

## BIM in Australia



The **Australasian BIM<sup>1</sup> Advisory Board (ABAB)<sup>2</sup>** was established in 2017, bringing together leaders from government, industry and academia to provide leadership on the adoption of BIM and Project Team Integration (PTI). ABAB was established by the Australasian Procurement and Construction Council (APCC) and the Australian Construction Industry Forum (ACIF), evolving from a previous APCC-ACIF collaboration established in 2015.

Since its formation, ABAB has produced a few reports and the National BIM Portal has been established by NATSPEC<sup>3</sup> who have published some standards, but there has been very little progress in establishing BIM as the default way of actually managing construction and engineering projects.

ABAB defines four levels of Building Information Modelling:

**Level 0.** This level involves practically no BIM. Level 0 firms often don't even use 3D models. They don't collaborate directly with other professionals and usually produce little more than 2D CAD drawings. Very few firms operate at this level.

**Level 1:** Most of the firms in Australia operate at this level. Level 1 involves some collaboration between professionals. But it doesn't pull all of the information into a single database. Instead, designers keep reworking their models as new information becomes available. Each professional involved manages the distribution of their own data, rather than sharing it with everyone.

**Level 2.** This is the level that most think about when talking about Building Information Modelling. At this level, all parties share information openly via the central database. It's not perfect BIM though. Usually, each party will have its own 3D model that it works from. This means that there's still some reworking involved at this level. This level is also called 'federated BIM'.

**Level 3.** The gold standard of Building Information Modelling. This level involves full information sharing in a single model. The model reflects all of the information stored in the central database. All stakeholders can access and alter this model with appropriate controls. This level is also called 'integrated BIM'.

Typical for Australia, these defined levels use different terminology to the well-established models in the UK<sup>4</sup>, and Europe. Also, unlike the UK and Europe, there is no roadmap to guide the Australian industry towards higher levels in the model.

<sup>1</sup> **BIM = Building Information Modelling**, for an overview of BIM see: [https://mosaicprojects.com.au/WhitePapers/WP1082\\_BIM\\_Levels.pdf](https://mosaicprojects.com.au/WhitePapers/WP1082_BIM_Levels.pdf)

<sup>2</sup> ABAB website: <https://www.abab.net.au/>

<sup>3</sup> The National BIM Portal contains documents, tools and other resources useful to those interested in implementing BIM. All content is accessible for free: <https://bim.natspec.org/>

<sup>4</sup> The UK BIM implementation roadmap can be downloaded from: <https://mosaicprojects.com.au/PMKI-ITC-011.php#BIM>

The achievements of ABAB against its commitments shows the lack of coordinated government support:



### Integrated Best Practice Approach to BIM

Integrate a whole of built environment approach to the development and adoption of the critical solutions that support best practice in BIM.

ABAB's ongoing commitment to support the Board of Treasurers with the implementation of the *Australian BIM Strategic Framework*.

Successful delivery of a prototype for the *Asset Management Digital Roadmap Generator* with partnership arrangements now being formed to fully develop and implement the Generator.

Six agencies are now implementing a BIM Strategy.

Six presentations given to ABAB from other organisations to cross-fertilise intelligence and leverage synergies.

Establishment of a *Technical Working Group to harmonise digital delivery efforts* across Australia.



### Consistent Approach to BIM

Drive consistent approaches by governments and industries to BIM requirements including standards, protocols, systems, contracts, tools, guidance and training.

Release of the *Australian Building Information Modelling and Digital Engineering Education Position Statement* to drive a consistent education standard across all jurisdictions to ensure a globally competitive industry.

Preliminary work commenced on the feasibility and value of a *National BIM/Digital Engineering Prequalification and Panel Arrangements*.

ABAB representation on digital /BIM related committees to leverage synergies and avoid duplication of effort.

Monitoring of the growth in digital delivery adoption by ABAB members as an indicator of the growth in the wider industry.



### Advice on Best Practice

Provide advice on best practice and promote, advocate, champion and influence widespread adoption of best practice.

*BIM Benefits Metrics commenced* piloting across a range of different types and sizes of government projects to help government and industry deliver projects more effectively. Data starting to come in.

The ABAB Website hits increased 16 fold in 2021 with a daily average hit rate up by 222% - testament to ABAB's recognition as the Peak Body for the consistent adoption of BIM/DE.

The 2021 Australian Infrastructure Plan promotes 'Digital by Default' and mentions ABAB as an enabler for national coordination and leadership for consistent standards and practices.



### Whole of Industry Voice

Provide advice and guidance to governments and industries on the most pressing issues and priorities facing the adoption of BIM and digital built environment within Australia.

In a first, all Australian States and Territories and the Australian Government are collaborating on digital delivery through ABAB.

ABAB recognised by industry as the Peak Body for the consistent adoption of BIM/DE with numerous invitations to present at various conferences.

Submission to the *Parliamentary Inquiry into procurement practices in government projects* followed by taking the lead role in the live virtual Public Hearing on 14 October 2021.

Four meeting Communiques to keep government and industry informed of developments.

Communications with relevant Ministers to champion the consistent use of digital delivery to maximise value from the various construction stimulus packages.

The driving force for the use of BIM in both the UK and Europe has been government mandates requiring steadily increasing levels of BIM to be used on their projects with the incremental improvements being planned years in advance. ABAB states on its web site that the UK Government identified its BIM Level 2 initiative as a significant contributor to the €840 million savings achieved on its public spend in 2013/14, and on its €1.2 billion savings in 2014/15. But in 2022. There is no equivalent initiative in Australia.



The latest attempt to make BIM mainstream is the report issued by *The House of Representatives Standing Committee on Infrastructure, Transport and Cities*, in March 2022: **Government Procurement: A sovereign security imperative**<sup>5</sup>. This report is wide ranging looking at cultural, industrial and ownership issues in the construction industries, as well 'digitizing construction'. Recommendation 7 in the report states:

*The committee recognises the potential benefits for increased efficiencies and productivity through the adoption of a digital by default approach in infrastructure projects, in which governments take the lead in providing accessible digital options that can be utilised by government officials and businesses, from planning to post-delivery assessment and, where applicable, for future application to like projects.*

*The committee recommends that the Australian Government in consultation with state, territory and local governments, support a digital by default approach in infrastructure projects, with consideration for:*

- *the digital by default recommendations in the 2021 Australian Infrastructure Plan*
- *tender requirements that utilise Building Information Modelling (BIM) or similar technologies*
- *supporting openBIM or similarly interoperable methods for digital delivery that allow for exchanging project information*
- *fostering contractor upskilling for small and medium enterprises in digital approaches when undertaking government-funded infrastructure projects*
- *facilitating whole of life digital strategies in project plans.*

Apart from being a restatement of the blindingly obvious, there is still not roadmap for implementation in the report. All Australian State, Territory and Federal Government agencies need to be applying the same requirements, using the same technologies, at the same time to minimize costs to industry and maximize the value of BIM to the economy. To date 7 years and \$Billions have been wasted by not moving towards a common Australian BIM environment; that hopefully will align with the already implements BIM approaches in the UK and Europe.



Based on the diagram above (sourced from the EU BIM Task Group<sup>6</sup>) progress in the EU is patchy, and based on the ABAB assessment, Australia sits somewhere between Croatia and Poland in the implementation of BIM. There seems to be the same obstacles everywhere:

<sup>5</sup> Download **Government Procurement: A sovereign security imperative** from: <https://mosaicprojects.com.au/PMKI-ITC-011.php#BIM>

<sup>6</sup> See: <http://www.eubim.eu/>



- lack of unified standards and norms, classifiers, state regulatory framework for BIM, or a lack of knowledge about the necessary standards
- lack of government support for similar technologies in many countries
- scarcity of specialists and professional body for instruction and retraining
- low demand for such technology among customers due to insufficient awareness of the benefits
- a conservative culture within local construction industries, where innovation is slow.

To overcome these challenges, the industry, governments, and software providers need to come together to solve issues, set standards, and allow the adoption of BIM in Australia to accelerate. At the moment:

- The Federal Government has standards and guidelines but no active implementation
- Queensland seems to be leading the way<sup>7</sup> but on its own terms
- NSW Dept. Transport has a BIM initiative<sup>8</sup>, but no whole of government approach
- Victoria as a ‘digital assets strategy’<sup>9</sup>, but not much else
- Tasmania as a ‘policy’
- South Australia is developing a policy
- West Australia has a group promoting BIM
- Northern Territory apparently has not heard of BIM, and
- ACT is thinking about the benefits of BIM.

The technology is not new and the benefits of an integrated and coordinated approach to BIM implementation have been measured for over a decade.

Back in 2017, I presented ***Projects controls using integrated data – the opportunities and challenges!***<sup>10</sup> to an international PMI scheduling conference, on the technologies that were available and being used at that time to improve the delivery of construction and engineering projects including drones, AI, virtual reality, and advanced BIM options. At the time, virtually none of these technologies were in use in Australia, five years later nothing much has changed.

My question is ‘*When is this going to change?*’ – Australia desperately needs effective leadership from the Federal Government, supported by the States and Territories to start reaping the benefits and savings achieved by a coordinated implementation of BIM.

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<sup>7</sup> For more on Queensland BIM initiatives see:  
<https://www.statedevelopment.qld.gov.au/industry/infrastructure/infrastructure-planning-and-policy/building-information-modelling>

<sup>8</sup> See: <https://www.transport.nsw.gov.au/digital-engineering/digital-engineering-framework-0>

<sup>9</sup> See: <http://www.opv.vic.gov.au/Digital-Build/Victorian-Digital-Asset-Strategy>

<sup>10</sup> Download ***Projects controls using integrated data – the opportunities and challenges!*** from:  
[https://mosaicprojects.com.au/PDF\\_Papers/P200\\_Projects\\_controls\\_using\\_integrated\\_data.pdf](https://mosaicprojects.com.au/PDF_Papers/P200_Projects_controls_using_integrated_data.pdf)



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