private sector participation arrangements and financing options that could potentially be applicable to the facility. In so doing, a further review of procurement benchmarks options for sport facilities should be undertaken to guide the assessment of risks and associated mitigation strategies.

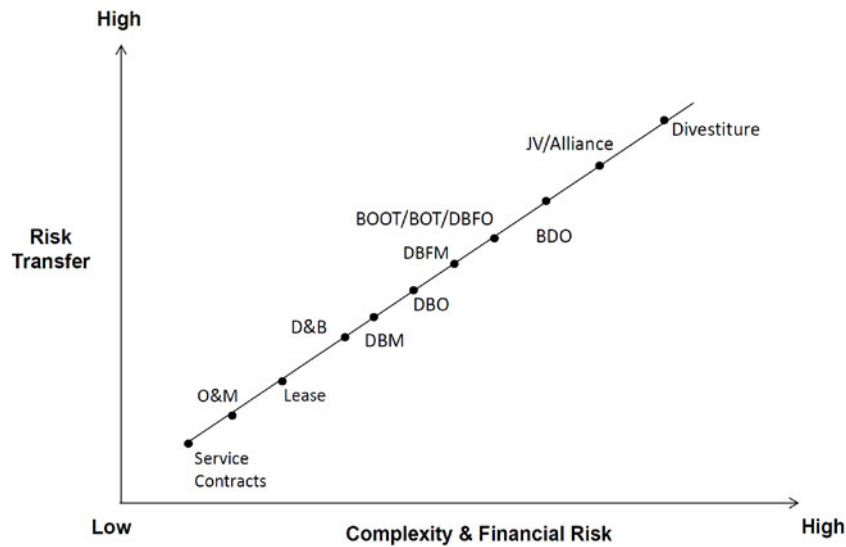
6.4. RISK ANALYSIS AND RISK TRANSFER

Each form of Private Sector Involvement (PSI) or private sector participation (PSP) varies in the allocation of risk between the public and private sectors: simple outsourcing contracts involve low levels of risk transfer from the public to the private sector. Divestiture, where assets are sold and responsibility for service delivery is transferred to the private sector, involves the highest level of risk transfer.

The key to any comparison of different forms of procurement and PSI, including PPP, is how risk and uncertainty are shared between the public and private sector, and how that risk is managed and / or mitigated. Generally, the lower the complexity of the contractual arrangement, the lower the level of risk transfers from the public to private sector.

⁴³ HSBC Sports Financing – Singapore Sports Hub PPP Project

Level of Risk Transfer and Complexity of Contractual Arrangements



Where: OM: Operate & Maintain; D&B: Design & Build; DBM: Design-Build-Maintain; DBO: Design – Build – Operate; DBFM: Design – Build – Finance – Maintain; BOOT / BOT: Build – Own – Operate – Transfer / Build – Operate – Transfer; BOO – Build – Own – Operate; and JV: Joint Venture

There are different risk profiles associated with different procurement and financing options. Broadly speaking, risks associated with different PPP / PSP fall into the following features:

- design risk
- construction risk
- operational risk
- lifecycle approach
- demand risk
- finance risk.

The basic principle for risk allocation entails that any risk should be borne by the party – either public or private- which best can manage it. Selecting the most appropriate procurement and financing options with considerations of risk allocation should be a key component of the feasibility assessment.

The following table outlines the key features of different PPP and private sector involvement (PSI) options:

| Option | Public Sector Responsibility / Role | Private Sector Responsibility / Role |
|--|--|---|
| Service contract | Owns and finances underlying assets Retain overall responsibility for operation and maintenance | Provision of services to public sector as part of overall operation and / or maintenance Responsible for providing services to the service levels specified |
| Operate & Maintain (O&M) | Owns and finances underlying assets | Operation and maintenance to a specified condition / service level Provision of services to the customer (retail or wholesale), possibly including collection of revenue |
| Lease | Existing asset transferred from the public sector for a specific period Usually receives an upfront capital payment in return for making a regular payment during the life of the lease | May need to refurbish or expand existing asset Finance of upfront capital payment and refurbishment / expansion cost May include operation and maintenance to a specified condition / service level |
| Design & Build (D&B) | Specifies the asset required in terms of its functions and desired outcomes Probably involves making stage payments during construction Asset is transferred to public sector on completion Operation, maintenance and management of completed assets | Design and construction of the asset to agreed price and specification Risk of time and cost overrun |
| Design, Build and Maintain / Design, Build, Operate (DBM / DBO) | Specifies the asset and services required Purchases the asset on completion for a pre-agreed price and therefore finances the asset when it becomes operational Takes all ownership risks following purchases May provide management and operations | Design and construction of the asset to agreed price and specification Operation, management and maintenance to a specified condition / service level following completion or may just provide management Provision of services to the customer (retail or wholesale), possibly including collection of revenue Private sector incentive to design and build for long term quality operations / or maintenance |
| DBFM | Specifies the asset and services required Purchases the asset throughout the agreed contract term Provides management and operations | Design, finance and construction of the assets Maintenance of the asset to specified conditions / service level Asset is returned to the public sector at the end of the contract |
| Build Own Operate (BOO) | The public sector becomes the owner of the asset at the end of the contract Commits to purchase services produced by the asset for a fixed length of time | Retains ownership of the asset in perpetuity |
| Boot Own Operate & Transfer (BOOT) | The public sector does not become the owner of the asset at the end of the contract May commits to purchase services produced by the asset for a fixed length of time | Does not necessarily retain ownership of the asset in perpetuity |

| Option | Public Sector Responsibility / Role | Private Sector Responsibility / Role |
|---------------------------------|--|--|
| Joint Venture / Alliance | Sharing of benefits/costs associated with project risks Pooling of assets, finance and expertise under joint management Pre-agreed formula to benchmark pricing, timing, service levels and sharing of benefits / costs achieved | Sharing of benefits/costs associated with project risks Pooling of assets, finance and expertise under joint management Pre-agreed formula to benchmark pricing, timing, service levels and sharing of benefits / costs achieved |

The embedded risk allocation under each PPP/PSP arrangement should provide a framework for the analysis of the procurement options. Such analysis should consider, among other factors, the magnitude of each risk, the private sector’s appetite for each risk and Government’s objective and priorities. Based on the risk assessment, advantages and disadvantages for each option should be set out.

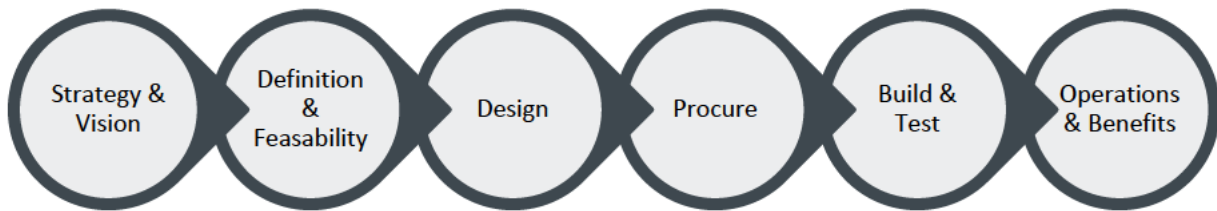
The risk assessment is expected to be a larger component of the overall business case analysis, and it will lead to quantitative estimates, such as cashflows implications for the Government. The assessment should also comprise the identification of:

- risk identification
- risk assessment – quantification and implications on cashflow
- mapping of risk transfers
- risk mitigation.

For a table of potential benefits and drawbacks to these please refer to Appendix 4.

7. DEVELOPMENT STEPS

The following is a typical development timeline for this type if a Construct Only delivery approach was undertaken. Noting that the Procure phase would otherwise shift forward with other delivery methods:



| | | | | | |
|---|--|--|----------------------|---|-------------------------------|
| Strategic Intention & Brief Site Feasibility | Concept Design & Preliminary Business Case | Design Development Final Business & Funding | Tender & Contracting | Subject to facilities required and phasing. | Transition to full operations |
|---|--|--|----------------------|---|-------------------------------|

Design Team will comprise:

- Architects
- Urban & Statutory Planners
- Project manager
- Core Engineers (structural, civil, mechanical, services including (electrical, hydraulic), wind, fire services, fire engineering.
- Traffic Planners
- Pedestrian Planners
- Access Consultant
- Cost Planners
- Specialists: Lighting, Field of Play, Acoustic, kitchen, digital/audio visual
- waste
- Geotechnical
- Land surveyors
- Land scape
- Business case & program planning (financial, economic and operational planners)

APPENDIX 1 CANBERRA CONTEXT

The following table identifies the broader context for Canberra:

| Well Being Rating | | |
|--|-----------------|--------------------|
| <ul style="list-style-type: none"> Canberra is rated and ranked well on the OECD World Regional wellbeing ratings: | | |
| • Access to services | #1 in Australia | Top 18% world-wide |
| • Civic Engagement | #2 in Australia | Top 5% world-wide |
| • Education | #1 in Australia | Top 15% world-wide |
| • Jobs | #1 in Australia | Top 8% world-wide |
| • Community | #2 in Australia | Top 7% world-wide |
| • Environment | #7 in Australia | Top 11% world-wide |
| • Income | #1 in Australia | Top 5% world-wide |
| • Health | #2 in Australia | Top 10% world-wide |
| • Safety | #1 in Australia | Top 10% world-wide |
| • Housing | #2 in Australia | Top 16% world-wide |
| • Life Satisfaction | #1 in Australia | Top 7% world-wide |
| Location, and access | | |
| <ul style="list-style-type: none"> Nation’s Capital – a place of influence and decision makers Home to many national organisations & institutions Government agencies: (Procure broad range goods and services; and facilitate business and productivity innovation) 150km inland 280km Sydney and 660km Melbourne Connected by road, air and rail New international air capability to Singapore and New Zealand through direct services Planned future services from Qatar Airlines and the Government is in discussions to secure interest for direct services from China. | | |

- Flight times: Sydney 50 minutes; Melbourne 70minutes, Brisbane 100 minutes and Adelaide 75 minutes.
- Drive time to Sydney market: 2-3 Hours.

Economic Growth and outlook

- 3% growth p.a. over last 5 Years and GDP \$31 Billion
- Economic growth is expected to be 2.25% in 2016-17 before returning to trend growth of 2.5% from 2017-18 onward
- Unemployment rate is now at 4.1% – the lowest in Australia
- Loss of ACT based Australian Public Service jobs 2015-16 offset by increases in Private Sector jobs.

Key industries

- Tourism adding \$2.06 Billion to the ACT economy
- Public administration
- Construction
- Professional, scientific and technical services
- Education and training
- Health care and social
- Financial and insurance.

Population growth and outlook

- 2009-2014 Growth rate 8.6% compared national average 8.2%; estimated to grow by 10.3% by 2061.
- 62% natural growth (births minus deaths).
- 38% growth from migration.
- Net overseas migration estimated to climb to 65% in 2019-20.

Transport Operations

- New light Rail developments improving access in and around the City.
- Transport partners and city invest in and support events by providing transport options in the region.

- Ride sharing
- Aviation Growth
- Bus Services to Sydney (high quality & frequency).

Events

- ACT community sentiment for major events is strong. 93% of Canberrans believe it is important for the ACT to host major sporting, arts and culture and community events. 85 % of Canberrans believe major events make the ACT a more enjoyable place to live.
- ~80 % of Canberrans believe that major events help to enhance community spirit, pride and enjoyment and that using taxpayer money to stage events in the ACT is reasonable.

Accommodation, Food & Beverage

- Investment in new product (for facilities with over 15 rooms) has increased the capacity and offering in the market, alleviating occupancy constraint during parliamentary sitting periods.
- Relationships and current sales and packaging capability exist within accommodation and other tourism service and experience providers.
- Canberra and the surrounding region has high quality food and beverage offerings.

APPENDIX 2: AUSPLAY PARTICIPATION DATA FOR THE SPORT SECTOR

AusPlay Participation data for the sport sector, ASC, September 2016

| Club sport (Adults) Top activities | Population estimate | Per cent of population | Per cent of club sport population |
|---------------------------------------|---------------------|------------------------|-----------------------------------|
| Golf | 666,349 | 3.4% | 17.3% |
| Football | 535,075 | 2.7% | 13.9% |
| Tennis | 394,713 | 2.0% | 10.2% |
| Cricket | 359,501 | 1.8% | 9.3% |
| Netball | 354,161 | 1.8% | 9.2% |
| Australian football | 307,087 | 1.6% | 8.0% |
| Basketball | 280,728 | 1.4% | 7.3% |
| Touch football | 208,708 | 1.1% | 5.4% |
| Bowls | 195,479 | 1.0% | 5.1% |
| Rugby league | 131,934 | 0.7% | 3.4% |
| Hockey | 117,537 | 0.6% | 3.0% |

| Club sport (Children) Top 10 activities | Population estimate | Per cent of population | Per cent of club sport population |
|--|---------------------|------------------------|-----------------------------------|
| Football | 551,911 | 12.0% | 28.8% |
| Australian football | 328,540 | 7.1% | 17.2% |
| Netball | 271,559 | 5.9% | 14.2% |
| Basketball | 251,583 | 5.5% | 13.1% |
| Cricket | 203,168 | 4.4% | 10.6% |
| Tennis | 192,167 | 4.2% | 10.0% |
| Swimming | 191,038 | 4.2% | 10.0% |
| Athletics, track and field | 124,541 | 2.7% | 6.5% |
| Rugby league | 115,949 | 2.5% | 6.1% |
| Gymnastics | 109,802 | 2.4% | 5.7% |

APPENDIX 3 SPORTS UTILISATION FOR RECTANGULAR VENUES IN AUSTRALIA

| Venue | Current Capacity | NRL | | | A-League | | | Super Rugby | | | Total | | | | | | |
|-------------------------------------|------------------|----------------|-------------------|---------------|-----------------|--------------------|---------------|----------------|-------------------|------------|---------------|----------------|---------------------------|---------------|---------------|---------------------------------|-------------|
| | | Matches (2017) | Avg. Crowd (2017) | % of Capacity | Matches (16-17) | Avg. Crowd (16-17) | % of Capacity | Matches (2017) | Avg. Crowd (2017) | Capacity | Total Matches | Total Crowd | Total Attendance/Capacity | Average Crowd | % of Capacity | Match days/potential match days | Utilisation |
| ACT | | | | | | | | | | | C | | | | | | |
| Bruce Stadium | 25,011 | 12 | 14,097 | 56% | 2 | 5,285 | 21% | 8 | 9,887 | 40% | 22 | 258,829 | 10 3 | 11,765 | 47% | 25% | 12% |
| NSW | | | | | | | | | | | | | | | | | |
| ANZ Stadium | 83,500 | 35 | 14,410 | 17% | 6 | 27,695 | 33% | - | - | - | 41 | 670,520 | 8 0 | 16,354 | 20% | 47% | 9% |
| Brookvale Oval | 23,000 | 10 | 11,153 | 48% | - | - | - | - | - | - | 10 | 111,530 | 4 8 | 11,153 | 48% | 11% | 6% |
| Campbelltown Stadium | 20,000 | 4 | 9,634 | 48% | 1 | 9,477 | - | - | - | - | 5 | 48,013 | 2.4 | 9,603 | 48% | 6% | 3% |
| Central Coast Stadium | 20,060 | 1 | 20,060 | 100% | 11 | 7,799 | 39% | - | - | - | 12 | 105,852 | 5 3 | 8,821 | 44% | 14% | 6% |
| Endeavour Field (Shark Park) | 22,000 | 12 | 12,953 | 59% | - | - | - | - | - | - | 12 | 155,436 | 7.1 | 12,953 | 59% | 14% | 8% |
| Hunter Stadium (Newcastle) | 33,000 | 12 | 15,619 | 47% | 12 | 8,707 | 26% | - | - | - | 24 | 291,917 | 8 8 | 12,163 | 37% | 28% | 10% |
| Jubilee Oval (Kogarah) | 20,505 | 5 | 10,793 | 53% | - | - | - | - | - | - | 5 | 53,965 | 2 6 | 10,793 | 53% | 6% | 3% |
| Leichhardt Oval | 20,000 | 4 | 12,123 | 61% | - | - | - | - | - | - | 4 | 48,492 | 2.4 | 12,123 | 61% | 5% | 3% |
| Penrith Stadium | 22,500 | 11 | 13,303 | 59% | - | - | - | - | - | - | 11 | 146,333 | 6 5 | 13,303 | 59% | 13% | 7% |
| Sydney Football Stadium | 45,000 | 11 | 13,971 | 31% | 12 | 13,382 | 30% | 7 | 14,500 | 17% | 23 | 415,763 | 9 2 | 18,077 | 40% | 26% | 11% |
| Wollongong Stadium | 23,000 | 4 | 14,792 | 64% | - | - | - | - | - | - | 4 | 59,168 | 2 6 | 14,792 | 64% | 5% | 3% |
| Queensland | | | | | | | | | | | | | | | | | |
| Lang Park (Brisbane) | 52,500 | 14 | 30,061 | 57% | 13 | 13,892 | 26% | 7 | 15,115 | 29% | 34 | 707,260 | 13 5 | 20,802 | 40% | 39% | 15% |
| Robina Stadium (Gold Coast) | 27,400 | 12 | 13,688 | 50% | - | - | - | - | - | - | 12 | 164,256 | 6 0 | 13,688 | 50% | 14% | 7% |
| Willows Sports Complex (Townsville) | 26,500 | 12 | 16,528 | 62% | - | - | - | - | - | - | 12 | 198,336 | 7 5 | 16,528 | 62% | 14% | 9% |
| South Australia | | | | | | | | | | | | | | | | | |
| Hindmarsh Stadium | 17,000 | - | - | - | 14 | 9,565 | 56% | - | - | - | 14 | 133,905 | 7 9 | 9,565 | 56% | 16% | 9% |
| Victoria | | | | | | | | | | | | | | | | | |
| AAMI Park | 30,050 | 11 | 16,034 | 53% | 21 | 13,382 | 45% | 8 | 8,446 | 28% | 40 | 524,961 | 17 5 | 13,124 | 44% | 46% | 20% |
| Western Australia | | | | | | | | | | | | | | | | | |
| Perth Oval | 20,500 | - | - | - | 14 | 10,533 | 51% | 6 | 9,520 | 46% | 20 | 204,579 | 10 0 | 10,229 | 50% | 23% | 11% |
| Total | 29,529 | | 14,951 | 54% | | 11,972 | 36% | | 11,494 | 32% | 16.94 | 238,840 | 7.4 | 13,102 | 49% | 19% | 8% |

Noting that the capacities of venues within the market vary significantly, from 17,000 to 83,500

References:

NRL - <https://afitables.com/r/crowds/2017.html>

A-League - <http://www.ultimatea-league.com/fixtures.php?show=season&season=2016-17>

Super Rugby - <https://www.w.shrugbyblog.com/2017/02/24/australian-super-rugby-attendances-2017-sr-2017-crowds-in-australia-conference/>

Potential Utilisation Drivers:

| | |
|--|-----|
| Event Day | |
| No Days | 365 |
| Ground Maintenance at 35 | 35 |
| Event and bump in out allowance (say 3 days per match day) | 3 |
| Potential Match Days | 87 |

APPENDIX 4 PPP / PSP APPROACHES, POTENTIAL BENEFITS AND DISADVANTAGES

| PPP Feature | Description | Potential Benefits | Potential Disadvantages |
|-------------------|---|--|---|
| Design risk | <p>Private sector responsible for designing the asset</p> <p>Public Sector provides design specification based on outputs required as opposed to detailed design inputs</p> | <p>Maximises private sector scope for innovation</p> <p>Provides access to latest technology, through large companies operating in a global environment with access to design ideas not otherwise available to government</p> | <p>Public sector needs to be careful about its output specification to ensure that the underlying solution is robust.</p> <p>Private sector likely to value engineer design to lowest cost solution which may impact robustness of solution</p> |
| Construction risk | <p>Private sector responsible for delivering to time and cost</p> | <p>Private sector bears risk of cost and time overruns</p> | <p>Private sector will need to be able to control and thus manage the risk of time and cost overruns if is it to price such risks cost effectively</p> |
| Operational risk | <p>Private sector responsible for operating and maintaining the asset</p> <p>Likely to be a long-term contract if significant long-term</p> | <p>Private sector bears risk of cost overruns subject to pre-agreed price adjustment formulae</p> <p>Private sector bears performance risk through a payment mechanism which varies payments according to performance</p> <p>Private sector assumes long term maintenance and replacement risk in return for receiving a pre-agreed annual contribution to fund replacements</p> | <p>Private sector will need to be able to control and thus manage the risk of cost overruns and performance failures if is it to price such risks cost effectively</p> <p>A long-term contract may be less flexible for the public sector than traditional shorter-term outsourcing service contracts</p> |

| PPP Feature | Description | Potential Benefits | Potential Disadvantages |
|--------------------|---|--|---|
| | maintenance risk is to be transferred | Potential for better customer focus as a positive long-term relationship with customers is essential to ensure good financial returns to the private sector and better service delivery to the customer | |
| Lifecycle approach | Transfer of design, construction and long term operating risk to the private sector | <p>Gives the private sector maximum opportunity to come up with the lowest whole life cost approach</p> <p>Single party can be responsible for capital, maintenance, upgrade and operational aspects of the asset delivery enabling “trade-offs” between investments at various life cycle stages to be considered</p> | <p>Public sector needs to be careful about its output specification to ensure that the underlying solution is robust.</p> <p>Private sector likely to value engineer design to lowest cost solution which may impact robustness of solution</p> <p>Private sector will need to be able to manage the risk of time and cost overruns if is it to price such risks cost effectively</p> <p>Private sector will need to be able to control and thus manage the risk of cost overruns and performance failures if is it to price such risks cost effectively</p> <p>A long-term contract may be less flexible for the public sector than traditional shorter outsourcing service contracts</p> <p>The more complicated the contract the longer and more complicated the procurement process is likely to be</p> |
| Demand risk | Transfer of risk of revenue generation and/or service use to the private sector | <p>Private sector assumes significant financial risk against the success of the overall project</p> <p>Potential for better customer focus as a positive long-term relationship with customers is essential to ensure good financial returns to the private sector and better service delivery to the customer</p> | <p>Private sector will only accept demand risk that it can control or easily predict</p> <p>Demand risk transfer may be expensive</p> |

| PPP Feature | Description | Potential Benefits | Potential Disadvantages |
|-----------------|--|---|--|
| | | Demand risk transfer will increase government's ability to treat finance as off-balance sheet | |
| Private finance | Private sector funds the creation of the asset and its ongoing operation for some form of return | <p>Potential for earlier project delivery unrestricted by public funding constraints</p> <p>Financial disciplines of the private sector can enhance the efficiency of the project and ensure a practical balance between risk and cost savings Private finance helps ensure economically sound decision making rather than potentially popular decision making</p> <p>Potential for private finance to be treated as off the government's balance sheet</p> | <p>Additional cost of private finance compared to the cost at which governments can borrow – this needs to be offset by efficiency savings by the private sector</p> <p>Potentially high cost of early termination of private sector's involvement may lead to inflexibility.</p> <p>Low cost but highly geared private finance structure may make contract changes costly and time consuming</p> <p>The more highly geared the finance structure the longer and costlier the procurement process is likely to be as lenders need to be satisfied that risks have been mitigated</p> |

Features of Approaches to Private Sector Involvement, Risk Transfer to Private Sector

| PPP Option | Risk transfer to private sector | | | | | |
|--|---------------------------------|-------------------|------------------|--------------------|-------------|-----------------|
| | Design risk | Construction risk | Operational risk | Lifecycle approach | Demand risk | Private finance |
| Service contract | ● | ● | ◐ | ● | ● | ● |
| Operate & Maintain (O&M) | ● | ● | ◐ | ● | ● | ● |
| Lease | ● | ● | ◐ | ● | ● | ◐ |
| Design & Build (D&B) | ● | ● | ● | ● | ● | ● |
| Design Build Maintain (DBM) | ● | ● | ● | ◐ | ● | ● |
| Design Build Operate (DBO) | ● | ● | ◐ | ◐ | ● | ◐ |
| Design Build Finance Maintain (DBFM) | ● | ● | ● | ◐ | ● | ● |
| Build Own Operate Transfer (BOOT) / Hybrid | ● | ● | ◐ | ◐ | ◐ | ● |
| Build Own Operate (BOO) | ● | ● | ● | ● | ◐ | ● |
| Joint Venture / Alliance | ◐ | ◐ | ◐ | ◐ | ◐ | ◐ |
| Divestiture | ● | ● | ● | ● | ● | ● |

Note:

Key:

- No risk transfer
- ◐ Weak transfer
- ◑ Reasonable degree of risk transfer
- ◒ Strong risk transfer
- Full risk transfer

Lease

Private finance risk transfer is only "strong" because limited risk transfer of other risks will make off balance sheet finance more difficult to achieve

DBO

Weak private finance because public sector pays on completion - this reduces scope for operational and lifecycle

DBFM

Provides potential for facilities where private finance are contract but operations are separately managed

BOOT / Hybrid

Risk transfer is slightly higher in BOO than BOOT as private sector retains ownership under BOO and therefore has more incentive to maintain asset (assuming it continues to have an economic value). Demand risk transfer depends on terms of contract

Joint Venture / alliance Degree of risk transfer can cover a wide spectrum depending on nature on contract.

Intentionally Left Blank
