

## **Elevate 2042: Creating sustainable benefits from the Brisbane 2032 Olympic and Paralympic Games**

### **Master Builders contribution to Brisbane 2032 Olympic and Paralympic Games Legacy Consultation Paper**

#### **Queensland Future Builders Centre: A step-change in improving building sector productivity**

The Brisbane 2032 Olympic and Paralympic Games is a once-in-a-generation opportunity to create a lasting legacy for our community and for our industry.

The construction industry is critical to ensuring a positive and lasting legacy, both in directly providing the facilities and infrastructure needed to deliver the Games, and in building the skills and know-how that will carry beyond 2023.

We have a unique opportunity to use the Games as a catalyst to transform how we deliver the homes and buildings Queenslanders need.

Government has committed over \$5 billion for the construction and upgrading of Olympic venues. Combined with programs for the construction of social and affordable housing, health capital works and renewables projects, there is an enormous pipeline of construction work in the lead-up to the Games. Successful delivery of this infrastructure presents an opportunity to create a step-change in construction towards greater productivity, efficiency, affordability and sustainability.

Skilled labour shortages, Queensland's acute housing shortage, unpredictable climate extremes and net-zero targets also demand improved productivity and more efficient ways of constructing.

Meeting these challenges will require improved ways of doing things. Modern Methods of Construction (MMC) is one pathway. MMC encompasses a systems-thinking approach and digitalisation, along with greater use of prefabricated buildings and components manufactured offsite.

The Queensland Government has already taken the step of establishing a Rapid Accommodation and Apprentice Centre in Brisbane with another to be established in Cairns. Further expansion of training and innovation opportunities, and complementing the work of Building 4.0 CRC, to achieve a greater adoption of MMC will address housing, skills and environmental challenges. This vision includes a focus on locally-manufactured building

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components combined with new skills for those working in manufacturing facilities and assembly.

Master Builders' legacy proposal is for the establishment of a 'Queensland Future Builders Centre' to promote the adoption of MMC. As a Legacy Centre it will support and assist the building industry to transition to the future of construction.

The Centre would be a place or places (both physical and virtual), where building sector businesses and workers can learn and share innovations and develop content for future skills to enable builders and trade contractors to adopt new methods of delivering projects to improve productivity and sustainable building practices.

In combination with this, we ask the Queensland and Australian Governments to support local manufacturing of building components to assist in the effective transition to MMC.

This proposal aligns with the aims of the Queensland Government's infrastructure productivity roadmap and the industry-led 'Smart Building Roadmap' (led by PrefabAUS) which are both currently being developed.

A response to the Consultation Paper has been submitted via the online survey portal in alignment with this submission.

### **Addressing the themes of Legacy**

This proposal addresses each of the four legacy themes set out in the Consultation Paper.

#### Economy, Jobs and Innovation

Productivity in the construction industry lags behind other industries, and overall, productivity in the construction industry was 1.8 per cent lower in FY 2021 than FY 1990<sup>1</sup>. BIS Oxford Economics estimates the opportunity cost in FY 2021 from poor construction industry productivity is almost \$9 billion for Queensland alone<sup>2</sup>.

Productivity advancements can be made through various improvements in the procurement and contracting process. For example, by adopting collaborative and streamlined processes, and improving our industry's culture.

We believe a real opportunity for productivity improvement in our industry lies in adoption of Modern Methods of Construction (MMC).

To really shift the dial on construction productivity, improvements must be made in the residential building sector. Residential construction represents the majority of businesses, jobs and output value in the industry<sup>3</sup>.

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<sup>1</sup> Disrupt or Die: Transforming Australia's construction industry, Australian Constructors Association, 2022

<sup>2</sup> As above

<sup>3</sup> [www.mbgld.com.au](http://www.mbgld.com.au) (statistics based on ABS data)

A shift to MMC starts with adopting a systems approach to design and construction, lean principles and digital technologies to reduce construction time and cost. Adding offsite prefabrication of building components brings the manufacturing and construction industries together.

Innovation in the system of building, through adoption of MMC, will achieve productivity gains, which in turn will lead to faster and more affordable delivery of housing in our State. There is also potential for reduced waste, shorter construction times, new and improved products, and better profitability for the construction industry. It will also help address housing shortfalls, climate resilience and adaptation, carbon reduction and greater energy efficiency.

Uptake of MMC must be explored in various ways, including offsite volumetric construction as well as incorporation of prefabricated building components, which can be a full design for manufacturing and assembly 'kit-of-parts' approach. There is already some uptake of MMC in both residential and commercial construction, and a greater uptake would lead to more Queensland-based manufacturing hubs for prefabricated building components. To establish a greater manufacturing capability, a reliable pipeline of demand in the initial years is necessary.

A transition to this approach across a broader segment of industry would, in our view, initially require a focus on the adoption of some components to improve construction efficiency while retaining on-site construction methods for other building elements. There will still be a need for more traditional methods of construction and these must continue to be supported.

To achieve the needed productivity gains in residential construction, we call on the Queensland government to implement, as an Olympics & Paralympics Legacy project:

- A 'Queensland Future Builders Centre', to put ideas into practice. The intent is to build upon existing efforts and promote innovation in the construction sector with a focus on supporting residential builders and trade contractors. This centre is envisaged to be both physical and virtual, and an opportunity for innovation and collaboration, policy improvements and future skills development.
- Government support for increased local manufacturing of prefabricated building components such as wall, floor and roof systems.
- Government policy supporting adoption of productivity improvements in residential construction, including future skills and support for building industry businesses.

### Sport, Health and Social Inclusion

To achieve the level of inclusive, affordable housing needed in Queensland, we must find ways to deliver housing more rapidly. Adoption of MMC is required, in a sustainable manner that enables existing building businesses to thrive. The Queensland Future Builders Centre is

envisaged to assist the building industry transition to a greater adoption of prefabricated building components, and faster delivery of housing.

#### A Better Future for our Environment

The reuse of buildings and/or components will provide sustainable venues and legacies in the journey towards net zero and a circular economy. Prefabricated offsite construction can also lead to more efficient, faster construction and less waste of building materials, energy and water. Reusable components will contribute to a circular economy. Local manufacturing results in less transport emissions.

#### Connecting Regionally and Globally

The integration of prefabricated building components with digital systems (such as BIM and digital twins) will enable collation of data in a usable way to inform planning, operations and maintenance as well as reuse of components. The 'Queensland Future Builders Centre' would complement Building 4.0 CRC. It will require Queensland reaching out to understand, adopt and build upon global best practice.

We look forward to working with the Queensland Government towards a better future for our industry and the built environment which we all share.

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