

# Construction digitalisation: future trends in project procurement and delivery

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Host: Kyle Gillan, Principal, Russell Kennedy Lawyers



**Russell Kennedy**  
Lawyers

# Webinar housekeeping

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- All attendees will be on mute and their cameras turned off for the entire webinar
- We have BD tech support live to assist with any technical issues
- Use the chat function for any comments/technical issues
- Use the Q&A function for specific questions related to the webinar content – Questions will be addressed at the end of the webinar
- There will be a post webinar survey link sent at the end of the webinar. We value attendee feedback
- We will also have a QR code linking to our feedback survey towards the end of the presentation so you can provide instant feedback

## Disclaimer

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The information contained in this presentation is intended as general commentary and should not be regarded as legal advice. Should you require specific advice on the topics or areas discussed please contact the presenter directly.

# Introduction

- An update
- The challenge
- Future directions



# Construction digitalisation

- Existing industry challenges
- Heightening focus
  - Technology, data and digital
- Shifting interest
- Industry developments



Infrastructure  
Australia

August 2021

Reforms to meet  
Australia's future  
infrastructure needs

2021 Australian Infrastructure Plan

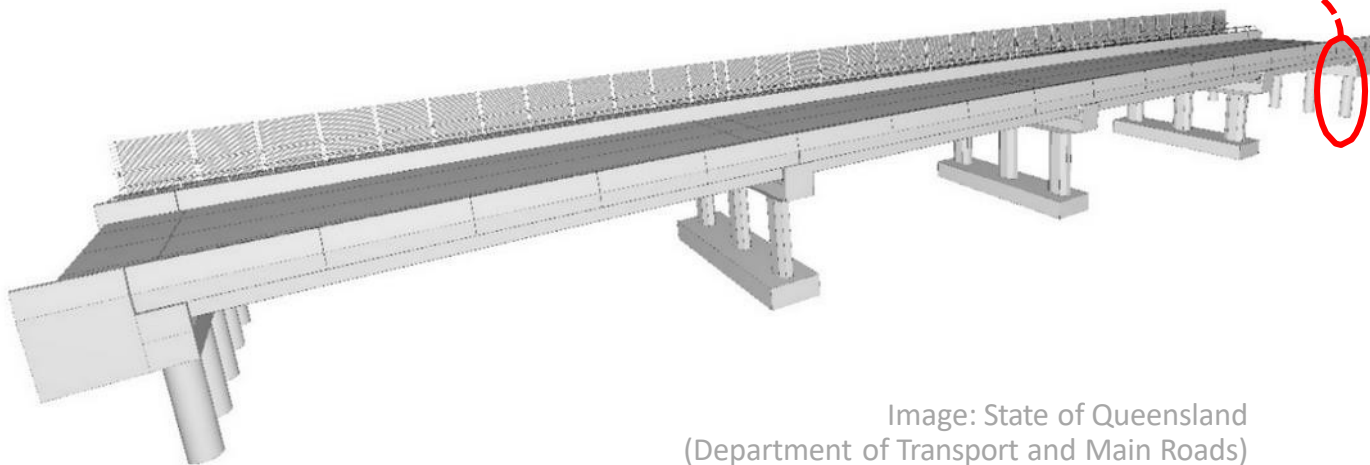
## 3.3 Recommendation

**Increase productivity and embed a culture of innovation in the infrastructure sector by adopting an evidence-based digital by default approach to infrastructure planning, delivery and operations.**

*Proposed sponsor: Department of Infrastructure, Transport, Regional Development and Communications*

# Technology orientated project practice: Building Information Modelling (BIM)

Figure 1 – Typical bridge BIM model for a girder bridge



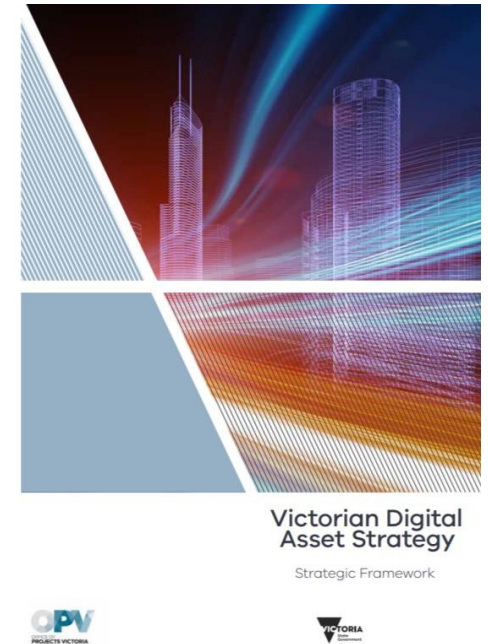
Item	Element	Property	Value
		Name	STR-Conc Precast Octagonal Pile - 150
		GUID	a72ee5153049b-95170e3e36016
		BIM Component Code	S1151-44-F-PP-1
		File ID	PP-A-1
		Contractor Lot Number	BaPP01
		Riched Length (in)	15m
		Final Set (Blow/Disp at completion)	45/15/800
		Driven Depth (in)	12,300
		Hammer Type used	SDM 1212
		Packing Type	Plywood
		Actual Capacity (PDA) (kN)	5000,000
		Constructed Location Staking	705/508/590
		Constructed Location Nothing	41788/459
		Construction Lot Record	Record#
		File Drawing Procedure	Record#
		FDCA Record	Record#
		As Constructed Drawing	Record#
		RPA	Records#
		NCRs	Records#

Image: State of Queensland  
(Department of Transport and Main Roads)  
BIM for Bridges Design Manual 2020

- As a case study
  - Digital representations
  - Object based, attributable
  - Relational
- Application
  - Buildings....but also infrastructure
  - Part of digital delivery
  - Life cycle applications
  - Projects and beyond

# Backed by public policy

- Data to plan and deliver infrastructure projects
- Part of project procurement processes
- Aligns with...
  - AMAF
  - Digital economy, government and transformation



# Implications, risks & challenges

- Make digitalisation meaningful
- Delineate the impact
- Enact an approach

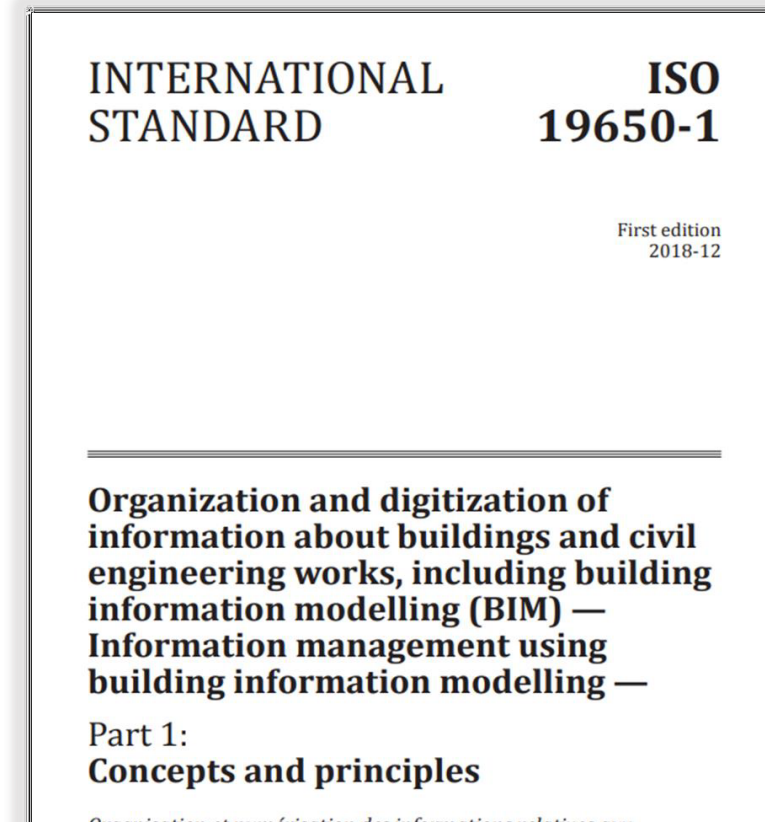


Image: WBDG



# Looking at BIM...from project practice

- Going back to basics
  - Representations and modelling capability, enabled by tech
  - Contrast to pre-BIM (e.g. drawings, CAD, PDFs)
  - What does BIM do that pre-BIM does not?
- Impact on existing
  - Some examples
  - Automated, generative design
  - Irish public procurement case
  - “Information requirements” (ISO19650)?



# Beware the gap...

- Degrees of impact & change
  - Industry practice
  - Supply and demand
- Depth of gaps & limitations
  - Definitions
  - Legacy issues
  - Capabilities
  - Commercial/legal frameworks
  - Standards
- Risk





## BIM in Local Authorities

A paper discussing the issues surrounding the implementation and adoption of digital ways of working/BIM in local authority organisations

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November 2020

## UK perspectives

- Low uptake of BIM and digital practices
- Highlighted challenges
  - Organisational culture, executive sponsorship
  - Supply chain engagement
  - Procurement practices
  - Perception for large-capital new-build projects

# Targeting change, being strategic

- Developing position
  - Testing the value proposition of BAU
  - Propensity for hybrid (existing and new)
  - In-house v outsourcing
- Role of engagement and collaboration
- Implementation
  - Pinpointing where to start
  - Understanding differences, relative to stakeholders
  - Risk assessment



# Future Directions



Image: Willow Inc

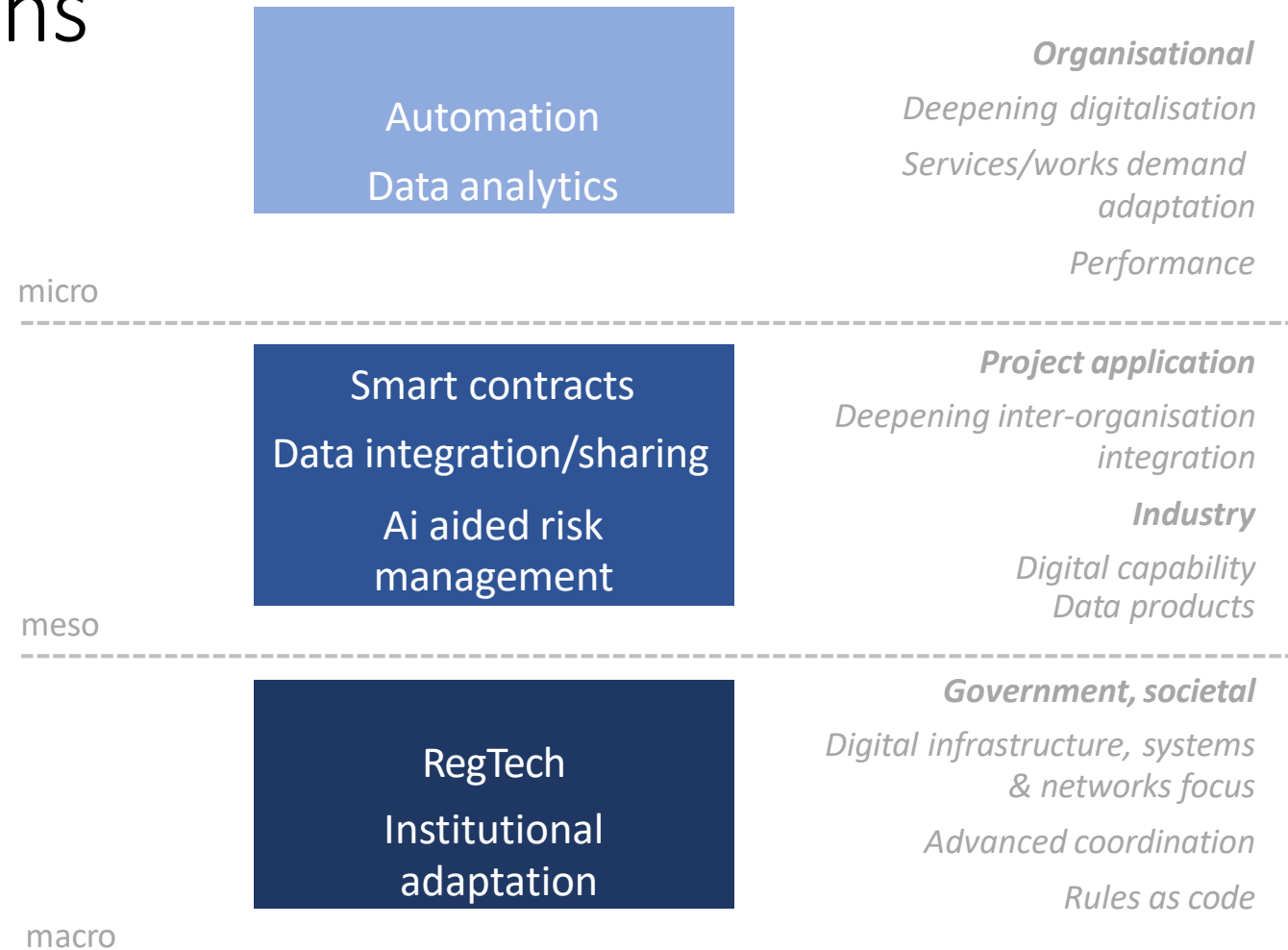
# Enhancement

- Same or similar services and processes
- Convergence
  - E-procurement, platform interfaces
  - Digital object products and markets
- Complementary applications
  - Spill overs
  - BIM based examples
    - Planning (approval processes, VCAT)
    - Property (strata title/land registration)
    - Building and construction code developments (e.g. ABCB, Building Confidence Report)
    - OHS/WHS



Image: Moreland City Council,  
<https://moreland.geocirrus.com/>

# Next evolutions & innovation



# Questions

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# Contacts

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