



Building Beyond Brisbane 2032

Infrastructure requirements for economic growth and
Olympic legacy

DECEMBER 2023



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The opportunity for a sustainable legacy

The Brisbane 2032 Olympic and Paralympic Games (The Games) represents a once-in-a-lifetime opportunity to create a sustainable legacy for Queensland (QLD) and in particular, South East QLD. The Games is the time to deliver a **lasting legacy of economic infrastructure** that will help shape and guide the economic expansion of QLD for the next 20 years.

In November this year, the QLD Government released “**Elevate 2042**”, which makes an attempt to outline the legacy that The Games could and should provide for QLD over the next 20 years. This document is a good start; however it doesn’t outline in any detail, any **real legacy infrastructure** that the industry was looking for guidance from the government on. It does reference the development of a **Brisbane 2032 Transport and Mobility Strategy** and a **SEQ Waste Management Plan**. Both are critical for 2032 and the future development of the region. These documents should have been developed immediately after the announcement of Brisbane as the 2032 host city. These plans will need to be completed very quickly to help guide meaningful development and delivery of this relevant infrastructure and facilities prior to 2032.

The QMCA firmly believe the Brisbane 2032 Olympic and Paralympic Games should be viewed as an opportunity to invest in and deliver infrastructure for Queenslanders now and into the future. **That economic infrastructure includes roads, rail, freight and logistics, waste, energy security and water security.**

The current slow approach raises the risk of necessary infrastructure either not completed in time or some elements not even commenced. This would not only create challenges during the games but would also leave the community short changed. With an immovable deadline, rushed procurement will place unacceptable risks on safety, quality, financial overruns and the environment. Delivering in a busy city with highly complex stakeholders means the program for infrastructure into 2032 needs to consider and give flexibility for challenges, both known and unforeseen. Critical concerns include the capacity and capability of local suppliers, the impact on the supply chain and meeting environmental and sustainability commitments. It is crucial that Government acknowledges the specific components of this multifaceted endeavour so that the approach to building the required infrastructure fosters resilience, adaptability and success and leaves a legacy with a more diverse and capable local engineering and construction industry.

Our message is clear: we must commence our efforts immediately to ensure the success of the Brisbane Olympic Games.

This paper is designed to outline infrastructure that QMCA believes is necessary to not only support a successful games, but create a sustainable legacy of economic growth for South East QLD for future generations. QMCA has put forward a prioritised list of potential investments and an outline of how to deliver and sequence them, taking learnings and lessons from other Olympic cities. In addition, we have considered the impact on supply chain and the capacity and capability of the local suppliers to achieve a sustainably delivered Olympic Games in Brisbane. The requirement of a net zero Games is no small undertaking and appropriate approaches need to be considered. We have outlined a program management approach as the pathway to success. By adopting this methodology, we can collectively (industry and government) and proactively address challenges, optimises resource allocation, and maintain a comprehensive understanding of the progress made by each contractor involved in the program. This approach not only enhances transparency but also facilitates informed decision-making, thereby increasing the likelihood of a successful, on-time and within-budget delivery of the essential infrastructure for the Brisbane 2032 Olympics.

Every dollar invested in economic infrastructure returns 8-10 times to the economy through jobs and productivity, ultimately leading to a greater gross state product.

Learnings from other Olympic Cities

The Olympic and Paralympic Games have long had the capacity to create unforgettable moments, but alongside the athletes and their achievements are the names of the cities that share Olympic triumph, long after the events have finished. In 2032, Brisbane has the opportunity to shine. The Brisbane 2032 Coordination Office only has nine years to prepare for the Games. Although the International Olympic Committee's (IOC) amendments support the versatility and legacy of Games' venues, the delivery of the necessary buildings and infrastructure remains as intense as ever, under both an immovable delivery date and the scrutiny of the world. It is critical however given the number of government stakeholders and industry as well that an independent coordination authority oversees the delivery and operations, independent of the workings of government. This approach was used successfully in Sydney and many of the other international cities that have hosted the games. Lasting legacies have proven hard to build, as outlined in Appendix 1 and Appendix 2. The case study here outlines learnings from the London Olympics.



London Olympics

In 2007, London was facing a similar challenge to Brisbane as the host of the 2012 Olympic and Paralympic Games. With the world watching, the Olympic Delivery Authority (ODA) appointed the CLM consortium (Jacobs, Laing O'Rourke and Mace) to successfully transform a contaminated brownfield site in East London into the Queen Elizabeth Olympic Park, a world-class venue that set new industry benchmarks safety, quality and sustainability. This approach in London helped achieve time, cost, quality, safety, environmental and community outcomes.

Logistics was fundamental to the success of the construction program for London in 2012. During the project inception stage, it was identified that having each contractor manage their own supply chain logistics could significantly impact the program, cost and quality. Unlike traditional project delivery models, however, under the contracting model for London 2012, the Delivery Partner was responsible for managing logistics program-wide, which provided greater surety for the ODA.

Coordinating a multitude of stakeholders and contractors, 3,000 supply chain members and more than 46,000 people over the project's lifetime required a clear vision and strategic methodology. Failure to meet the ODA's deadline and rigorous construction and infrastructure milestones was not an option. Championing collaboration, the Delivery Partner established clear organisational protocols, governance and reporting to offer a fast-tracked solution that successfully delivered this politically charged venture on time and to budget.

 Reported a **zero accident frequency rate**

 Managed more than **1,200 planning submissions**

 Employed more than **434 apprentices** and **105 graduates**

 **Saved £470m** against the forecast overrun construction cost.

 Developed a bespoke, **ISO 9001-accredited project delivery management system**

Program management approach

Brisbane may face no greater test of teamwork than preparing for the 2032 Olympic Games. The Gabba, all sporting venues, the athletes' village, and broader South East QLD infrastructure including transport and utilities must be ready to enable OCOG to conduct test events to occur from 2031.

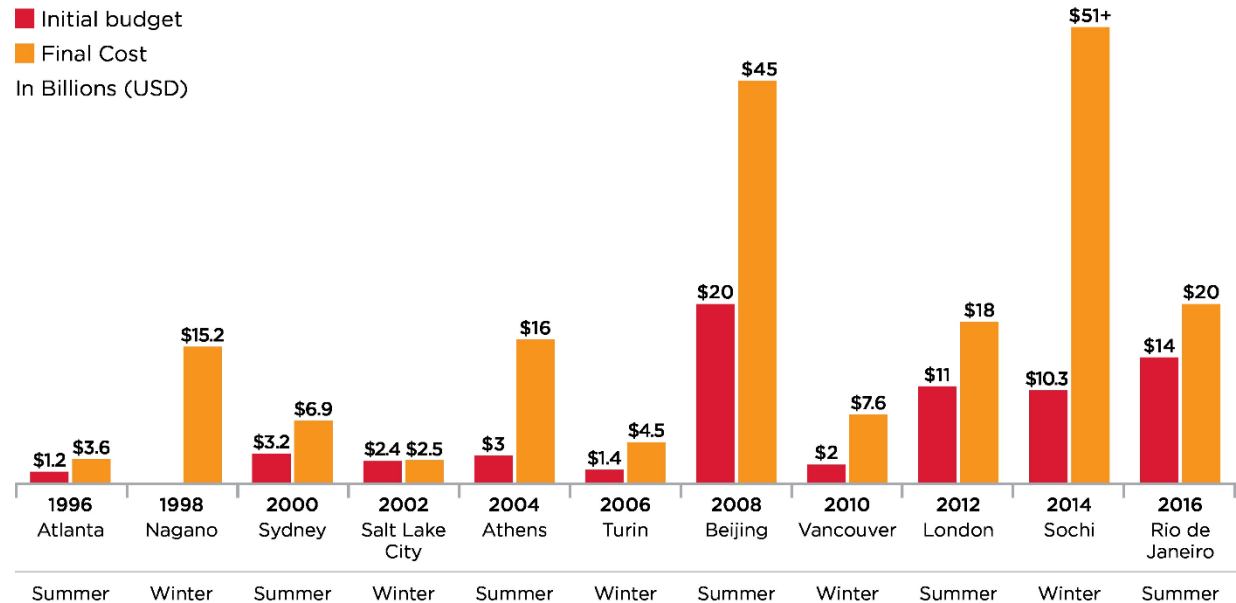
However, Figure 1 illustrates the stark reality of Olympic budget management. Each bar represents the estimated costs for hosting the Games versus the final expenditures incurred by the host cities. Strikingly, the data reveals a consistent trend of cost overruns across every Olympic event, emphasising the challenges inherent in accurately forecasting the financial requirements of hosting The Games.

Program management (including the delivery partner approach), offers a structured methodology to align project objectives with available resources, enabling host cities to navigate the intricate web of Olympic preparations more effectively. Cities that have successfully hosted The Games have shown that these approaches are key to linking all the major elements together in a sequenced and programmed way. This approach considers how facilities and infrastructure will operate during the games, but also after the games are completed; critical to ensuring that the infrastructure and facilities connect, are efficient and can meet the necessary requirements.

The London Games saw the deployment of the Delivery Partner model (for the venues and facilities), where the delivery partners were integrated with the government team to drive a coordinated and integrated approach to the planning, design and delivery of all infrastructure, services and operations. Critical to the success was also the supply chain engagement and capability strengthening strategy that saw training and upskilling of the workforce, not only for construction but also for operations of the facilities during the games.

Estimated vs. Final Olympic Costs

Source: Council on Foreign Regions



Figures are all estimates based on academic and news wire sources.

Sources: Council on Foreign Regions; AP, Robert A. Baade and Victor A. Matherson, Douglas Booth and Colin Tatz, NYT, Xinhua, Andrew Zimbalist

Figure 1: Estimated vs. Final Olympic Costs (inclusive of additional transport infrastructure)

A program management approach, with an independent coordination authority, in QMCA's view, is the way to successfully deliver the required infrastructure. This will provide best-for-program decision-making with full visibility of the program for each contractor. This enables contractors to share resources and help build the capability of the supply chain, training the workforce and creating a lasting legacy. Benefits include:

- **Driving early engagement** with the private sector to prioritise scoping, design development, cost planning, programming and approvals
- **Bringing the client on the journey** early including through the procurement process; driving efficiency and cost certainty
- Augmenting and complementing **industry capability and capacity**
- **Incentivising all parties** including the contractor and supply chain partners to drive key metrics such as cost reduction and in turn project success
- **Attracting experienced contractors** who can manage the works effectively without pricing in the risk.

The London Olympics is often cited as **the** example of a successful Games in terms of budget management. As outlined in Figure 2, the initial budget for the facilities and venues of the London Olympics was set at around £9.3 B, and the final cost was reported to be approximately £8.77 B. This means that the event was **delivered under the construction budget**, which is a rare accomplishment and can be linked back to the program management and delivery partner approaches. This success contributed to the event's enduring economic impact, showcasing that properly executed program management and delivery partner approaches not only deliver a successful international sporting spectacle, but also lay the foundation for a sustained and positive economic legacy. The London Olympics exemplifies the potential for host cities to balance the demands of hosting a major event while fostering economic benefits that extend well beyond the competition itself.

An integrated program manager approach for Brisbane could help ensure all aspects associated with the operation of the assets, including 'legacy' issues, are incorporated into the design and delivery of the infrastructure, and critically that works are prioritised and coordinated, considering labour and supply chain capabilities. The persistent trend of budget overruns serves as a compelling call to action, emphasising the need for a disciplined and strategic approach to managing the multifaceted complexities associated with hosting such a global spectacle. As we look to the future of the Olympic Games, the implementation of robust program management practices stands as a critical safeguard against the fiscal uncertainties that have historically marred the financial legacies of host cities.

London 2012: Olympics and Paralympics £528m under budget

19 July 2013 | Olympics



The cost of the London Olympics and Paralympics was £528m less than expected, according to the government.

The combined budget for the two events was £9.29bn, but the cost has been revised to £8.77bn.

It is an increase in savings of £151m since the last update in October, with a drop in policing and other security, transport and construction expenses.

Source: <https://www.bbc.com/sport/olympics/20041426>

Figure 2: Extract of London 2012 Olympics from the BBC



Mitigation strategies of the program management approach

Drawing on experience from the London 2012 Games and other major infrastructure projects that share similar challenges, Table 1 outlines the anticipated high-level challenges facing the Brisbane 2032 Olympic and Paralympic Games and the benefit of the program management approach in mitigating them.

Table 1: Mitigation strategies

1 Meeting an immovable completion deadline	2 Managing a highly complex stakeholder base	3 Working within the busy Brisbane city	4 Providing cost-effectiveness	5 Creating an enduring legacy for Queensland
<p>APPROACH</p> <ul style="list-style-type: none"> » Early stakeholder engagement to define requirements and interfaces » Early engagement with the market to understand capacity and capability for efficient procurement strategies » Upskill industry for future ways of working (eg data analytics in construction) » Use digital tools for design and risk assessment (build twice, once virtually) » Use an integrated digital project control's platform that provides real-time program and cost updates across the full Brisbane 2032 program. 	<p>APPROACH</p> <ul style="list-style-type: none"> » Engage early to understand the role, responsibility and decision-making authority of each stakeholder (e.g. IOC, Federal, State and local government agencies, international sports organisations/federations, utility authorities and other infrastructure owners) » Use digital tools to virtually demonstrate and agree design solutions and demonstrate construction methodologies and drive best-for-Brisbane 2032 outcomes » Foster an environment of open and honest communication with all stakeholders. 	<p>APPROACH</p> <ul style="list-style-type: none"> » Use digital tools to identify potential interface risks, and test and prove construction and staging solutions (build twice, once virtually) » Utilise preassembled modular components to expedite construction and minimise the impact on the travelling public » Early engagement with stakeholders to develop a construction and staging plan that considers utilities » Engage early with utility asset owners to understand existing infrastructure and interfaces and develop an entire utilities program. 	<p>APPROACH</p> <ul style="list-style-type: none"> » A workforce that is sized to align with the program » Implement program-level employee induction » Maintain common systems and processes across the entire program rather than on a project-by-project basis » Engage early with industry to understand capacity and capability for efficient procurement » Use digital tools for early design agreement » Maximise early works to set the foundations for successful project delivery » Use an integrated digital project controls platform that provides real-time program and cost updates across the full Brisbane 2032 program. 	<p>APPROACH</p> <ul style="list-style-type: none"> » Engage early with local SMEs to understand capacity and capability and develop packaging strategies that champion local industry participation » Work with training organisations to identify training and upskilling opportunities for SMEs » Draw on relationships with Indigenous suppliers and social enterprises » Simplify subcontracts for SME participation » Pass social procurement requirements through supply chain contracts with mandated monthly reporting » Promote STEM programs in schools to increase the representation of female engineers.
<p>BENEFIT</p> <p>An integrated whole-of-Games design and delivery approach that develops and agrees upon solutions early and identifies and manages program risks. Through the digital control's platform, the Brisbane 2032 Coordination Office will retain full transparency of all projects from day one. Project dashboards are generated in real-time that accurately report resourcing status and progress through design, procurement, construction and handover.</p>	<p>BENEFIT</p> <p>Aligned stakeholders who understand and respect each other's requirements and that decisions will be made on a best-for-Brisbane 2032 basis. A culture of openness and honesty that identifies and resolves issues efficiently.</p>	<p>BENEFIT</p> <p>Potential interface issues such as design clashes or pedestrian/traffic flow can be investigated in a virtual model through every project stage to minimise disruption and maximise safety during construction. A streamlined and collaborative approach that minimises interface risk and ensures power, water and sewerage infrastructure has capacity to meet demand. Early and ongoing engagement to keep the public informed during construction.</p>	<p>BENEFIT</p> <p>A collaborative, efficient and value-driven design and delivery process that maintains full transparency at all program levels. The project stays within budget, able to make accurate forecasts through data-centric processes to stay ahead of potential change and provide teams with time to mitigate risks.</p>	<p>BENEFIT</p> <p>Brisbane 2032's long lead time and multiple infrastructure projects will support structured apprenticeship and traineeship outcomes. This will underpin an economically strong Queensland and the legacy of a skilled, sustainable, diverse workforce, and healthy, vibrant communities.</p>

Proposed Infrastructure

QMCA believe that legacy infrastructure for the games can and should focus on helping achieve the desired outcomes within the **Elevate Plan**, including the following under the heading of “**Increased Local and Regional Connectivity**”:

- Increased use of public and active transport in SEQ before, during and after the games
- Proportion of population with good accessibility to a range of services by walking and cycling
- Accelerated upgrades to transport infrastructure in SEQ which supports the region’s growing population and a good Games experience for all
- Improved proportion of residents with access to employment by public and active transport.

As such, infrastructure that supports this desire (outlined in Figure 3) has been incorporated into the development of the needed infrastructure for The Games and the creation of a legacy infrastructure that supports economic and population growth over the longer term. This includes:

- Road projects that enable and support efficient freight movement
- Public transport infrastructure that enables high-frequency, high-capacity services to provide greater connectivity across the region
- Active transport links, including key links that fill gaps in the active transport network and enable greater use of active transport for daily transport
- Other infrastructure that supports environmental objectives including waste management and recycling.

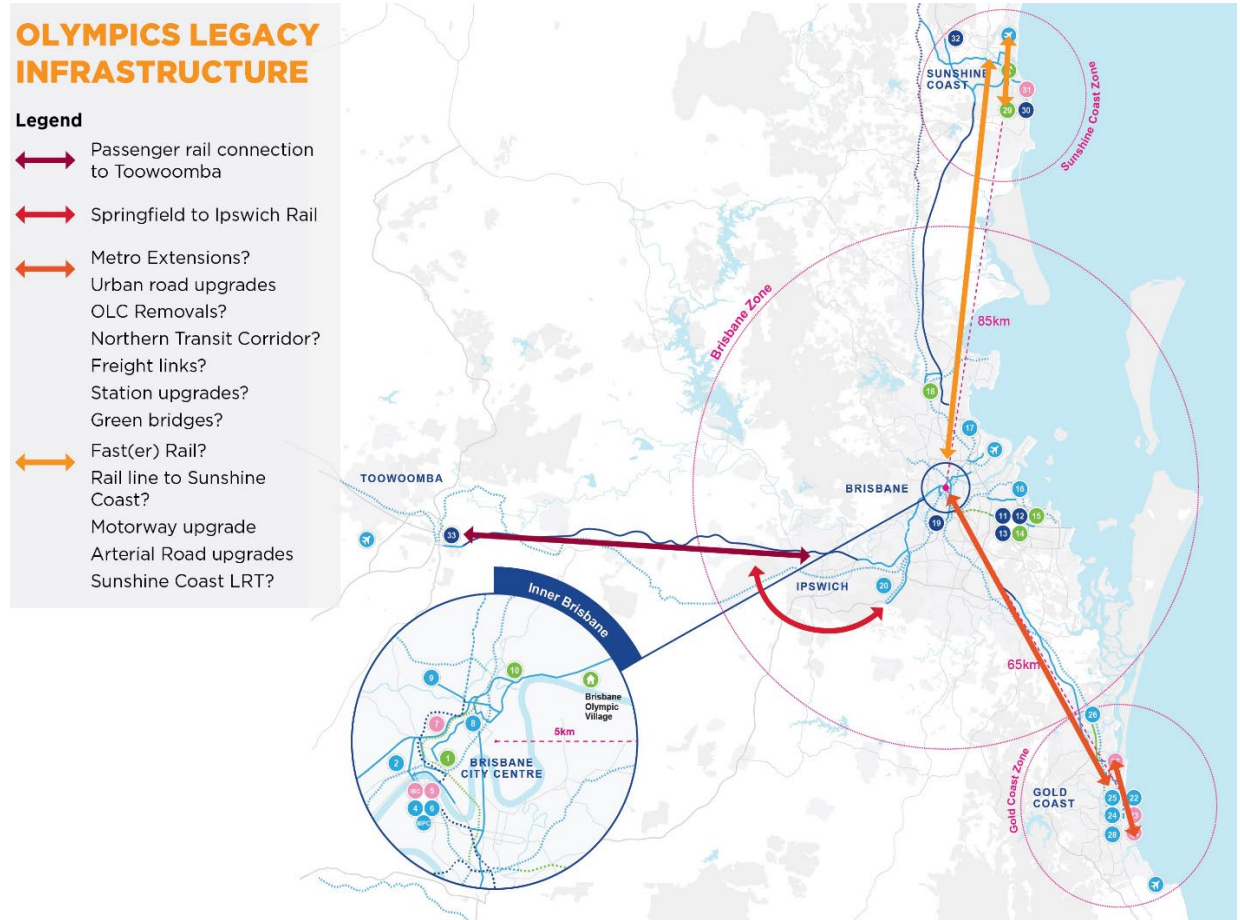


Figure 3: Priority infrastructure for increased local and regional connectivity from road to rail to active transport and waste and energy.

This resulted in a combined list of **61 priority infrastructure** projects; developed to cover a range of infrastructure from road to rail to active transport and waste and energy.

Prioritising proposed infrastructure

The SEQ People Mass Movement Study was undertaken by the SEQ Council of Mayors in 2019. This report identified the concept of the 45-minute region with major centres linked through higher speed mass transit solutions as well as dense transport options within the greater Brisbane City ring, as illustrated in Figure 4.

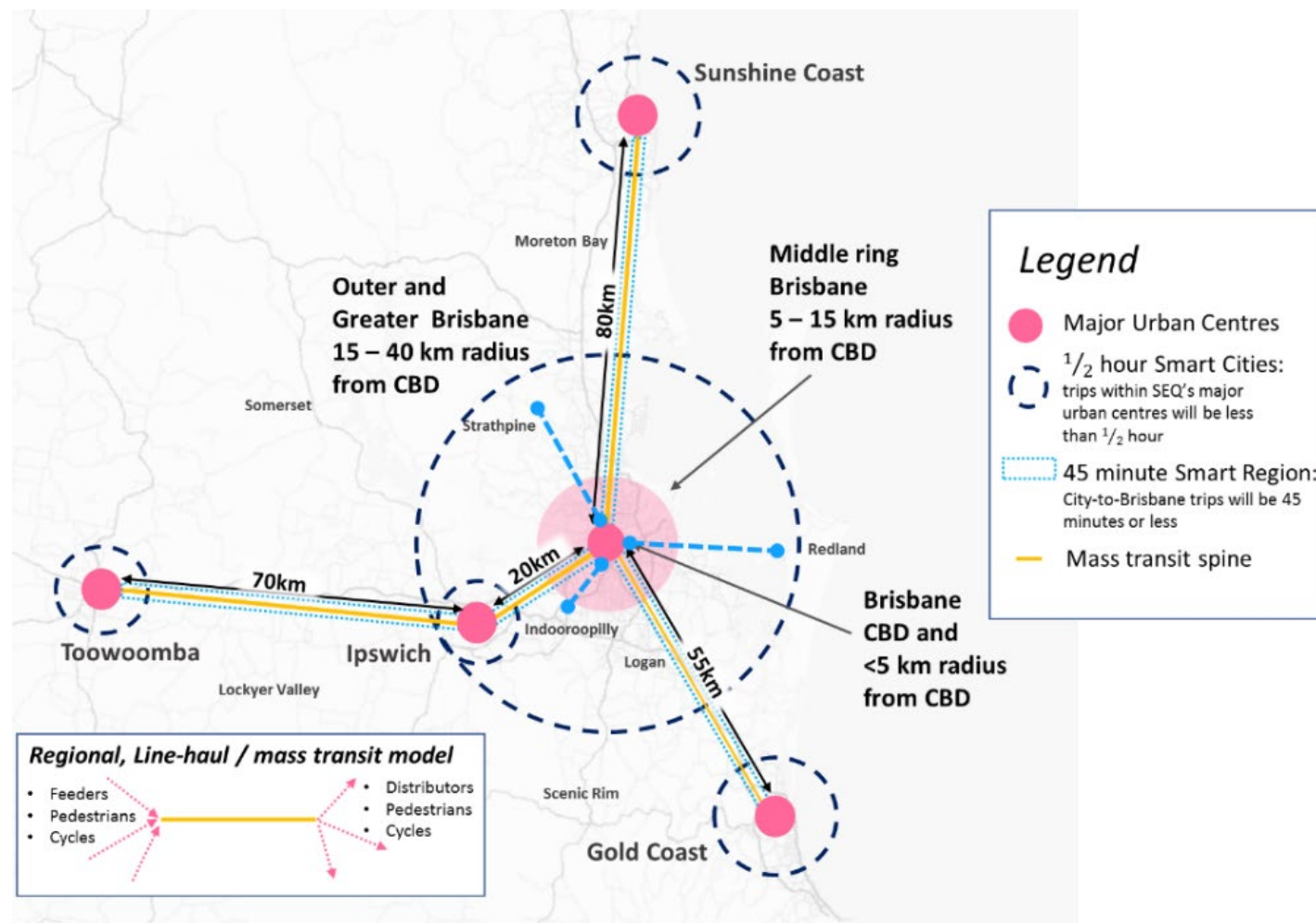


Figure 4: Key infrastructure priorities outlines in the People Mass Movement Study 2019

Using this document plus input from QMCA members about what infrastructure maybe needed not only for The Games but creating a long-term economic legacy.

We developed 5 criteria to assess potential projects. These include:

1. Sustainable transport
2. Fills a known existing gap
3. Perceived public acceptance
4. Legacy benefit
5. Games time contribution

Capacity resilience was also considered in the evaluation.

We applied weighting to each criteria using the pairwise assessment method with Games time contribution the highest-ranking criteria and perceived public acceptance the lowest. Following this, the individual projects were scored against the weighted criteria (a score of 1 being the lowest and a score of five the highest). A sum of the weighted individual criteria scores was given to each project for overall ranking. The resulting 20 projects represent those that are most needed for South East QLD to meet the growing needs of the region whilst allowing us to host a world-class global event, providing international and domestic tourists as well as local residents a once-in-a-lifetime experience.

The below graphic outlines the results of this methodology and our proposed infrastructure priorities.

Proposed infrastructure



Score Value	Sustainability	Fills a known gap	Perceived public acceptance	Legacy benefit	Games time contribution
5	<ul style="list-style-type: none"> 20 (Sustainability) 11 (Sustainability) 16 (Sustainability) 4 (Sustainability) 19 (Sustainability) 7 (Sustainability) 15 (Sustainability) 2 (Sustainability) 17 (Sustainability) 8 (Sustainability) 6 (Sustainability) 14 (Sustainability) 1 (Sustainability) 10 (Sustainability) 3 (Sustainability) 5 (Sustainability) 13 (Sustainability) 	<ul style="list-style-type: none"> 4 (Fills a known gap) 2 (Fills a known gap) 8 (Fills a known gap) 12 (Fills a known gap) 6 (Fills a known gap) 20 (Fills a known gap) 1 (Fills a known gap) 3 (Fills a known gap) 9 (Fills a known gap) 5 (Fills a known gap) 14 (Fills a known gap) 		<ul style="list-style-type: none"> 12 (Legacy benefit) 20 (Legacy benefit) 4 (Legacy benefit) 9 (Legacy benefit) 7 (Legacy benefit) 15 (Legacy benefit) 2 (Legacy benefit) 8 (Legacy benefit) 6 (Legacy benefit) 14 (Legacy benefit) 1 (Legacy benefit) 3 (Legacy benefit) 5 (Legacy benefit) 13 (Legacy benefit) 	<ul style="list-style-type: none"> 10 (Games time contribution) 18 (Games time contribution) 4 (Games time contribution) 12 (Games time contribution) 11 (Games time contribution) 20 (Games time contribution) 2 (Games time contribution) 9 (Games time contribution) 7 (Games time contribution) 15 (Games time contribution) 1 (Games time contribution) 3 (Games time contribution) 5 (Games time contribution) 14 (Games time contribution)
4		<ul style="list-style-type: none"> 19 (Fills a known gap) 17 (Fills a known gap) 18 (Fills a known gap) 13 (Fills a known gap) 16 (Fills a known gap) 7 (Fills a known gap) 15 (Fills a known gap) 	<ul style="list-style-type: none"> 12 (Perceived public acceptance) 	<ul style="list-style-type: none"> 16 (Legacy benefit) 10 (Legacy benefit) 18 (Legacy benefit) 11 (Legacy benefit) 	<ul style="list-style-type: none"> 16 (Games time contribution) 13 (Games time contribution) 17 (Games time contribution) 8 (Games time contribution) 6 (Games time contribution)
3	<ul style="list-style-type: none"> 18 (Sustainability) 9 (Sustainability) 	<ul style="list-style-type: none"> 10 (Fills a known gap) 11 (Fills a known gap) 	<ul style="list-style-type: none"> 18 (Perceived public acceptance) 11 (Perceived public acceptance) 10 (Perceived public acceptance) 9 (Perceived public acceptance) 6 (Perceived public acceptance) 	<ul style="list-style-type: none"> 17 (Legacy benefit) 	
2	<ul style="list-style-type: none"> 12 (Sustainability) 		<ul style="list-style-type: none"> 4 (Perceived public acceptance) 2 (Perceived public acceptance) 19 (Perceived public acceptance) 8 (Perceived public acceptance) 7 (Perceived public acceptance) 16 (Perceived public acceptance) 1 (Perceived public acceptance) 17 (Perceived public acceptance) 3 (Perceived public acceptance) 5 (Perceived public acceptance) 15 (Perceived public acceptance) 14 (Perceived public acceptance) 20 (Perceived public acceptance) 	<ul style="list-style-type: none"> 19 (Legacy benefit) 	<ul style="list-style-type: none"> 19 (Games time contribution)
1			<ul style="list-style-type: none"> 13 (Perceived public acceptance) 		

- 1 Sunshine Coast Mass Transit Project - Stage 2
- 2 South Bank Transport Project (pedestrian infrastructure and busway station project)
- 4 Sunshine Coast Mass Transit Project - Stage 1
- 10 Gabba to City Pedestrian spine
- 17 Potential Green bridge connection between New Farm and East Brisbane

- 19 Brisbane River Crossing and Green Bridges Project
- 3 Eastern Transit Way
- 8 Mass Transit Corridor Extensions
- 9 Bruce Highway Upgrade Projects
- 12 North Brisbane tunnel
- 18 Pacific Motorway Upgrade Projects

- 5 Beerwah to Kawana. Caboolture to Maroochydore Corridor (CAMCOS) Urban Passenger Rail
- 6 New Rail Stabling Facilities
- 7 Gold Coast Light Rail (Stages 3 & 4)
- 11 Metro extension to Airport (via Albion)
- 13 Gold Coast Light Rail Extension (Miami to Robina)

- 14 North Coast Rail Line Duplication (Beerburum to Nambour Project) (B2N)
- 15 Gold Coast Urban Rail Line Extension Project
- 16 Kawana-Maroochydore. Caboolture to Maroochydore Corridor (CAMCOS) Urban Passenger Rail 2
- 20 Faster Rail (Brisbane to the Sunshine Coast)

Timing and delivery approaches

Given the unique and pressing circumstances surrounding this event, there are strategic considerations that will drive successful and timely completion of critical infrastructure projects. The factors outlined below have formed the logic behind the timeline on the following page. The proposed timeframe is broken into four time periods, three prior to the Olympics and one post event, focussing on delivering infrastructure that enhances and builds off The Games specific infrastructure.

Staging for Early Completion

One of the central tenets of our recommended approach is to stage infrastructure projects for completion at least 12 months ahead of the opening of the Brisbane Olympic Games. This ambitious timeline provides room for unexpected delays and ensures that all facilities are fully operational, tested, and refined well in advance of the event. This early completion will serve as a safeguard against last-minute setbacks and will bolster the overall success of The Games.

Inclusivity and Industry Opportunities

To achieve the unmoveable deadline, it is crucial to engage the entire industry. We envision a collaborative approach that not only includes major contractors and suppliers but also welcomes contributions from smaller players and local businesses. By providing opportunities for the whole industry, we can tap into a wider pool of expertise, resources, and innovation.

Skilled Workforce

The infrastructure sector must take immediate action to ensure an adequate number of skilled personnel are available, not just within their own organisations but also among contractors, suppliers, and clients. This necessitates a collective effort to address potential skill shortages through training and recruitment initiatives.

Spreading the Peak

To manage the workload effectively and avoid bottlenecks in construction, we propose spreading the peak activity across the project timeline in three distinct periods of time. This approach will mitigate the risk of resource shortages and ensure a more even distribution of labour and materials throughout the duration of the projects. Spreading the peak will also allow for a smoother and more predictable construction process.

Program-based Approaches

To manage the complexity and interdependencies of multiple infrastructure projects, a program-based approach is essential. This approach will provide a holistic view of all projects, enabling better coordination, resource allocation, and risk management across the entire portfolio.

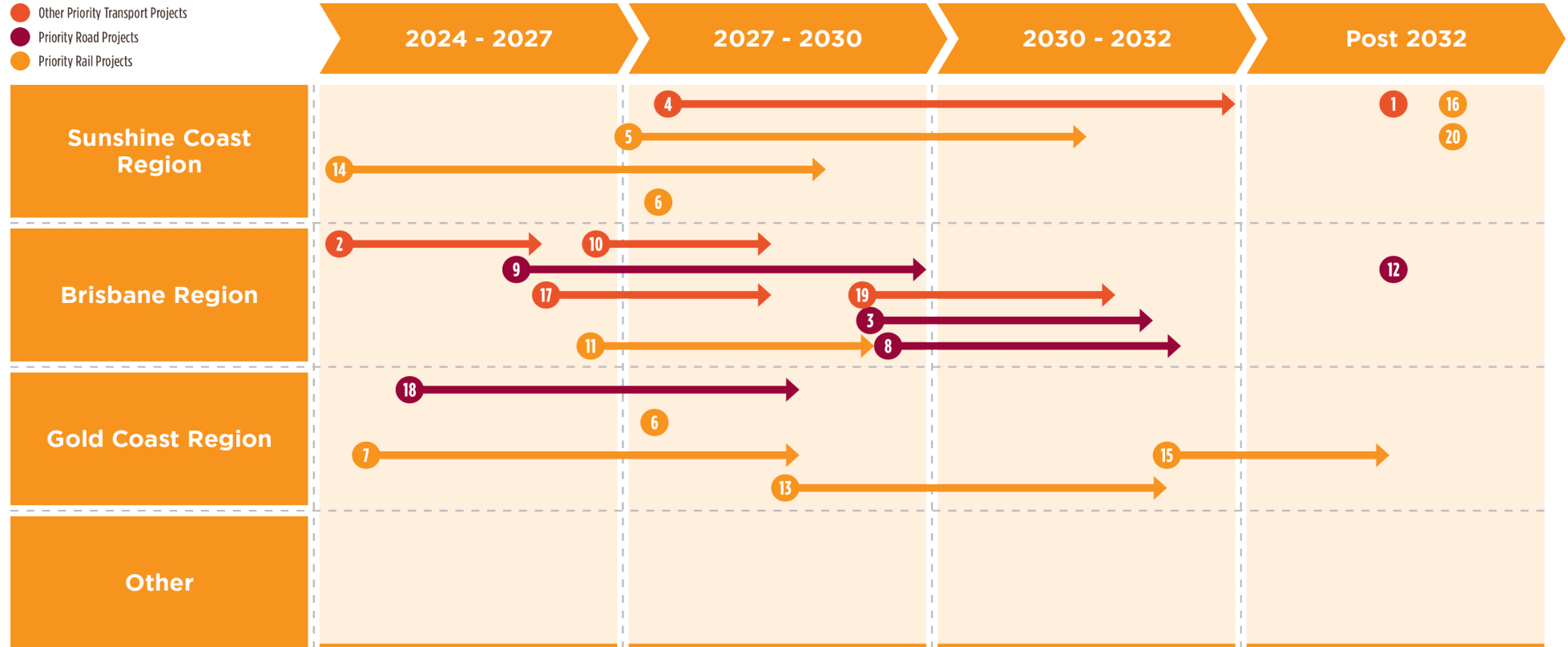
Non-Standard Procurement Approaches

Given the time constraints and unique nature of the projects, traditional procurement approaches may not suffice. We must be open to innovative and non-standard procurement methods that expedite decision-making, reduce bureaucracy, and facilitate faster project initiation.

The delivery of key infrastructure for the Brisbane Olympic Games is a formidable undertaking. To meet the ambitious timeline, we must act swiftly, adopt non-standard procurement approaches, and embrace program-based methodologies. **The message is clear: we must commence our efforts immediately to ensure the success of the Brisbane Olympic Games and deliver long-lasting economic and community outcomes for the region.**

Infrastructure timeline

- Other Priority Transport Projects
- Priority Road Projects
- Priority Rail Projects



- | | | | |
|---|---|--|---|
| <ul style="list-style-type: none"> 1 Sunshine Coast Mass Transit Project - Stage 2 2 South Bank Transport Project (pedestrian infrastructure and busway station project) 4 Sunshine Coast Mass Transit Project - Stage 1 10 Gabba to City Pedestrian spine 17 Potential Green bridge connection between New Farm and East Brisbane | <ul style="list-style-type: none"> 19 Brisbane River Crossing and Green Bridges Project 3 Eastern Transit Way 8 Mass Transit Corridor Extensions 9 Bruce Highway Upgrade Projects 12 North Brisbane tunnel 18 Pacific Motorway Upgrade Projects | <ul style="list-style-type: none"> 5 Beerwah to Kawana. Caboolture to Maroochydore Corridor (CAMCOS) Urban Passenger Rail 6 New Rail Stabling Facilities 7 Gold Coast Light Rail (Stages 3 & 4) 11 Metro extension to Airport (via Albion) 13 Gold Coast Light Rail Extension (Miami to Robina) | <ul style="list-style-type: none"> 14 North Coast Rail Line Duplication (Beerburrum to Nambour Project) (BZN) 15 Gold Coast Urban Rail Line Extension Project 16 Kawana-Maroochydore. Caboolture to Maroochydore Corridor (CAMCOS) Urban Passenger Rail 2 20 Faster Rail (Brisbane to the Sunshine Coast) |
|---|---|--|---|

Other Opportunities

The Games, like any major international event, can serve as a catalyst for infrastructure development beyond just transportation infrastructure and the energy transition infrastructure underway regionally in QLD. These opportunities include the related infrastructure and outcomes outlined in Table 2.

Table 2: Other opportunities

Opportunity	
Energy options	Collate and collect waste from venues to a central location (potentially using vacuum waste systems), where recycling can be undertaken and a waste to energy facility be built that helps provide base load energy for the venues.
Water security and recycling	Water security for the region is an ongoing issue. However, the implementation of small to mid-scale wastewater interception and treatment facilities to water major venues and sporting facilities around the region, offers long term legacy outcomes.
Digital telecommunications	A digital infrastructure backbone for the region that is used for the games, will then be legacy infrastructure for the region that could help spur additional long term investment off the back of this digital infrastructure (IoT, etc).
Social infrastructure	Social infrastructure including housing (and higher density) around key nodes to support the growing housing challenge.
Sustainability	Investment in sustainable building practices and the supply chain to meet the demand and need for “net zero construction”.
Local capability	Capability and capacity growth and upskilling of local industry, including training colleges for the workforce.
Private sector investment	<p>The public sector should not be viewed as the only financier and provider of infrastructure and services for The Games. There are many areas where the private sector is willing to and can provide significant benefits in funding and delivering. These include:</p> <ul style="list-style-type: none"> • Water and wastewater facilities and operations • Energy and waste facilities and operations • Integrated development with key venues and facilities • Digital and telecommunication infrastructure. <p>Thinking about infrastructure opportunities beyond transportation allows host cities to leverage the Olympics as a catalyst for holistic development. It enables the creation of a legacy that extends beyond the event itself and contributes to the long-term well-being and prosperity of the community.</p>

Supply Chain

A look back over the last ten years has seen local supply chains construct and operationalise coal seam gas, wind power, solar power, transmission lines and increasingly both hydrogen and hydroelectric power. These industries require the learning of new skills and the development of new capability, and time and again, the local supply chain has demonstrated the ability to learn and adopt new approaches.

The supply chain opportunity for the Olympics, however, has relatively low barriers of entry given local familiarity with the type of construction. We've built stadiums before; we've built roads and rail before and we're very familiar with the construction of enabling infrastructure.

However, the Government must approach capability and capacity building for the Olympics as it would with local supply chains entering new industries.

Whilst the infrastructure is familiar, there are many new approaches, technologies and processes that could and should be developed as part of an Olympic construction program. This will not only deliver The Games, but also an economic legacy of construction innovation, productivity and collaboration both with the Government and within the construction supply chain itself.

To ensure the supply chain capability and capacity is developed enough to deliver the program, there is a need for focused development. This is not just in construction skills, but on how the construction industry can both participate and collaborate in a shared delivery model for The Games and adopt global best practices in construction.

In the process of building capability in new industries, the Government employs a **supply chain capability-building program**. The industry has shown it can learn new industries and skills when provided with a clear and thoughtful development pathway. We see this exact program as an opportunity to build on our industry's existing capability, knowledge and experience to develop more advanced and productive capabilities in our industry. **It's what the program needs, and the world will expect. The Olympic program isn't a new industry per se, nor does it require many new skills, but it is a catalyst to learn new ways to perform familiar skills and continuously improve.** In that sense, it is an opportunity lost if there isn't a dedicated supply chain capability-building program for The Games. With the window for that development opportunity nearing rapidly, suppliers and, in turn, all Queenslanders would benefit from an increased focus.

Collaboration, capability building and capacity making should be an Olympic legacy that starts today.

Resources

The 2023 QLD Major Projects and Pipeline Report (QMPPR) has highlighted the fact that over the next 5 years the demand for labour to deliver the major project infrastructure could rise to close to 50,000 people. Currently, there are approximately 20,000 - 25,000 people directly employed in the major project delivery in the state. The Olympic infrastructure (stadiums and facilities) will require an **additional 4,000 - 5,000 employees on top of the requirements for the current increase in project delivery.**

This competition for resources will be one of the **greatest challenges to delivery** of the necessary infrastructure and facilities for The Games. With competition from the health building program, water infrastructure, energy transition, the resources sector development (critical and base minerals) and the general build program; resources will be tight. In addition, both NSW and Victoria continue with their comprehensive infrastructure programs, which have drawn upon QLD resources since 2015.

To ensure that the right resources can be secured for the required program of works, it is imperative that we engage the engineering and construction market as early as possible through **collaborative procurement and delivery approaches**. This will bring the construction industry together with clients to practically plan, deliver value for money and find constructible solutions. Through a program approach, we can bring in experience from other jurisdictions, plan out the best use of resources, build capability for the work type and schedule the resource requirement so it is balanced. **Without a collaborative program-based approach to procurement and delivery, it is unlikely QLD will be able to deliver the amount of investment required in the time left to The Games.**

Sustainability and ESG

The QLD Government have declared that they will deliver a [sustainable](#) Olympic and Paralympic Games, in line with the IOC's 2020 [announcement](#) that the Olympic Games will be climate positive from 2030. Expectations have clearly been set for the 2032 procurement strategy ([Q2032 Procurement Strategy](#)). This strategy states "To supply to Brisbane 2032, your business must take action now to become more sustainable, and in so doing increase your profitability, capitalise on future opportunities, and become more resilient."

Organisers are working on a carbon budget for The Games to meet both the IOC requirements and the Australian Government's commitment to use renewable energy as the majority energy source for the delivery of The Games. Under the commitment, The Games must minimise and compensate for their direct and indirect carbon emissions and deliver long-term zero-carbon solutions for future Games. This will involve reducing carbon use wherever possible and offsetting the residual emissions.

The IOC agreement also outlines that The Games must deliver long-term zero-carbon solutions for future Games. The Australian and QLD Government requirements include net-zero emissions by 2050, 30% lower emissions in 2030 compared to 2005, and 70% renewable energy generation. It is expected companies that seek to supply to The Games will need to meet formal accreditations such as ISO14000 and ISO14001. Furthermore, the State Government is also focused on hosting a zero-waste event with lasting climate benefits to QLD.

This represents an enormous challenge and a unique opportunity for the QLD construction industry. A discussion paper prepared by the QLD Government titled 'Reducing government infrastructure emissions roadmap' provides strategic intent and direction for the infrastructure industry to contribute to net zero by 2050. However, the Olympics are in 2032, and as per the commitments listed above, there is a requirement to move from good intent to practical action quickly. Four examples of how the industry can sustainably deliver infrastructure are listed below.

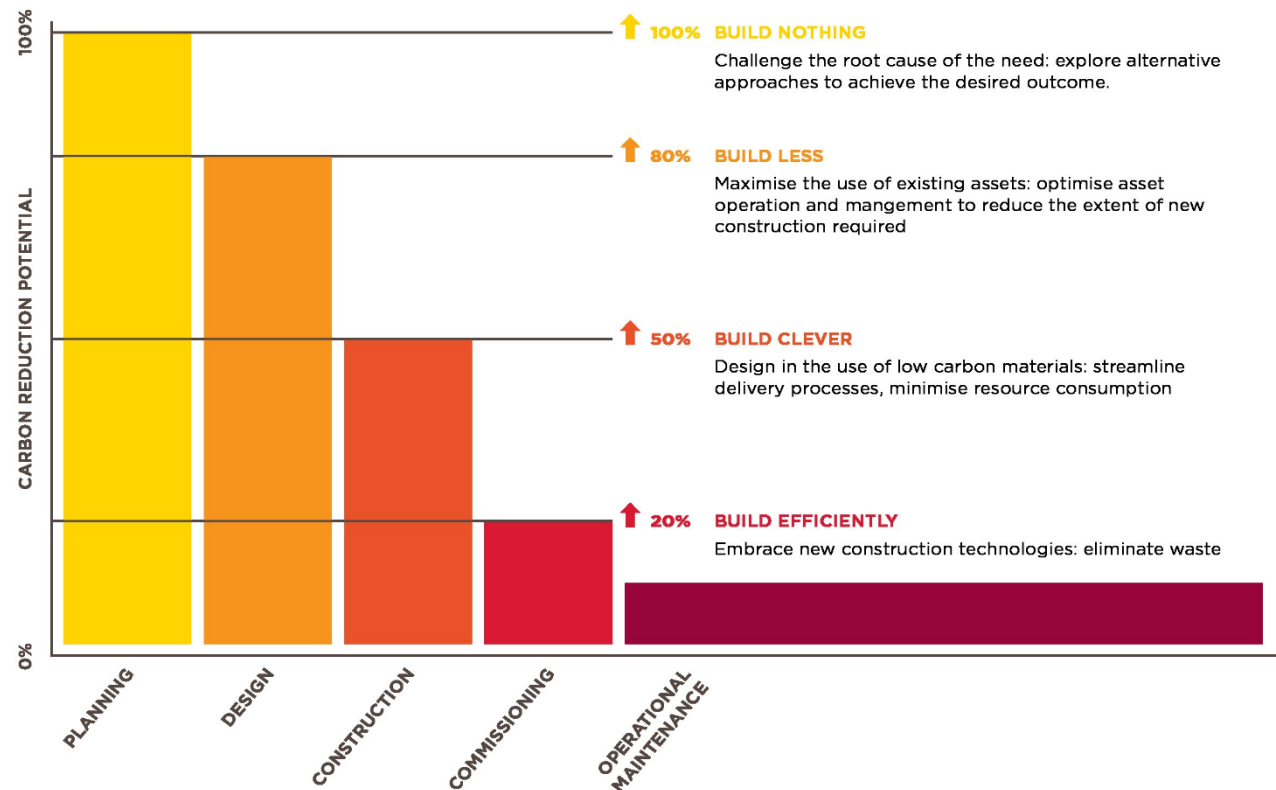


Figure 5: Carbon reduction potential of strategic infrastructure choices (Source: Green Construction Board)

1. Build Capability

The discussion refers to the potential carbon reduction from strategic infrastructure choices prepared by the Green Construction Board (Figure 5). Experienced practitioners in the industry will naturally build as they know and as they have learned. Engineers and architects should undertake professional development at educational institutions that have embedded sustainability in their curriculums. Government employees also need to be educated on new practices around low carbon impact. It is easy to say that we need to build less, build clever and build with other materials, but **changing mindsets and lifting capability requires a genuine transformation of the industry**; and that starts with education.

2. Pre-construction carbon impact assessments

We can't change what we can't measure. By measuring the pre-construction carbon impact over the infrastructure lifecycle, we can make changes early in the design phase. Investing in an exhaustive understanding of the carbon footprint resulting from the project to assess and validate working hypotheses, enables early decision-making that will deliver the required sustainability results. Having a deep understanding of the carbon energy impact from a holistic point of view enables outside-the-box thinking.

3. Reduce construction risks

On top of environmental impact, building less and building clever means less risk for our people. We all know that meeting an immovable completion deadline, managing a highly complex stakeholder base, and working within the city environment whilst being cost-effective are all potential risk factors that could lead to injuries to workers. Delivering the infrastructure injury-free will create an enduring legacy for the industry in QLD.

4. Innovative thinking

Construction of infrastructure for the 2032 Games is a unique opportunity to think differently, at scale, including:

- Taking a holistic approach to the infrastructure of South East QLD. We need to view the infrastructure as an ecosystem under the industrial ecology principle - the waste of a company could be the resource of another one (waste to energy facilities, etc)). The principle of a **circular economy** for construction materials and inputs needs to be considered. The use of “green steel and concrete” and other materials from the supply chain has a strong role to play
- Collaborate with [Paris 2024](#) and [LA28](#) to share low carbon best practices
- The use of battery electric and hydrogen-fuelled plant and equipment for construction
- The adoption of “modern methods of construction” such as modularisation and prefabrication will be critical as energy-saving and alternative methods that can be deployed in the building process. This approach is also more efficient and less energy-consuming than traditional building approaches.

Conclusion

In embracing the challenge and promise of the Brisbane 2032 Olympic and Paralympic Games, we embark on a transformative journey toward not just a global event but a sustainable economic legacy for QLD. Our emphasis on economic infrastructure — from roads and rail to logistics, waste, energy security, and water security — is pivotal for the enduring prosperity of our state.

However, with the ticking clock and conventional approaches proving inadequate, immediate attention is demanded. We advocate for a program management approach, drawing inspiration from successful models such as London 2012, and prioritising infrastructure projects based on criteria ensuring sustainability, public acceptance, and lasting benefits.

The competition for resources is fierce, necessitating collaborative industry engagement. Early involvement of the engineering and construction market through collaborative procurement and the program management and potentially including delivery partner approaches is crucial for securing resources to meet our ambitious program of works; as is attracting, training and creating a workforce and supply chain for the delivery of The Games, but also the future.

Aligning with global efforts to combat climate change, our commitment to a sustainable Games is clear. Meeting the IOC's 2020 announcement for climate positivity from 2030 and the Australian Government's net-zero emissions targets necessitate innovative and sustainable construction practices, offering a unique opportunity for the QLD construction industry to lead in sustainable infrastructure development.

To achieve these goals, we propose building industry capability through education, conducting pre-construction carbon impact assessments to understand where investment needs to be made now to ensure that we can meet the goal of “net zero construction”, reducing construction risks, and fostering innovative thinking. Our aim is not merely to meet the immediate needs of The Games but to leave an enduring legacy in the industry, emphasising sustainability.

Now is the time for action; by adopting a program management approach, collaborating across the industry, and embracing sustainable practices, we can ensure not only the success of the Brisbane Games but also craft a legacy of economic growth, environmental responsibility, and innovation for generations to come.

We welcome the opportunity to engage in further discussions. Together, we can ensure that the Brisbane 2032 Games is not only a success but is the catalyst to the economic legacy of our State.

The true measure of a successful Games is the infrastructure legacy left behind.



Key contributors





Appendix 1 - Examples of poor outcomes at previous Summer Games host cities

Athens 2004

Whitewater

Beijing 2008

BMX Venue

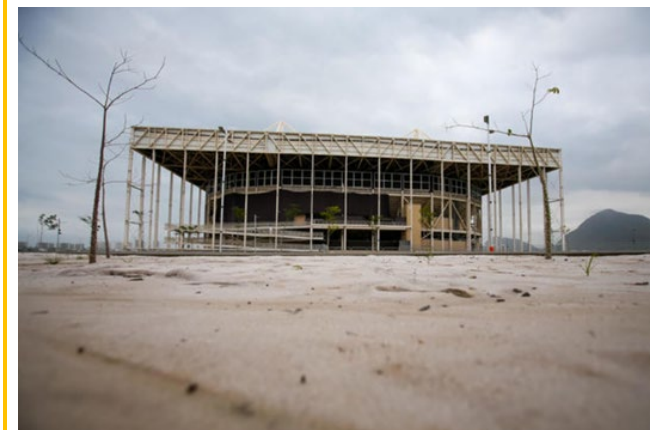
Rio de Janeiro 2016

Aquatic Venue

During
the
Olympics



After the
Olympics





Appendix 2 - Examples of good outcomes at previous Summer Games host cities

Sydney 2000

Olympic Park

London 2012

Olympic Park

During
the
Olympics



After the
Olympics

