AU BIM STANDARDS

Richard Choy - CEO
NATSPEC // Construction Information
Founded in 1975, with the objective to improve the construction quality and productivity of the built environment through leadership of information.
Government Shareholders

- Chief Minister, Treasury and Economic Development Directorate (ACT)
- Dept of Finance (Federal)
- Dept of Finance (WA)
- Dept of Finance, Services and Innovation (NSW)
- Dept of Housing and Public Works (QLD)
- Dept of Infrastructure, Planning and Logistics (NT)
- Dept of Planning Transport and Infrastructure (SA)
- Dept of Treasury and Finance (TAS)
- Dept of Treasury and Finance (VIC)

**NATSPEC provides the baseline level of quality for Government and quality projects**
Industry Shareholders

- Air Conditioning and Mechanical Contractors' Assoc
- Australian Elevator Association
- Australian Institute of Architects
- Australian Institute of Building
- Australian Institute of Building Surveyors
- Australian Institute of Quantity Surveyors
- Construction Industry Engineering Services Group
- Consult Australia
- Engineers Australia
- Master Builders Australia
- Standards Australia
Building Information Modelling

BIM is a digital form of construction and asset operations. It brings together technology, process improvements and digital information to radically improve client and project outcomes and asset operations. BIM is a strategic enabler for improving decision making for both buildings and public infrastructure assets across the whole lifecycle. It applies to new build projects; and crucially, BIM supports the renovation, refurbishment and maintenance of the built environment – the largest share of the sector. (EU BIM Taskgroup, 2018)
Australia

Federation of 8 States and Territories

with 537 Local Councils
NATSPEC BIM Collaboration
The central reference that defines:

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

Key requirement:
- BIM Management Plan
NATSPEC National BIM Guide

Purpose:
To assist clients, consultants and stakeholders to clarify their BIM requirements for construction projects in a nationally consistent manner.
NATSPEC National BIM Guide

Project BIM Brief

National BIM Guide

BIM Management Plan
Anna Meares Velodrome

Design through parametric modelling

Project Brief Overview

Development of the roof forms

Development of the walls and cladding

Delivery of information for production
Design Flexibility

Using parametric work flow allows great flexibility throughout the development of the design.

Immediate visual feedback

In this model control ratios are used to adjust the flex of the form in both directions that allowed studies of form generated by the constraints of different cladding materials.
Australasian BIM Advisory Board - Strategic Statement

Vision: ‘Improved productivity and asset outcomes’

Strategy: To take a leadership and coordinating role in the consistent adoption of BIM and associated integration and collaborative processes.
National DE Policy Principles

Goals
- Provide Framework
- Consistent, Open & Harmonised
- Build Capability

Principles
- Consistent & Scalable
- Open & Harmonised
- Whole of life
- Convergence with GIS
- Foster Collaboration
- Capture Knowledge
- Build Capability

Possible Workstreams
VDAS Steering Committee

Objectives:

• reviewing existing DE and BIM documentation within Victorian Government projects;
• consider relevant lessons learned from Digital Asset Strategy rollouts in other Australian jurisdictions;
• consider and learn from projects that have utilised and rolled out DE and BIM;
• review and consideration of new best practices, standards, and specifications in DE or BIM that can be implemented the VDAS;
• identify and implement a strategy for Victoria Government by relevant agencies, ensuring consistency of approach across government.

2018: Stage 1

“Getting Victoria VDAS Ready”
What is BIM process consistency?
BIM process consistency is the consistent use of proven methods, techniques, standards, templates, workflows and tools within and across the public sector. BIM process consistency improves the performance of BIM adoption and implementation.
Asset Information Requirements Guide

Deciding at the start of a project what information is required to effectively manage the operation of an asset after handover

Exchange Information Requirements (EIR)
The client’s information exchange requirements, e.g. data formats, exchange dates and procedures applicable to the AIR and PIR

Asset Information Requirements (AIR)
The information the client needs during the operational phase of an asset

Project Information Requirements (PIR)
The information the client needs during the project delivery phase

NATSPEC
Construction Information
Object standardisation

Object modelling guidelines

The following guidelines are to assist with the creation of the geometry and to assist object creators in regards to file naming and IFC designation as they interact with the Properties Generator.

The aim of the guidelines below are to standardise and rationalise applications, and so as not to compromise the performance of the properties generator.

Object metadata

The following guidelines and general rules can be applied to objects:

IFC designation

To allow for improved interoperability between BIM authoring and BIM data exchange.

Generic Design – Industry Foundation Models

The Generic Design – Industry Foundation Models (IFM) tool is a powerful foundation for creating consistent and interoperable models of industry, including buildings and infrastructure. The IFM includes a wide range of models that are openly available and can be used for various purposes. The models are designed to be compatible with other BIM software and can be easily integrated into existing projects.

Some of the models available in the IFM include:
- Air Terminal
- Attenuator Rectangle
- Attenuator Round
- Axial Fan
- BW Ceiling Access Panel
- BW Cleaning Zone
- BW Concrete Plinth
- BW Dust Access Door
- BW Duct Access Panel
- BW Penetration Round Floor
- BW HVAC Interface Equipment
- BW HVAC Interface Equipment

These models can be used for a variety of purposes, including:
- Design and planning
- Documentation and reporting
- Construction coordination
- Maintenance and operation

The IFM is a valuable resource for anyone involved in the design and construction of buildings and infrastructure.
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AU BIM Standards

Consistent BIM Object Names & Properties

Open BIM Object Standard
NATSPEC BIM Object Properties Generator

Clear Project Control

NATSPEC BIM Management (Execution) Plan

Clarity of Project Requirements

NATSPEC Project BIM Brief

Consistent Client Information Requirements

ABAB Asset Information Requirements

Clear Client Information Outputs

Client Asset Management Plan

Consistent Language

NATSPEC BIM Guide
Questions

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