

# BIM ACTIVITY IN AUSTRALIA

Richard Choy, CEO
NATSPEC // Construction Information

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## Presentation Overview



- **NATSPEC**
- BIM Guidelines and Standards
- ▶BIM Research
- ➤ NATSPEC National BIM Guide
- ▶BIM Objects and Specifications
- ➤BIM Community
- BIM & Government



### Not-for-Profit formed in 1975

- ➤ Air Con and Mechanical Contractors' Assoc of Aust
- ➤ Australian Council of Building Design Professions
- Australian Elevator Association
- Australian Institute of Architects
- Australian Institute of Building
- Australian Institute of Building Surveyors
- Australian Institute of Quantity Surveyors
- ➤ Construction Industry Engineering Service:
- ➤ Consult Australia
- Engineers Australia
- ➤ Master Builders Australia
- Standards Australia





Australian Institute of Architects







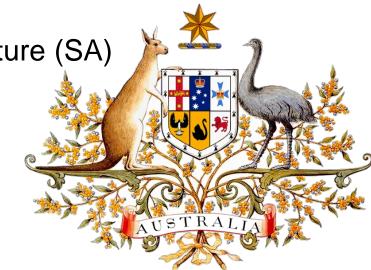
## Improve the quality of construction in Australia



- Building Commission Victoria
- Dept of Infrastructure (NT)
- ➤ Dept of Finance (WA)
- ➤ Dept of Finance and Deregulation (Federal)
- Dept of Finance and Services (NSW)
- ➤ Dept of Housing and Public Works (QLD)
- ➤ Dept for Transport, Energy and Infrastructure (SA)
- Dept of Treasury (ACT)
- Dept of Treasury and Finance (TAS)

NATSPEC// Construction Information Provides the baseline level of quality for

Government and quality projects



## **NATSPEC National Specifications**

## BiM

## NATSPEC



"Using good design documentation you protect your reputation, you reduce defects, you produce high quality, you protect costs and more importantly and overarchingly, you deliver on time. And without good documentation you can't achieve all those objectives".

Mario Macri, Lend Lease, Centraplaza project

Construction Information

## **Building Information Modelling**



- NATSPEC believes that digital information, including 3-D Modelling and Building Information Modelling, will provide improved methods of design, construction and communication for the industry.
- Further, NATSPEC supports open global systems. This will result in improved efficiency and quality.



## BIM Guidelines



2009 NATSPEC participated in the development of the National Guidelines for Digital Modelling and Case Study documents.

The Guidelines were developed to initiate discussion and involvement across the Australian construction industry on the collaborative use of BIM in order to encourage the development and adoption of common national standards of practice.

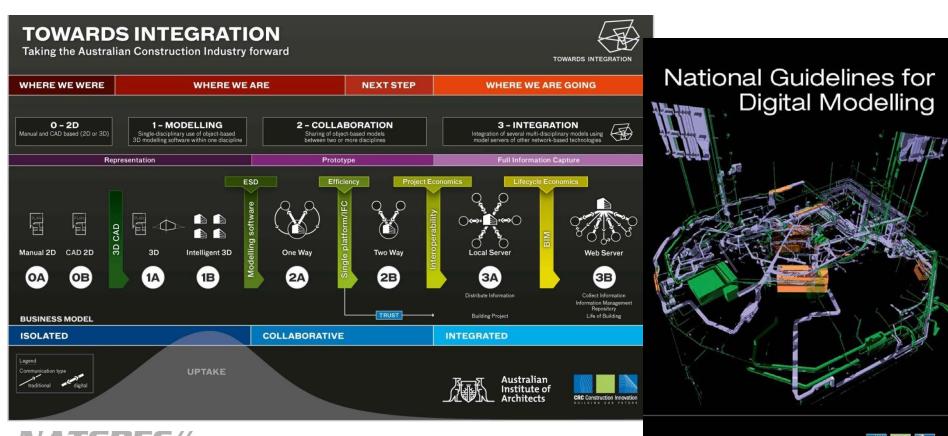




## National Guidelines for Digital Modelling



buildingsmart.org.au/digital-modelling-guidelines-dmg-new-review





## BIM Research



2010 NATSPEC sat on the Digital Technologies Working Group and assisted in the development of the economic study commissioned by the Australian Government's Built Environment Industry Innovation Council (BEIIC).

The purpose of this study was to examine the potential for BIM to improve the productivity within the Australian construction industry.

http://buildingsmart.org.au/BIM\_Economic\_Study\_Final%20Report\_29Oct2010.pdf







## NATSPEC NATSPEC the national building specification



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#### Welcome to NATSPEC







NATSPEC is the trading name of Construction Information Systems Limit ABN 20 117 574 606

NATSPEC, founded in 1975, is a not-for-profit organisation that is own by the d construct and property industry through professional associations and government property groups. It is impartial and is not involved in advocacy or policy development.

NATSPEC's major service is the comprehensive national specification system endorsed by government and professional bodies. NATSPEC, the National Building Specification, is for all building structures with specialist packages for architects, interior designers, landscape architects, structural engineers, service engineers and domestic owners. AUS-SPEC is the Local Government specification system for the life-cycle management of assets. Packages include Urban and Open Space, Roadworks and Bridges, Public Utilities, and Maintenance. NATSPEC is also responsible for the National BIM Guide and its associated documents.

NATSPEC's objective is to improve the construction quality and productivity of the built environment through leadership of information.

#### Go to SPECbuilder Live

Download SPECbuilder Live Guide

View the 9 minute NATSPEC for Quality Projects video



## www.natspec.com.au





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BiM

NATSPEC Building Information Modelling Portal

Standar and Australian Practice. the Exchange of Digital Building Information

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#### **NATSPEC BIN Guide Documents**

The National BIM Guide is the sist clients, consultings and stakeholders to clarify their BIM requirements in a nationally consistent manner.

NATSPEC National BIM Guide

The core reference document

**Project BIM Brief** 

For defining and documenting the specific requirements of your project by reference

to the National BIM Guide.

BIM Object/Element Matrix

Can be used as a reference or to define the properties and Level of Development of many of a project's building elements.

#### News & Events

 25/2/13 NATSPEC upgraded.

#### Recent changes

- 25/2/13 Classification
   Keynoting Framework
   added under 'Tools
- 25/2/13 Additional E and BIM Managem added under 'Reso

#### Welcome to NATSPEC's BIM Portal

This website is home to the NATSPEC National BIM Guide and other documents. It is also a repository of documents and tools

A in the construction industry.

#### 

## NATSPEC National BIM Guide



2011 & 2012 **NATSPEC BIM Reference Schedule** NATSPEC BIM PROJECT BIM BRIEF 1.1 Purpose of this Project BIM Brief This Project BIM Brief is to define the Client's requirements for the use of Building Information Modelling (BIM on the Project Identified below. This Project BIM Brief must be read in conjunction with the NATSPEC National BIM Guide. Any variation to the NATSPEC National BIM Guide needs to be recorded within this Brief. This Brief is to be read in conjunction with the Project Confract and other briefing documents. Project Address Areas to be modelled NATSPEC BIM 1.4 BIM Pr NATSPEC BIM **NATSPEC National BIM Guide** v1.0 - February 2012 The VA **BIM** Guide BIM Management Plan Template

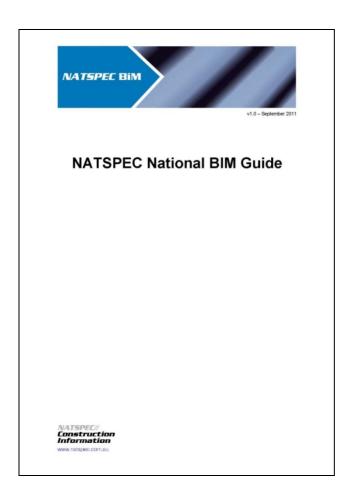
Download for free from www.natspec.com.au

2012



## Project BIM tools





#### This core document defines:

- Uses for BIM on projects
- Roles and responsibilities
- Collaboration procedures
- Modelling requirements
- Documentation standards
- Digital deliverables

### Key requirement:

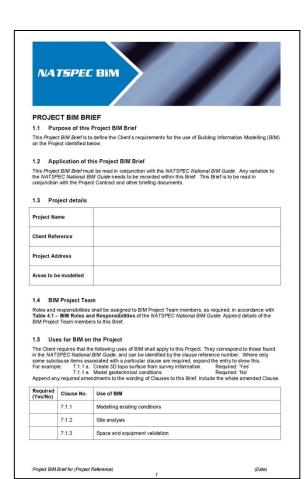
BIM Management Plan





## Project BIM tools





## NATSPEC Project BIM Brief

Provides a place to document the specific requirements of a project by reference to the National BIM Guide



## 23 BIM Uses



- 7.1 Project Definition, Planning and Pre-Design
- 7.2 Architectural Modelling (Design)
- 7.3 Structural Modelling and Analysis
- 7.4 MEP Modelling and Analysis
- 7.5 Quantity Take-off and Cost Planning
- 7.6 Construction Models
- 7.7 Facilities Management/As-built Mode





## NATSPEC National BIM Guide



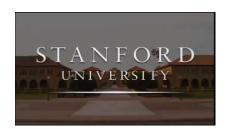
"Excellent work and good to see real progress with this tool. The UK is lagging behind because of red tape and current structures which are proving to be a difficult barrier to overcome but we are making head way (thinkBIM project with our (not for profit) organisation Construction Sector Network)."

Karl Redmond – Construction Sector Network UK – 4/10/2011

"I attended a forum yesterday sponsored by the Associated General Contractors of America and your BIM Guide was referenced as being currently the best that one of the contractors reviewed. Congratulations!"

Renee Tietjen – Senior Architect, Department of Veteran Affairs – 4/11/2011











## NZ BIM Guide



2013 NATSPEC has been engaged to produce the New Zealand BIM Guide based on the NATSPEC National BIM Guide









## BIM & IPD



NATSPEC is a member of the AIA/CA BIM and IPD Steering Group. The purpose of this group is to develop resources and guidelines for practitioners in the Australian building industry.

- 2012 documents produced on explaining BIM to different sectors; BIM Education; and, BIM Management Plans.
- 2013 finalizing documents for other industry sectors and BIM Legal and Procurement issues.

www.bim.architecture.com.au/



Australian Institute of Architects





## BIM Objects for MEP



NATSPEC is a member of the Steering Committee for the AMCA BIM MEP<sup>AUS</sup> project. The purpose of the project is to facilitate the effective adoption of BIM practices associated with building services (Mechanical, Electrical, Plumbing).

2012 AMCA has published a number of standards for modelling MEP services which can be downloaded from <a href="https://www.bimmepaus.com.au/">www.bimmepaus.com.au/</a>

More standards are currently being developed.





## Collaborative Object Libraries



2012 NATSPEC is a partner in this project with SBE NRC. The objective of the project is to develop standards and processes that will enable collaborative object libraries to store and share information appropriate to each stage of the built asset lifecycle, and in a platform neutral manner. Proof of concept has been established.

2013 Objects are being developed for some government clients and funds are being sought for the next phase of work.







## BIM & Specifications



2006 **SpecNotes and Viewer** NATSPEC partnered with CRC-CI to research how software applications may integrate specification documents with digital building models.

### 2013 BIM, Specifications and Bills of Quantities

NATSPEC is partnering with QUT on an ARC linkage project which is examining the relationship between BIM, construction specifications and cost plans and how they might be integrated.







## **BIM Community**



#### ISO TC59/SC13 Mirror Committee BD-104

NATSPEC's proposal to form an Australian mirror committee of International Organization for Standardization Technical Committee 59/Subcommittee 13 (ISO TC59/SC13) *Organisation of information about building works* was approved by Standards Australia (SA) in 2012.

ISO TC59/SC13 works to develop standards for the digital exchange of data and documentation.







- Collaborate ANZ The aim of Collaborate is to foster and disseminate best practice amongst peers and to the wider industry. collaborate-anz.com
- OBAA The OBAA is a unified group of software vendors who share the common purpose of promoting open BIM standards which facilitate the exchange of digital information between BIM users.

buildingsmart.org.au/open-bim-alliance-of-australia

 ANZRS ANZRS addresses content standards for Autodesk Revit only.







## BIM & Government



No national approach





**Australian Government** 

Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education









**Australian Government** 

**Department of Defence** 

## Challenges

NATSPEC

- IPD Integrated Project Delivery
- Contracts
- IP Intellectual Property
- Liabilities
- Expectations
- Facility Management





