

BUILDING INFORMATION MODELLING

Strategic Outcomes with BIM

Engineering and Construction | Government Projects | Buildings



2017

Swissôtel Sydney Thursday 3 August | 8.30am - 12.30pm

About NATSPEC

NATSPEC is a not-for-profit organisation with the objective of improving the construction quality and productivity of the built environment, through leadership of information. 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 standards. This will result in improved efficiency and quality. NATSPEC's primary focus is on the 'i' in BIM (information) and how it is linked to digital models. NATSPEC's areas of interest include: how specification information can be best integrated with BIM, and how the development of BIM guidelines and standards can benefit the construction industry. NATSPEC is currently supporting a range of digital information projects nationally and internationally. NATSPEC has worked on a number of BIM initiatives with organisations including International Construction Information Society, Australian Institute of Architects, BuildingSMART, and Consult Australia.

For more information visit www.natspec.com.au and click on the BIM logo. This website is a depository of information endorsed by APCC, ACIF, and ABA. The SBEnrc has made their 'BIM Value Tool,' a decision-support tool to maximise the benefits of BIM, available on our website.



Keynote Speaker



Prof. HUANG Qiang

Chairman, China BIM Union

Vice-President, China Academy of Building Research

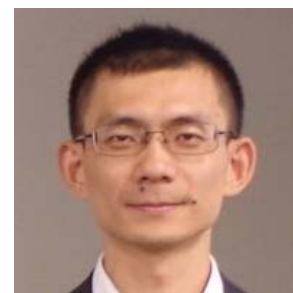
Prof. Huang is the Chairman of the Board of the China BIM Union, and in charge of the drafting committee of Chinese National Standard, GB/T51212-2016 Unified Standard for Building Information Model Applications. He has served as Vice President of China Academy of Building Research (CABR), and Chairman of China Building Technique Group Co., Ltd. (CBTGC) for over 15 years.

Prof. Huang is an expert awarded special governmental allowance by the State Council of the PRC, and also the outstanding expert with prominent contributions, awarded by Ministry of Construction of the PRC. He also tutors PhD students. For years, he devoted himself to geotechnical engineering research and won the Awards for Science and Technology Advancement Awards of Ministry of Construction several times. He is Editor-in-Chief of 4 building-related regulatory documents, and the author of 5 monographs.



Moderator: **Richard Choy**

CEO, NATSPEC//Construction Information



Translator: **Dr. YE Ling**

*Associate Research Scientist,
China Academy of Building Research*

Engineering and Construction

FEATURED SPEAKER:



Simon Vaux

Chair, IWG National DE Working Group

Director Digital Engineering, Transport for NSW (TfNSW)

CASE STUDY:



Melanie Binks

Design Manager (BIM Manager), Multiplex

PANEL:



Antony Sprigg

*Chief Executive Officer, Infrastructure
Sustainability Council of Australia*



Matthew Trigg

State Manager (NSW), Consult Australia

Government Projects

FEATURED SPEAKER:



Michael Green

*Chair, Australasian BIM Advisory Board
Executive Director, Sector Developments, Dept. of Economic
Development, Jobs, Transport and Resources, VIC*

CASE STUDY:



Liz Partridge

Project Director, NSW Health Infrastructure

PANEL:



Andrew Curthoys

*Director, Infrastructure Policy, Taskforce and
Engagement, Department of Infrastructure,
Local Government and Planning, QLD*



Teresa Scott

*Executive Director, Australasian Procurement
and Construction Council*

Buildings

FEATURED SPEAKER:



Anthony Butler

*Chair, BuildingSMART Australasia
Principal, Digital Engineering, EIC Activities*

CASE STUDY:



Alex Leese

Associate, Cox Architecture

PANEL:



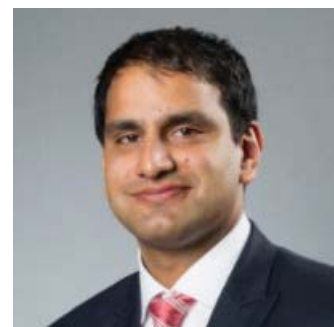
Luiz Aguiar

*Chair, Australian Institute of
Architects WA BIM
Design Manager, Jaxon
Construction*



James Cameron

*Executive Director, Australian
Construction Industry Forum*



Sumit Oberoi

*National Executive Director,
Airconditioning & Mechanical
Contractors' Association*

Speakers

Luiz Aguiar

Design Manager, Jaxon Construction

Chair, Australian Institute of Architects WA BIM Committee



Luiz is a Design Manager with experience in a diverse range of projects in Australia and overseas, including commercial office, health care, residential and education. A design-focused architect with a passion for detailing, Luiz has excellent communication and technical skills, which is key to good management of the design component in D&C and ECI environment. He is proficient in the delivery of 3D documentation using Revit software, and BIM management procedures and protocols.

Luiz has been involved in the coordination of multi-disciplinary 3D documentation of large commercial buildings, incorporating environmental impact modelling studies and simulations; his experience includes project coordination in 4D and 5D (project programming/time-frames and quantities takeoff and cost) utilising BIM technology.

Melanie Binks

Design Manager (BIM Manager), Multiplex



Melanie Binks has always had a love of technology and its potential to enhance our capabilities. Starting out as an Architect, she quickly moved across to construction and has worked on two of Perth's major BIM projects for the past 5 year: the Perth Children's Hospital and the new Perth Stadium.

As a design manager working for Multiplex on the Stadium, she manages BIM and a team of modellers producing the Architectural documentation for the project. Chairing the WA Revit user group last year and being part of the Australian Institute of Architects BIM committee, Melanie believes the industry can develop greatly through knowledge sharing and collective learning. She has also helped develop the new BIM Masters course at the University of WA, which ran for the first time this past semester.

Anthony Butler

*Chairman, BuildingSMART Australasia
Principal, Digital Engineering, EIC Activities*



Anthony is currently chair of the BuildingSMART Australasia chapter. He is the lead for Digital Engineering at EIC Activities, which is the Engineering advisory company for CIMIC. This involves leadership of Building Information Modelling (BIM), Geographic Information Systems (GIS), and digital integration across all CIMIC operating companies.

His career to date has focused on Engineering and Technical Design management, specifically on BIM and Digital Engineering in the Infrastructure and Oil and Gas Industries with his work on a range of projects, from suburban rail developments to a remote LNG gas project. Anthony's hands-on experience has given him a thorough, technical understanding of BIM implementation and best practice requirements to benefit all levels of project teams.

James Cameron

Executive Director, Australian Construction Industry Forum (ACIF)



James Cameron is the Executive Director of the Australian Construction Industry Forum (ACIF), having joined the organisation in January 2016. James brought to ACIF strong skills in research, policy, and advocacy, from roles with Australian Institute of Building and Australian Automobile Association.

He is currently undertaking a PhD at the Australian National University (ANU) in political science, and hopes to finish in coming months. At ANU he tutored in the subjects International Political Economy and Introduction to Politics. James has also held teaching roles overseas, worked in international banking, and for a management consulting firm. In his ACIF role, James is progressing some of the major issues facing the construction industry, and is ensuring that ACIF Members engage with Government Ministers at ACIF meetings to facilitate this.

Andrew Curthoys

*Director, Infrastructure Policy, Taskforce and Engagement
Department of Infrastructure, Local Government and
Planning, Queensland*



Andrew is an Urban and Regional Planner with almost 30 years of experience in planning for urban communities, infrastructure projects, and policy delivery. Andrew is a Registered Planner and Fellow of the Planning Institute of Australia. He has a Masters of Business Administration from the University of Queensland and is a Graduate of the Australian Institute of Company Directors.

He is currently assisting Government agencies and the private sector to identify their infrastructure policies in the asset management space. He is leading the delivery of Queensland's BIM implementation program, including the delivery of policy and principles. He is also working to develop a Strategic Asset Management Planning framework for agencies. Andrew is passionate about asset management, improving procurement, and better utilisation of public infrastructure, and the savings that can be generated for governments, and in turn, the community.

Michael Green

*Chair, Australasian BIM Advisory Board
Executive Director, Sector Developments, Dept. of Economic
Development, Jobs, Transport and Resources, Victoria*



Michael has been Executive Director of the Sector Development Division, Future Industries Project since March 2015 and has been Director of Industry Programs since June 2014 for the Victorian Government's Department of Economic Development, Jobs, Transport and Resources. Before joining the Department, Michael served in a number of Federal Government posts in Canberra, where he was the Acting Head of Manufacturing Division in the Department of Industry.

Alex Leese*Associate, Cox Architecture*

Alex has been a qualified architect for fifteen years, working for the first seven of those in the UK, and the last four years with Cox Architecture. Alex has worked in many sectors of the building industry including residential, health, retail, civil, and sports stadia, and found that all these sectors have differing demands on the design process and the types of BIM systems required to efficiently complete building projects.

Over the past two years, through working on civil and sports stadia, Alex has developed a strong interest in efficiencies of parametric design to complement previous experiences in developing BIM systems. In the future, he aims to continue to develop systems that can provide great design flexibility, whilst achieving high levels of efficiency in design through standardisation.

Sumit Oberoi*National Executive Director, Air Conditioning & Mechanical Contractors' Association of Australia (AMCA)*

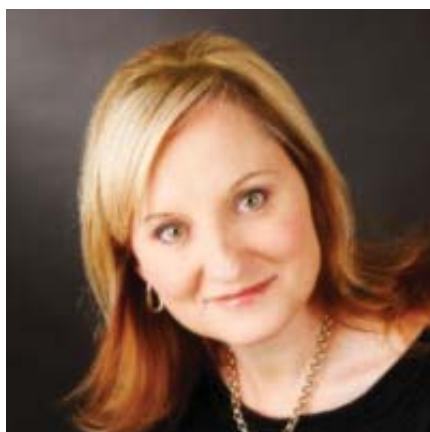
Sumit is the National Executive Director of the AMCA. Prior to this appointment, Sumit was employed as Executive Director (Victoria) and before that, AMCA Policy Analyst, where he was responsible for the association's policy program. Sumit has been instrumental in the development of the BIM-MEPAUS Initiative from its inception in 2010.

Prior to joining the AMCA in 2009, Sumit worked in numerous roles with the Victorian State Government, most notably within the Economic and Financial Policy at the Department of Treasury and Finance. Sumit is a passionate industry policy advocate who continually seeks to help AMCA members deliver quality projects through construction innovation. Sumit currently holds a number of Directorships with the Australian Refrigeration Council, Plumbing Joint Training Fund, Plumbing Industry Climate Action Centre, and ARBS Exhibitions. He is also a representative on a number of Victorian and Commonwealth Construction Policy forums.

Liz Partridge*Project Director, NSW Health Infrastructure*

Liz is a Project Director at NSW Health Infrastructure, where she oversees Health Infrastructure's BIM implementation programme. Health Infrastructure was one of the first agencies in NSW to introduce requirements for BIM, having mandated its use on all projects over \$30m in 2013. Recently, Health Infrastructure has expanded its BIM programme by introducing the use of a centrally-managed design data management tool across all its projects.

Liz also chairs the Australasian Health Infrastructure Alliance (AHIA) BIM Subgroup. AHIA is the custodian of the Australasian Health Facility Guidelines, which provides freely available guideline resources - including BIM resources - to healthcare designers across Australia and New Zealand.

Teresa Scott*Executive Director, Australasian Procurement and Construction Council (APCC)*

Teresa is a Graduate from the Australian Institute of Company Directors and a Certified Practising Project Director. Teresa began her career working in financial positions for medium sized organisations and not-for-profit organisations, supported by qualifications in Business and Accounting.

Teresa joined the APCC in 2000, progressing in 2012 to Executive Director. Teresa's current position and responsibilities include working with the Council of Chief Executives to set the strategic direction of the APCC, delivering on the extensive work program, and expanding APCC's role as Australasia's leading public sector procurement and construction forum. Teresa is passionate about driving best practice in procurement through innovation and thought leadership. Teresa currently serves on the Chartered Institute of Procurement and Supply Australasian Procurement Advisory Board, as well as the Queensland Procurement Industry Advisory Committee.

Antony Sprigg*CEO, Infrastructure Sustainability Council of Australia (ISCA)*

Antony is a successful, seasoned, and highly regarded Chief Executive Officer, and has quadrupled bottom line growth in four years, and tripled the size of his team. He engages, negotiates, and collaborates at the highest levels with governments, multi-laterals, non-government organisations, and the private sector nationally and internationally.

Over the past four years, in partnership with his Board, Antony has created ISCA's vision and strategy. Central to this success is the team Antony has recruited, and continues to coach and mentor. The team deals with a complex plethora of external partner and stakeholder needs and expectations, creating increased demand and developing an ever widening market. He is a global thought leader and trend setter in infrastructure funding and finance, project development, delivery governance, and risk and opportunity appreciation - specifically with respect to triple bottom line short and long term issues.

Matthew Trigg*State Manager (New South Wales), Consult Australia*

Matthew is a policy and public affairs professional, commentator, and advocate for better cities. Currently State Manager for NSW with industry association Consult Australia, Matthew leads the regional team to support and represent professional services firms (such as engineers, architects and project managers) involved in improving Australia's cities, infrastructure, and natural environments. Matthew also coordinates Consult Australia's Innovation Roundtable and was the project manager for the development of the Australian Digital Built Environment Principles.

Simon Vaux

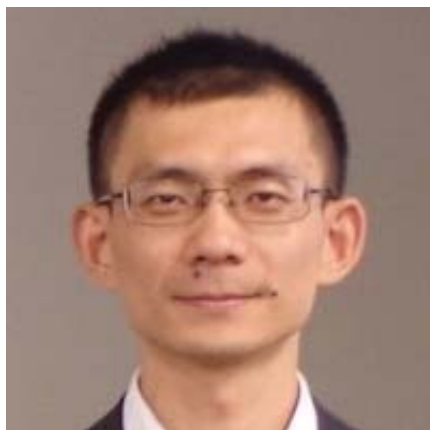
*Chair, IWG National DE Working Group
Director Digital Engineering, Transport for New South Wales
(TfNSW)*



Simon Vaux is Director Digital Engineering with Transport for NSW (TfNSW) and is currently leading the long-term strategy to implement Digital Engineering (DE) within Transport. Simon is an active member of various DE industry groups and is currently Chair of the National DE Working Group, which is working towards a national approach to DE for Transport and Infrastructure. He has been with TfNSW for the past 10 years and over this time he's managed the engineering of numerous major transport projects in and around Sydney. Prior experience includes various client and consulting roles in Australia and the UK.

YE Ling

Associate Research Scientist, China Academy of Building Research



Dr. Ye is an Associate Research Scientist at China Academy of Building Research, with a content focus on sustainable building. He received his PhD in Heating, Gas Supplying, Ventilating, and Air-Conditioning Engineering at Harbin Institute of Technology (HIT). Dr. Ye is certified as a Registered Utility Engineer (HVAC), and Registered Consulting Engineer. He is Deputy Secretary-General of CECS/TC51 green building and eco-district, member of China Green Building Council (ChinaGBC), and member of Advisory Committee of Technical Regulation, MoHURD.

Dr. Ye has served as principal investigator for a Chinese National Key Technology R&D Program, and as co-investigator for another 12 programs with funding from MoST and MoHURD. He also participated in research funded by Asia-Pacific Economic Cooperation (APEC), U.S.-China Clean Energy Research Center, and Energy Foundation (EF), to name a few. Dr. Ye has compiled 5 Chinese national standards as co-drafter, and reviewed more than 50 standards on the national and provincial level. He has published two books as principal author, and another 11 books and reports as co-author. He has also published around 40 papers in international journals or conference proceedings, and Chinese core journals. Dr. Ye has mentored two postgraduate students, as Part-time Supervisor of BUCEA.

Free Information

NATSPEC BIM position statement

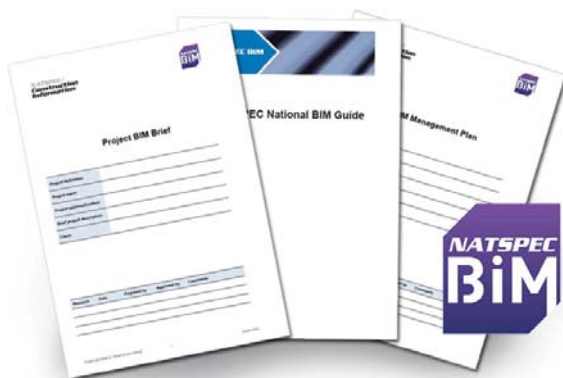
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What is BIM?

The American Institute of Architects (AIA) has defined BIM as "a model-based technology linked with a database of project information", and this reflects the general reliance on database technology as its foundation.

And from the BuildingSmart international website glossary (2010): "A basic premise is collaboration by different stakeholders at different phases of the life cycle of a facility to insert, extract, update or modify information in the process to support and reflect the roles of that stakeholder."



Getting Started with BIM

This NATSPEC BIM Paper is for those who have been seriously considering implementing BIM within their organisation and are now asking 'What do we do next'? It covers the preparation and planning required by architectural or engineering personnel who want to make implementation happen. It provides general guidance on the topic and discusses some of the decisions to be made and issues that need to be considered.

NATSPEC National BIM Guide Documents

The NATSPEC National BIM Guide works with a number of supporting documents that can be compiled in a coordinated way and read in conjunction with each other to define how BIM is to be implemented on a project.

The NATSPEC Project BIM Brief Template

Updated 2016

The Template: provides a place to document the specific requirements of a project by referencing to the relevant parts of the National BIM Guide. These include roles of project team members, what BIM will be used for, software to be used, and standards applicable to the project. It addresses one of the fundamental issues associated with the application of BIM: clearly defining how it is to be implemented on a project. If this is not done at the outset, significant problems will result.

The NATSPEC National BIM Guide

Reviewed and reconfirmed 2016

The core reference document providing guidance on the major elements of a BIM project including: Roles and responsibilities, management processes and collaborative working procedures, project deliverables, standards, software applications, and the infrastructure required to support the project.

The NATSPEC BIM Reference Schedule

A list of reference documents and standards that can be cited. The specific documents chosen to be applicable to a project are recorded in the Project BIM Brief.

NATSPEC BIM Object/Element Matrix

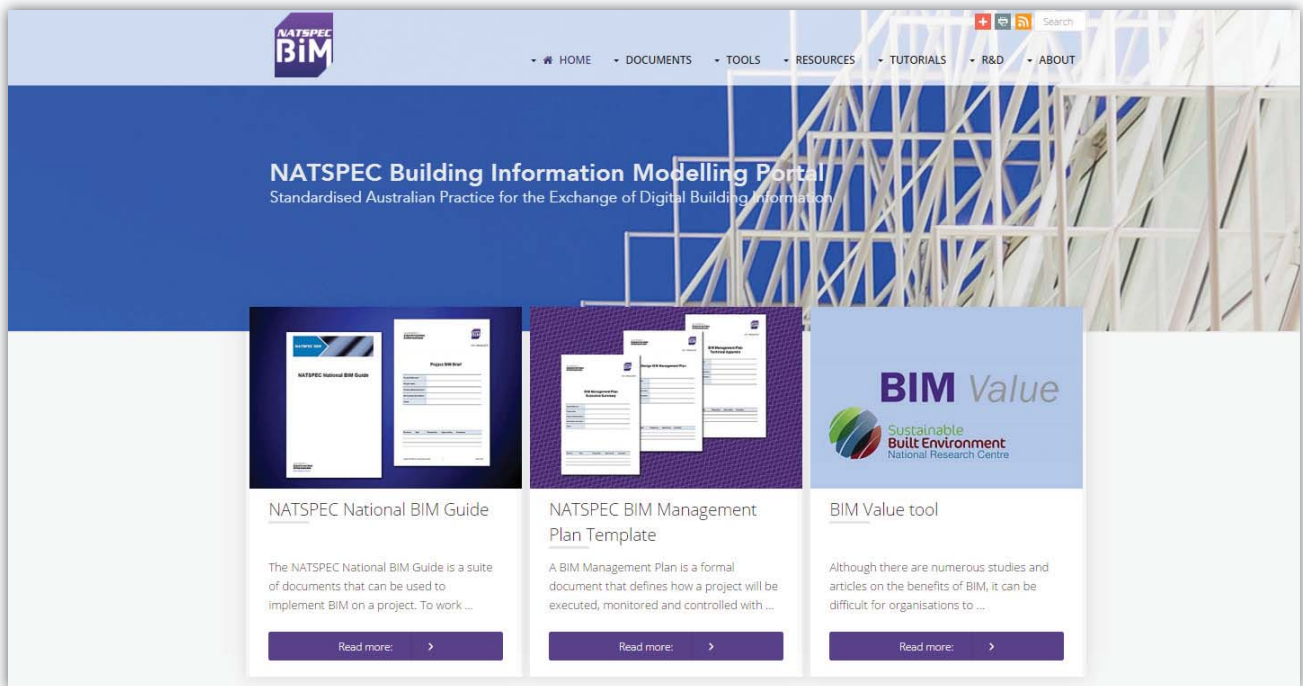
A series of Microsoft Excel (.xls) worksheets that defines a large number of model objects and elements, and their properties by Uniformat/OmniClass classification and Level of Development (LOD) at different stages in the building's lifecycle. Primarily intended as a reference document, providing a consistent approach to model development by all team members.

NATSPEC BIM Management Plan Templates

Updated 2016

Editable Word files that can be used to create a BIM Management Plan (BMP) for a project. A BMP is a formal document that defines how a project will be executed, monitored and controlled with regard to BIM. One of its main purposes is to make clear what members of the project team can expect from each other. The templates are customised to respond to the project-specific requirements recorded in the Project BIM Brief.

For more information, visit www.natspec.com.au and click on the BIM logo



Project BIM Brief

Project Reference: _____

Project name: _____

Project address/location: _____

Brief project description: _____

Client: _____

Revision	Date	Prepared by	Approved by	Comments

Project BIM Brief

1.1 - Purpose of this Project BIM Brief
The Project BIM Brief is to define the Client's requirements for the use of Building Information Modelling (BIM) on the Project.

1.2 - Application of this Project BIM Brief
This Project BIM Brief must be read in conjunction with the NATSPEC National BIM Guide (NBIG). 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 Contract and other briefing documents.

1.3 - Project team members
The contact details for key stakeholders who will be involved in planning for BIM on this project are:

Role	Description	Name	Organisation	Email
Client representative				
Project Manager				
Lead consultant				
Design BIM Manager				
Construction BIM Manager				

1.4 - Project goals
The client's goals for the project are:

Priority	Goal description	BIM Uses

1.5 - Procurement strategy
Proposed project procurement strategy: _____
Contractor engagement indicative date: _____

1.6 - Project schedule
The estimated dates for major project milestones are:

Project phase or milestone	Estimated start date	Estimated completion date
Project planning		
Conceptual Design		
Schematic Design		
Design Development		
Contract Documentation		
Construction		

The NATSPEC BIM Portal

The NATSPEC BIM Portal contains the following resources useful to those interested in implementing BIM. All content is accessible for free. Go to www.natspec.com.au and click on the BIM logo.

Documents

In addition to the NATSPEC BIM documents noted before, you can download documents on BIM-related topics including Level of Development (LOD), BIM education, scheduling and information classification.

Tools

The BIM Value tool, developed by SBEnrc in partnership with NATSPEC, is a free open-access tool that provides managers with a step-by-step guide to identifying potential benefits, metrics and tools for implementing BIM. Download classification and filing tools that will help you organise items such as trade and technical literature, project information, web browser bookmarks and object libraries. A keynoting text file based on the NATSPEC classification system can also be downloaded. This framework file provides the basis for creating keynote systems that assist document coordination by linking the model or drawings to the specification.

Resources

The Resources pages provide links to available BIM Guides and BIM Management Plans. In addition to a brief coverage of a selection of topics relevant to BIM, a glossary of BIM terms is also provided for reference. These can be downloaded and may also be used for educational purposes.

Tutorial

Presentations on the NATSPEC National BIM Guide and Getting Started with BIM can be viewed online.

BIM R&D Projects

A searchable listing of BIM research and development projects being undertaken by Australian Government or industry organisations.



ABN 20 117 574 606
Level 4, 263 Clarence Street
Sydney NSW 2000 Australia
Phone: 1300 797 142
Fax: 1300 797 143
Email: mail@natspec.com.au
www.natspec.com.au

