BIM Implementation in Australia

Steve Appleby
BIM / IPD Leader at AECOM
Class Summary

- Australian National BIM Initiative
- Virtual Australia and New Zealand Initiative (VANZI)
- Global BIM Mandates – progress update
  - UK
  - Asia Pacific
Learning Objectives

At the end of this class, you will be able to:

- Understand the key tasks undertaken to implement BIM on a National level.
- Explain the role of buildingSMART in the creation of the National BIM Initiative strategy for the federal government of Australia.
- List the roadblocks to successful BIM adoption and how to overcome them.
- Understand global BIM adoption rates.
Australian National BIM Initiative
A strategy, for the *focused adoption* of building information modelling, related digital technologies and processes, for the Australian built environment sector
Weaknesses in Current Practice

- Lack of integration along the supply chain linking parties, and between the project phases;
- Lowest bid selection strategy rather than value for money;
- Poor understanding of optimised and properly documented designs;
- Inadequate/ineffective use of technology in design;
- Lack of appreciation of the benefits of open communication.
Innovation in the buildings network: Assessing the impacts of Building Information Models

This study commissioned by BEIIC has shown that “the use of BIM by those involved with the design, construction and operation of buildings will dramatically increase their productivity”.

“it is estimated that this benefit over the period 2011 to 2025 is equivalent to a one off increase in GDP of $4.8Bn in 2010 and that the benefit could be as high as $7.6Bn”
Developing a National Program

BEIIC recommended the development of a BIM Implementation Plan and buildingSMART Australasia were commissioned at the end of 2111 to undertake the work.

The starting point was the outcomes of the MESH conferences in Brisbane, Melbourne and Sydney in early 2011 which identified 6 issues requiring priority attention to accelerate the adoption of BIM in the Australian built environment sector:

- Workshops and a consultation process were held in February & March 2012 to get detailed, cross-sector definition of issues.
Roadblocks to Implementation

What are the blockages that we need to solve and other necessary actions to realise the improvements in sustainability, energy efficiency, productivity, quality etc?

- Lack of model building protocols;
- Lack of BIM object libraries;
- Legal and insurance impediments;
- Lack of standards for information exchange;
- Inconsistencies in information handover protocols;
- Skills gaps;
- Lack of strategic research focus; and
- Industry resistance to process change.
Industry Workshop Involvement

Workshops were held in Hobart, Melbourne, Adelaide, Perth, Sydney, Brisbane and Canberra.

Delegates from Department of Housing & Building, NZ and Rob Owen, UK representing the CIB IDDS project also attended the CBR meeting.
Key Workshop Priorities

The participants at the stakeholder consultation workshops proposed the following further key recommendations, listed according to priority:

- A BIM adoption roadmap should be completed, with value itemised at each stage;
- The Commonwealth and State and Territory governments should be encouraged to require full collaborative BIM for their building procurements;
- The legal and technical instruments needed to support the above should be developed as soon as possible, and aligned with the relevant international codes and standards;
- Governments should consider the development of procurement processes and assistance packages to encourage the accelerated adoption of BIM in the built environment sector; and
- Clients and operators should be educated on the benefits of BIM to increase the demand for BIM services.
National Pilot Projects

The outputs of the Program would be used and tested through a series of National Pilot Projects

- Directed by client groups, both *private and government*.
- *In-kind commitment* of project teams.
- *Validating* these new protocols, procurement methods and collaboration scenarios.

Pilot projects would form a series of *case studies*, *industry workshops* and *technical documents* that would disseminate results and give feedback to the program.
NBI Recommendations

The National BIM Initiative recommends execution of the following project work programs:

1. Procurement
2. BIM Guidelines
3. Education
4. Product Data and BIM Libraries
5. Process and Data Exchange
6. Regulatory Framework
Working Groups and Timeframe
Industry Advisory

Brokering the Framework for Virtual Australia & New Zealand
NBI Outcomes

Industry & Government would declare their **shared commitment** to the new technology

The NBI would provide

- **Leadership** in the construction sector,
- Give *industry confidence* to adopt the new technologies,
- Realise *increased productivity* in the construction sector,
- Deliver *more efficient use of resources*
- Support *innovation and quality* in the built environment
NATSPEC National BIM Guide

- The Australian *National BIM Guide* is a reference document to be read in conjunction with a *Project BIM Brief* which outlines the particular requirements for each project.

- The *National BIM Guide* is to assist clients and consultants to clarify their BIM requirements in a nationally consistent manner. This will reduce confusion and duplication of effort.

- The *National BIM Guide* is an adaptation of the *US Veteran Affairs BIM Guide*. 
A crucial issue is access to information from building product manufacturers for use in all types of model-based applications.

The responsibility for action lies with:

- Product manufacturers,
- Suppliers,
- Product brokers such as Natspec,
- Certification agencies,
- Industry bodies and
- Software vendors
Procurement, Legal Issues & Insurance

Integrated design and project delivery has a major impact on current consulting services and procurement methods.

Should we be adopting Integrated Project Delivery (IPD)?

These issues need to be resolved by groups such as:

- APCC and state agencies,
- legal practices,
- professional indemnity insurers,
- Standards Australia and
- Local Government
Multi-disciplinary BIM education

BIM requires a **high level of knowledge** and **expertise in the use of specific software** and the capability or ‘know how’

This is a crucial role for Educational institutions at all levels:

- Universities and TAFE,
- Secondary Schools,
- Professional accreditation bodies and
- Groups such as the Construction Industry Training Boards
Compliance and Certification

It is widely recognised that we need **performance standards** that encourage **innovation in products, process and methods**.

**Government policy must facilitate performance standards enabled by BIM across industry through:**

- Policy makers,
- Codes and standards bodies,
- Research organisations, and
- Local regulators
VIRTUAL AUSTRALIA AND NEW ZEALAND INITIATIVE

VANZI

Brokering the Framework for Virtual Australia & New Zealand

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Placeholder
Case Studies
1 Bligh Street, Sydney
The ARK, Sydney
UK National Mandate Update
APAC National Mandate Update

Placeholder
Thank You

Steve Appleby

Steve.appleby@aecom.com