

AU BIM STANDARDS

Richard Choy - CEO

NATSPEC // Construction Information



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Not-for-profit

Founded in 1975, with the objective to improve the construction quality and productivity of the built environment through leadership of information.

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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

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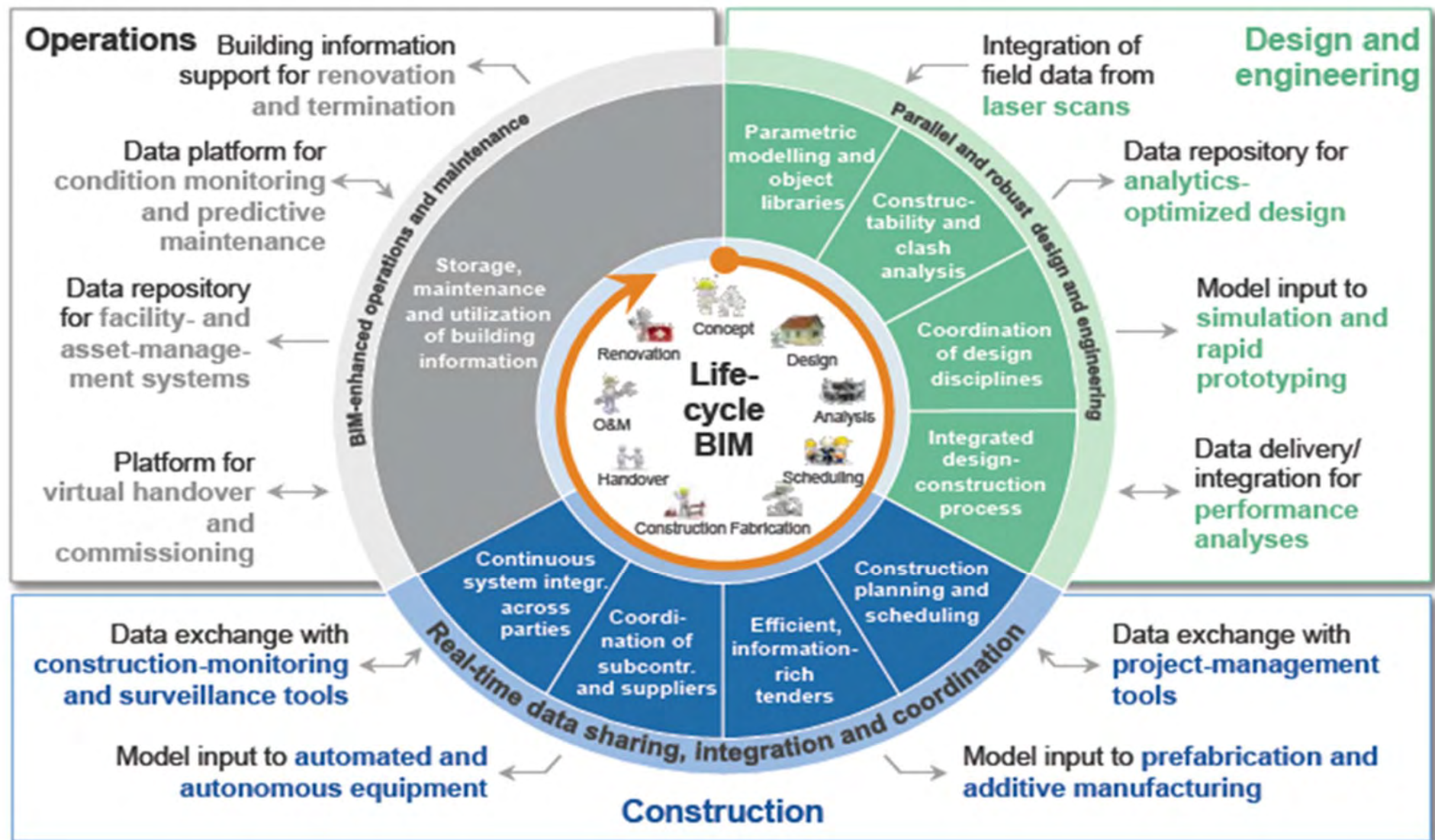
Industry Shareholders

- 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)

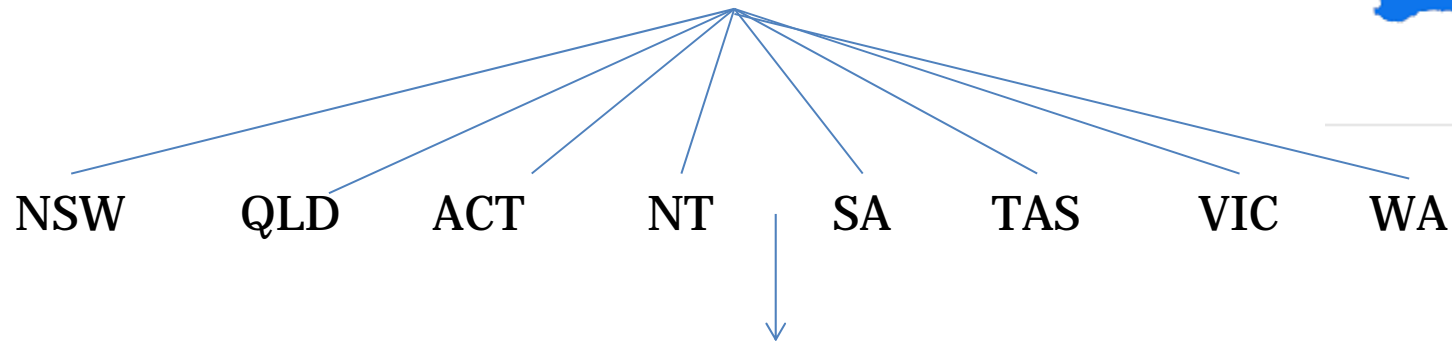


World Economic Forum, 2016

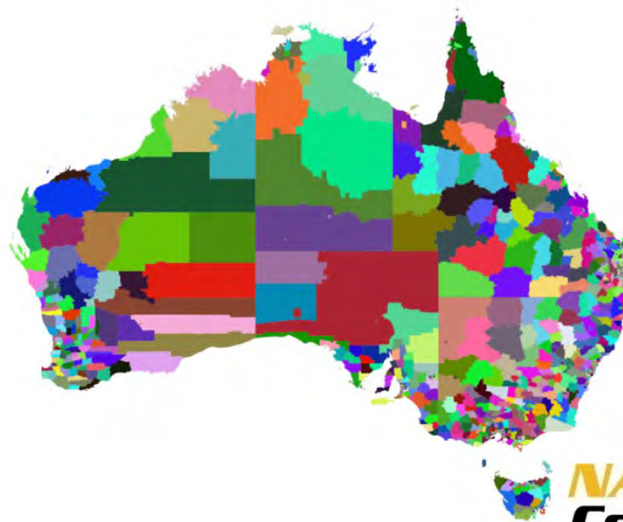
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Australia

Federation of 8 States and Territories



with 537 Local Councils

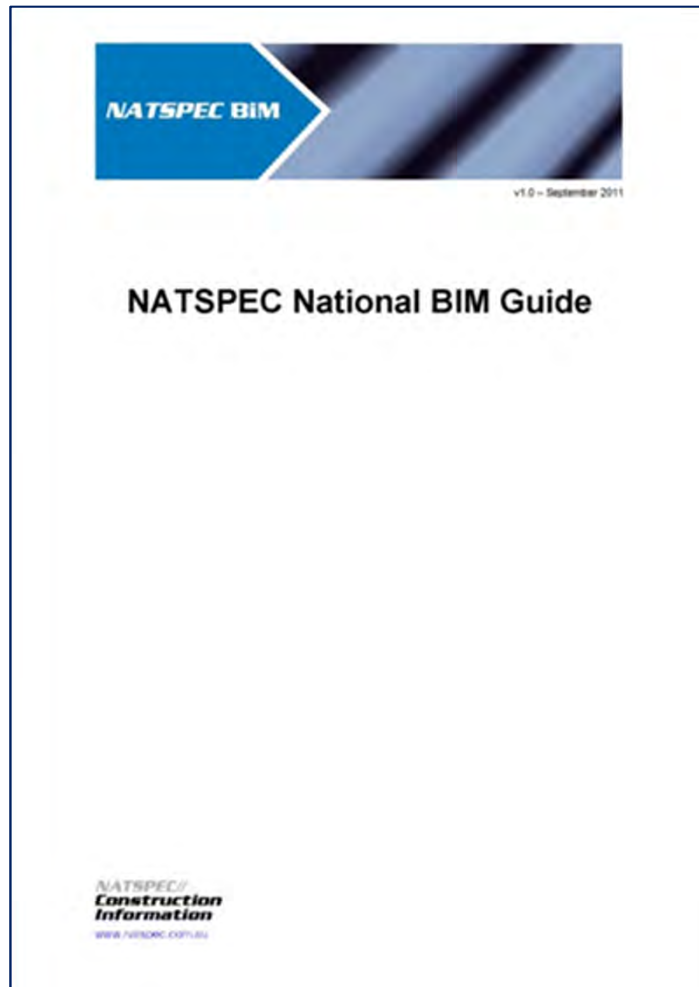


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NATSPEC BIM Collaboration



NATSPEC National BIM Guide



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.

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NATSPEC National BIM Guide



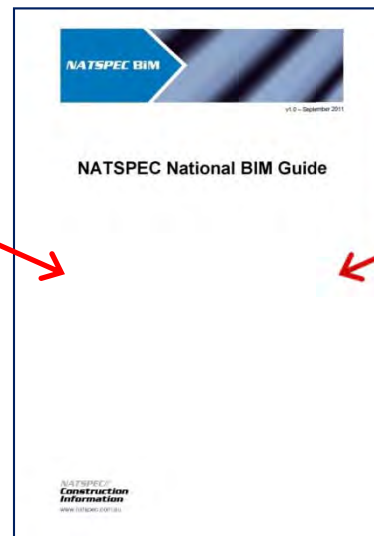
The Project BIM Brief form includes the NATSPEC Construction Information logo and version v2.0 - February 2018. It contains fields for Project Reference, Project name, Project address/location, Brief project description, and Client. At the bottom, there is a table for revisions with columns for Revision, Date, Prepared by, Approved by, and Comments.

Project BIM Brief



The BIM Management Plan form includes the NATSPEC Construction Information logo and version v3.0 - February 2018. It contains fields for Project Reference, Project name, Project address/location, Brief project description, and Client. At the bottom, there is a table for revisions with columns for Revision, Date, Prepared by, Approved by, and Comments.

BIM Management Plan



National BIM Guide

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Anna Meares Velodrome

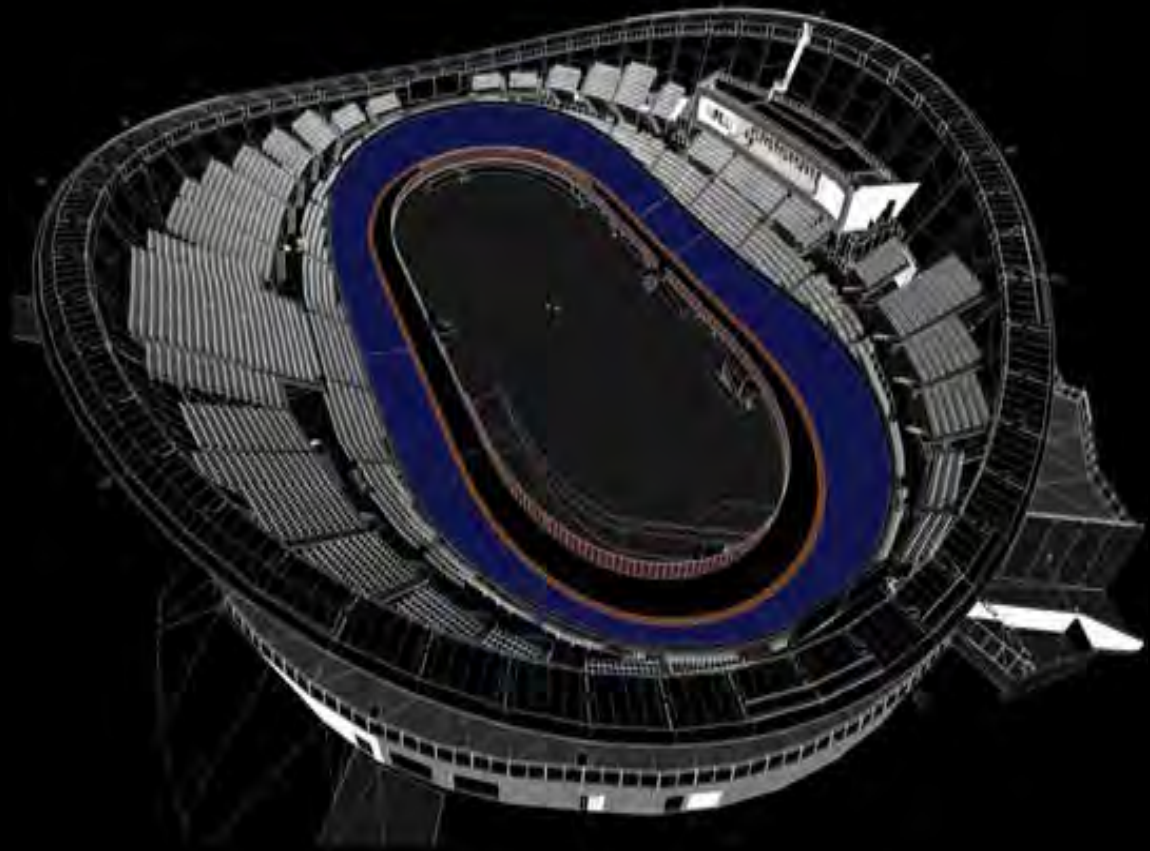
Design through parametric modelling

Project Brief Overview

Development of the roof forms

Development of the walls and cladding

Delivery of information for production

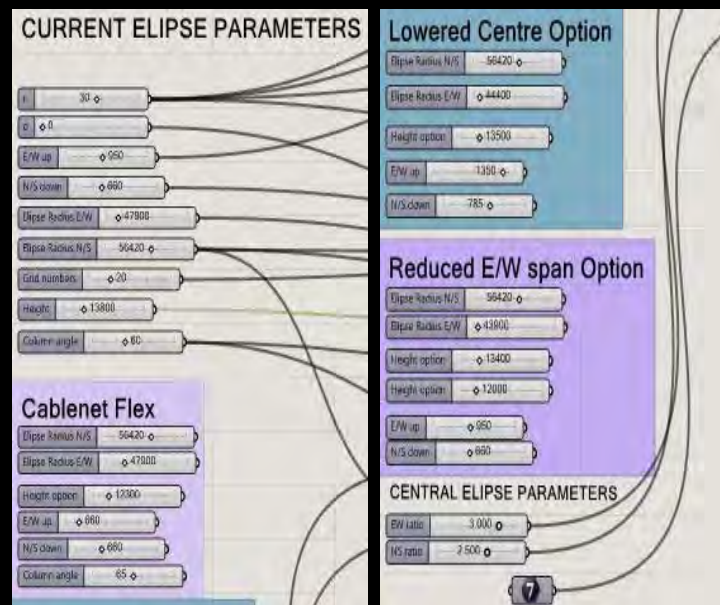
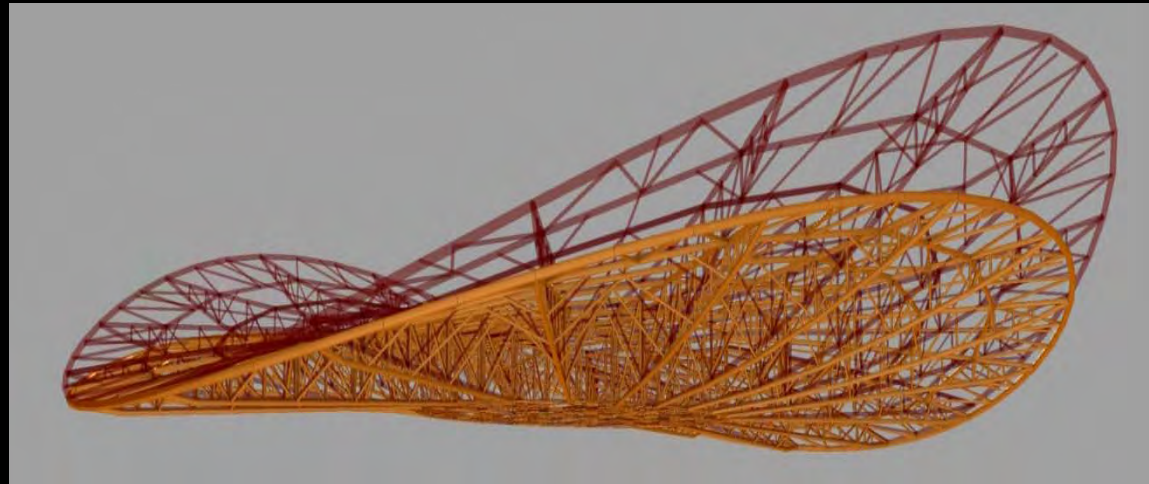


Design Flexibility

Using parametric workflow 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

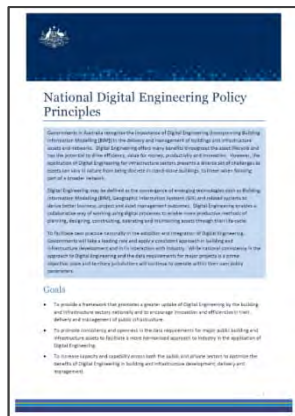
Vision: 'Improved productivity and asset outcomes'

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

Coordination & Collaboration

Awareness & Education

National DE Policy Principles



Goals

Provide Framework

Consistent, Open
& Harmonised

Build Capability

Principles

Consistent & Scalable

Open & Harmonised

Whole of life

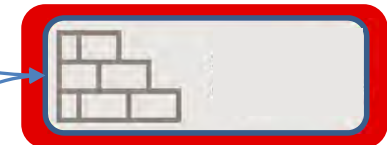
Convergence with GIS

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”

Aug

Sep

Oct

Nov

Dec



BIM Process Consistency:

**Towards a Common Framework for
Digital Design, Construction and Operation**

Phase 1: Overview Report



www.abab.net.au

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.

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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



www.abab.net.au

Exchange Information Requirements (EIR)

The client's information exchange requirements, e.g. data formats, exchange dates and procedures applicable to the AIR and PIR

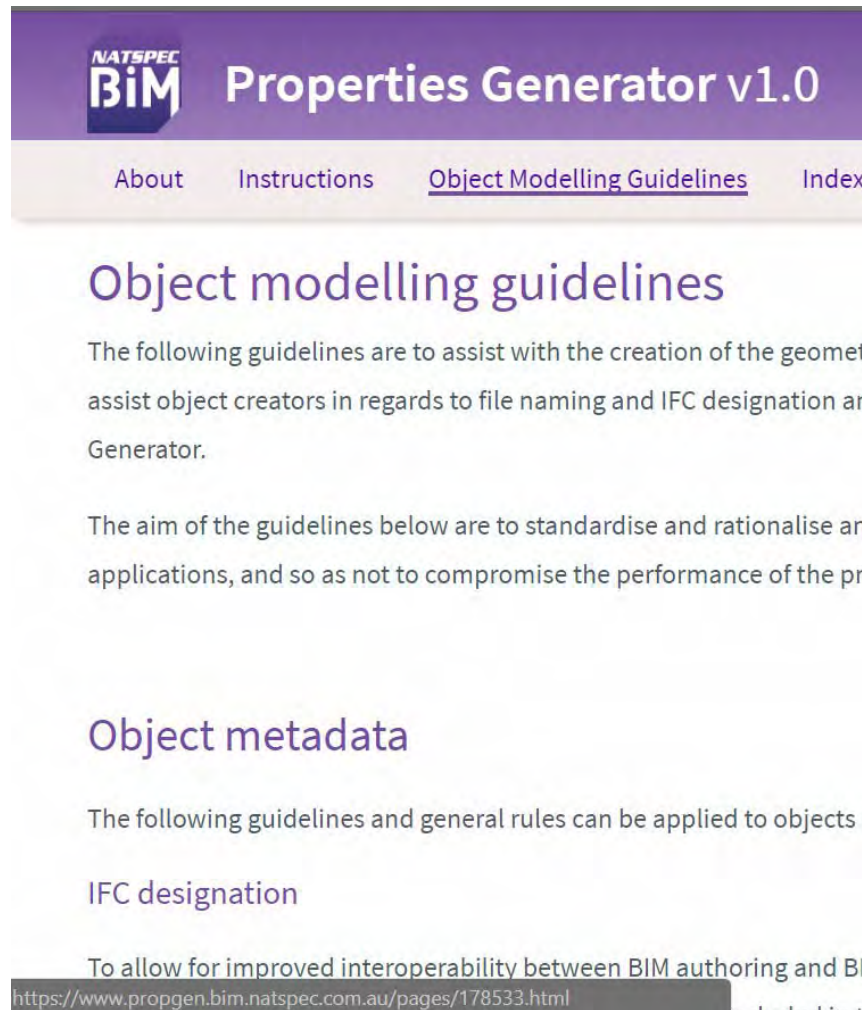
Asset Information Requirements (AIR)

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

Object standardisation



The screenshot shows the website for the NATSPEC BiM Properties Generator v1.0. The header is purple with the NATSPEC BiM logo and the title 'Properties Generator v1.0'. Below the header is a navigation bar with links: 'About', 'Instructions', 'Object Modelling Guidelines' (which is underlined), and 'Index'. The main content area has a heading 'Object modelling guidelines' in purple. Below this, there is a paragraph: 'The following guidelines are to assist with the creation of the geometri assist object creators in regards to file naming and IFC designation ar Generator.' Another paragraph follows: 'The aim of the guidelines below are to standardise and rationalise ar applications, and so as not to compromise the performance of the pr'. Below this is a heading 'Object metadata' in purple. Underneath, it says 'The following guidelines and general rules can be applied to objects'. Then, another heading 'IFC designation' in purple. At the bottom, it says 'To allow for improved interoperability between BIM authoring and BI' followed by a URL: 'https://www.propgen.bim.natspec.com.au/pages/178533.html'.

NATSPEC BiM Properties Generator v1.0

About Instructions Object Modelling Guidelines Index

Object modelling guidelines

The following guidelines are to assist with the creation of the geometri assist object creators in regards to file naming and IFC designation ar Generator.

The aim of the guidelines below are to standardise and rationalise ar applications, and so as not to compromise the performance of the pr

Object metadata

The following guidelines and general rules can be applied to objects

IFC designation

To allow for improved interoperability between BIM authoring and BI
<https://www.propgen.bim.natspec.com.au/pages/178533.html>





Generic Design – Industry Foundation Models

The Generic Design – Industry Foundation Models (IFM) provide for designer's requirements with generic, modular and design simplifying tools and including LOD 300. These models are supplied from the Autodesk Australia Content Store and have the shared parameters added by BIM-MEP^{AUS} for design and specification purposes.

Each IFM family incorporates geometry based on representative manufacturer data and provides a range of assets that will be intended to meet LOD 300 modelling purposes. IFMs also provide the source content for Manufacturer's Certified Models.

Generic Design – Industry Foundation Models



Air Terminals

IFM Air Terminals in a perpendicular with skimmers and tags

[View Product](#)



Attenuator Rectangle

IFM Rectangular Attenuator

[View Product](#)



Attenuator Round

IFM Round Attenuator

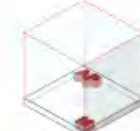
[View Product](#)



Axial Fan

IFM Adjustable (with axial fan) 4 models

[View Product](#)



BW_Ceiling Access Panel

IFM Generic Builders Work: Ceiling Access Panel

[View Product](#)



BW_Clearance Zone

IFM Generic Builders Work: Clearance Zone

[View Product](#)



BW_Concrete Plinth

IFM Generic Builders Work: Concrete Plinth

[View Product](#)



BW_Duct Access Door

IFM Generic Builders Work: Duct Access Door Model

[View Product](#)



BW_Duct Access Panel

IFM Generic Builders Work: Duct Access Panel Model

[View Product](#)



BW_Penetration Round Floor

IFM Generic Builders Work: Penetration Round Floor

[View Product](#)

Source

- ☐ BIM Forum
- ☐ IFC 2x3
- ☐ IFC4 Add2
- ☐ NATSPEC BIM
- ☐ NATSPEC Spec

Property Categories

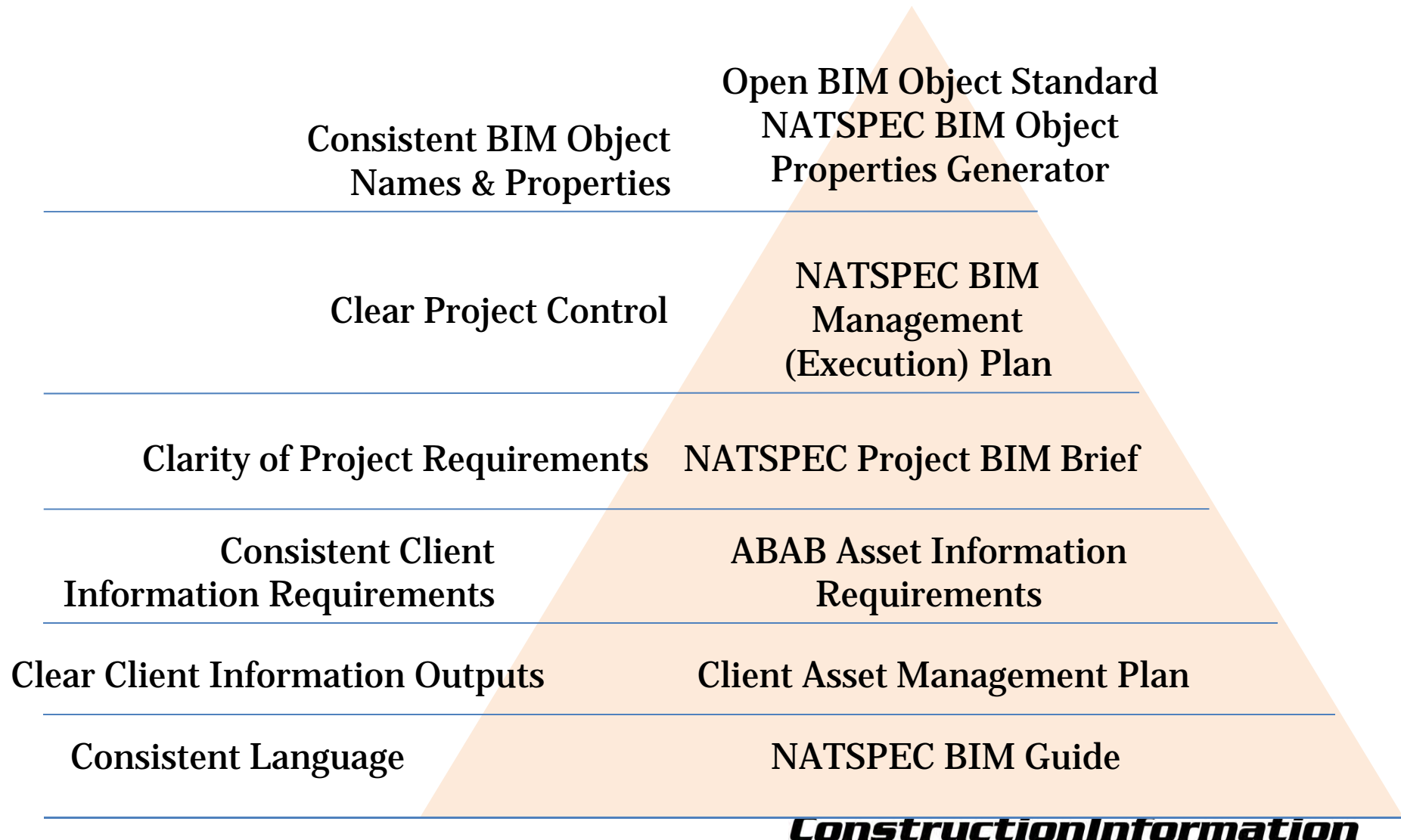
- ☐ Admin data
- ☐ Code compliance data
- ☐ Construction logistics data
- ☐ Cost data
- ☐ Facilities management data
- ☐ Geometric data
- ☐ Manufacturer data
- ☐ Performance data
- ☐ Scheduling data
- ☐ Spatial and location data
- ☐ Specification data
- ☐ Sustainability data

Classification

(Select the classification you'd like to be included)

Masterformat	08 44 00 : Curtain Wall
NatspecWorksection	0432 Curtain walls
Omniclass Table 21 Elements	21-02 20 10 40 : Fabric
Omniclass Table 22 Work Results	22-08 44 00 : Curtain W
Omniclass Table 23 Products	23-13 33 19 11 : Claddi 23-13 33 27 11 : Curtain
Uniclass Elements	EF_25_10 : Walls
Uniclass Systems	Ss_25_10_20 : Curtain
Uniformat	B2010.40 : Fabricated I

AU BIM Standards



Questions

FOR FURTHER INFORMATION
GO TO

www.NATSPEC.com.au

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