

# Project & Program Management Symposium 2021

The Future of Project Controls, BIM and Beyond



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# A little about Loretta



## Loretta Bayliss

Group CEO, Prescience Group  
Brisbane, Australia



Prior to Prescience, industry career in Telecommunications, Aviation, Energy, Oil and Gas and tier 1 technology consulting



Clear focus on enterprise technology solutions, transformational IT project management and implementing with passion, integrity & vision

# Career Learnings & Takeaways



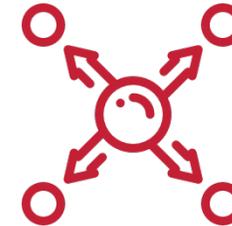
Begin with the end in mind



Don't eat the elephant whole



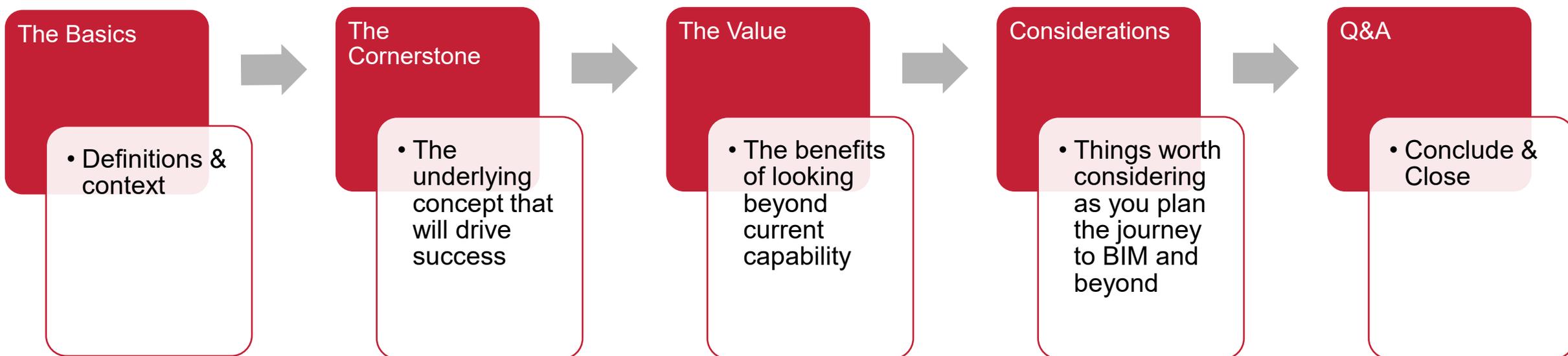
Ask the silly questions



Seek outcomes, not solutions to symptoms



Always ask why





“

“Nothing is more powerful  
than an idea whose time  
has come.”

*Victor Hugo*

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# THE BASICS

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Definitions & Context

# What's in a name?

## Getting your head around The Lingo

- **Project Controls**

A process that encompasses the resources, procedures, and tools for the planning, monitoring, and controlling of all phases of the capital project lifecycle.

- **BIM**

Building Information Modelling is the process of creating and managing a digital model that include data associated with physical and functional characteristics (structural, energy, geometric, plant engineering, etc.) across a project lifecycle.

- **Internet of Things**

A virtual representation of real-world entities and processes, synchronized at a specified frequency and fidelity.

- **Digital Twin**

A virtual representation of real-world entities and processes, synchronized at a specified frequency and fidelity. In layman's terms, an exact digital replica of something in the physical world, overlaid with real-time, usage based data.

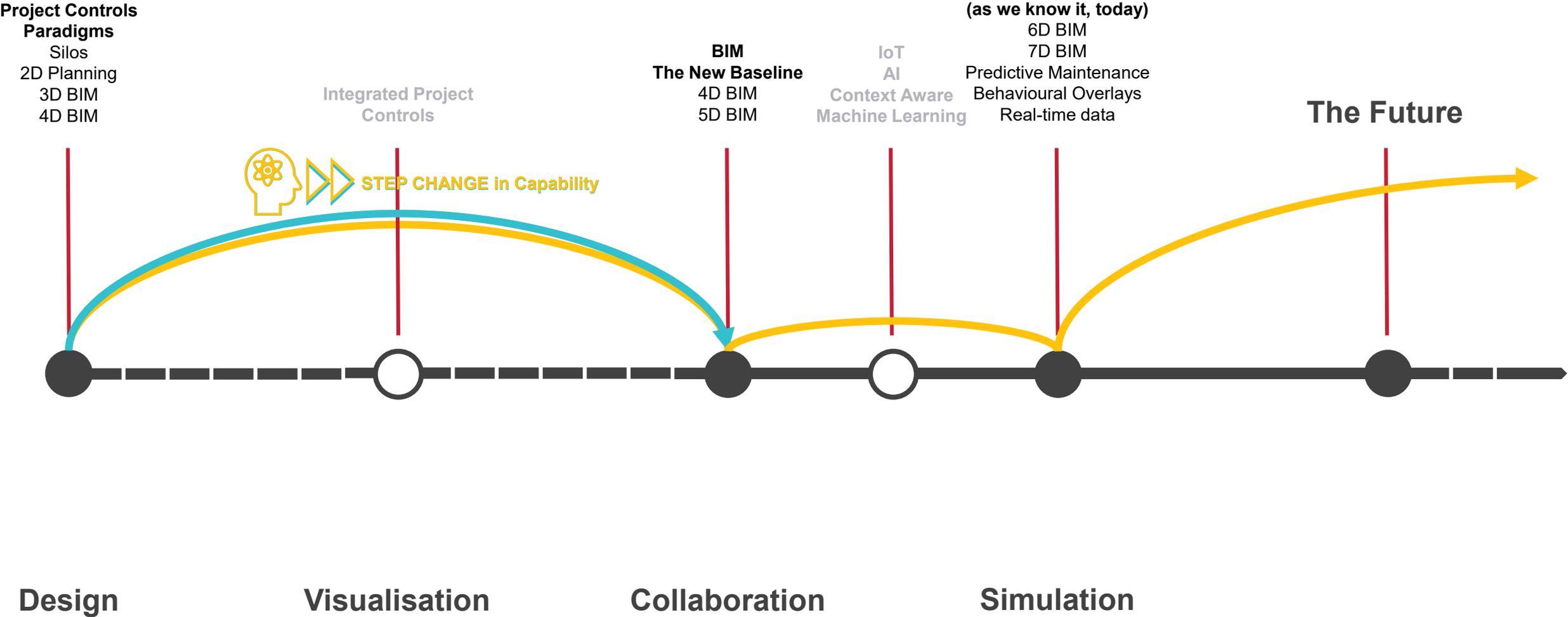


# THE CORNERSTONE

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The less obvious drivers of success

# The BIM and Beyond Journey





“The biggest thing about BIM is that it’s moving us back to interdisciplinary work.”

*Kathleen Liston*  
co-author of *BIM Handbook*



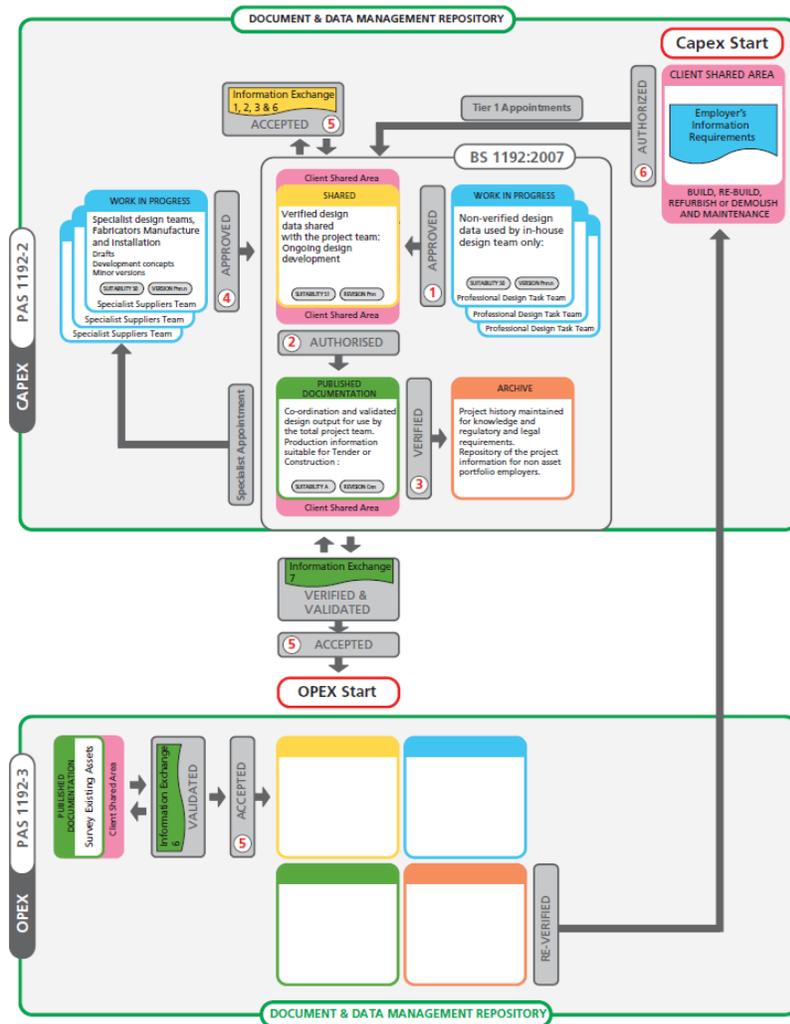
“BIM still continues to be very much at the forefront of our professional consciousness. This is hardly surprising, since BIM has been universally acknowledged as a ‘disruptive technology’, and it is causing us all to rethink our processes and identities.”

*Lachmi Khemlani*  
Founder & Editor, AECBytes

# A foundation of strength

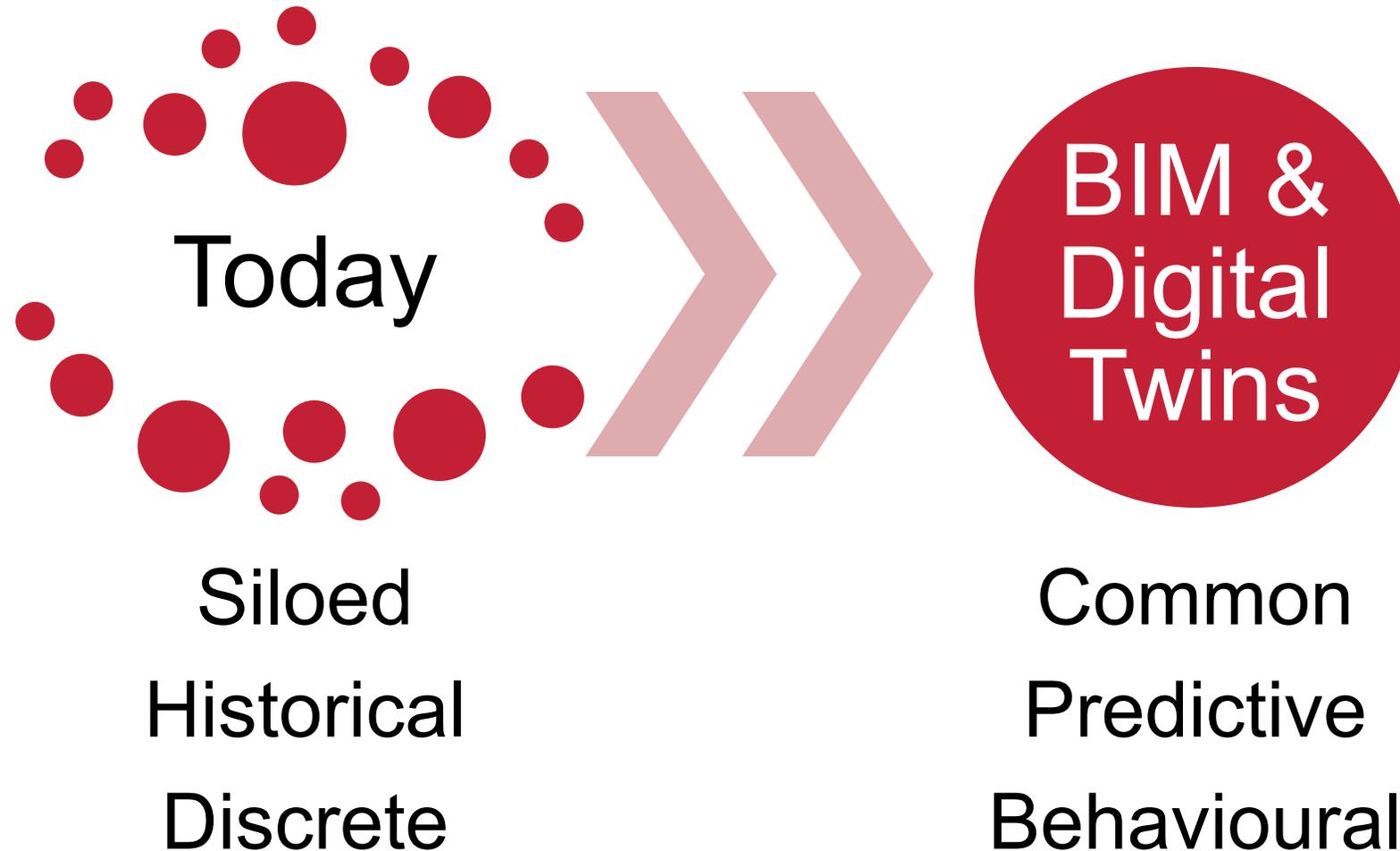
## Common Data Environment (CDE)

- Integrated Project Controls and reporting provided first generation centralised data storage, alignment of data elements and outcome driven processes.
- The Common Data Environment concept was first formally associated with BIM as an online place for collecting, managing and sharing information amongst a team working on a project.
- In the digital twin context, the CDE provides the right standards and systems to avoid data silos and duplicate information, across a broader set of sources than a BIM CDE alone.



The CDE is core to the BIM and Beyond journey.

# The CDE supports the information journey



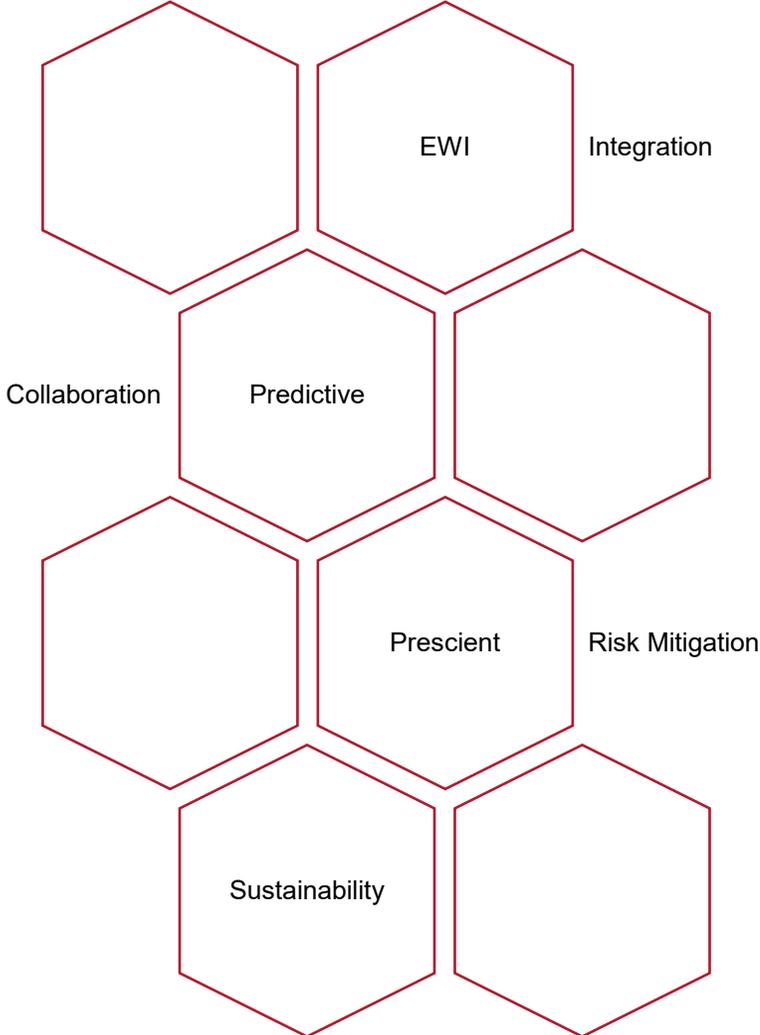


# THE VALUE

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The benefits of looking beyond current capability

# Benefits of extended digital capability





# COMMON PITFALLS

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And how to avoid them!

# There is a theme emerging!



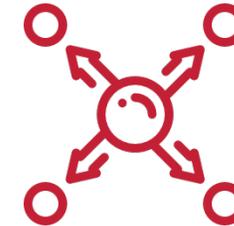
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# The devil is in the detail

- Accurate capture of physical properties
- Real-time data updates and associated data volumes
- Conflict detection and resolution
- Interaction between the physical and digital layers
- Contract and legal implications

# Reading List

MARR, Bernard (2019) **7 Amazing Examples of Digital Twin Technology In Practice**, <https://www.forbes.com/sites/bernardmarr/2019/04/23/7-amazing-examples-of-digital-twin-technology-in-practice/?sh=102d10926443>

**Glossary of Digital Twins**, <https://www.digitaltwinconsortium.org/glossary/index.htm>

**Avoiding the Pitfalls of BIM and Digital Twins**, <https://3drepo.com/wp-content/uploads/2021/04/3D-Repo-White-Paper-Digital-Twins-How-to-avoid-the-pitfalls-of-BIM-1.pdf>

## Industry Bodies:

Australasian BIM Advisory Board, <https://www.abab.net.au/>

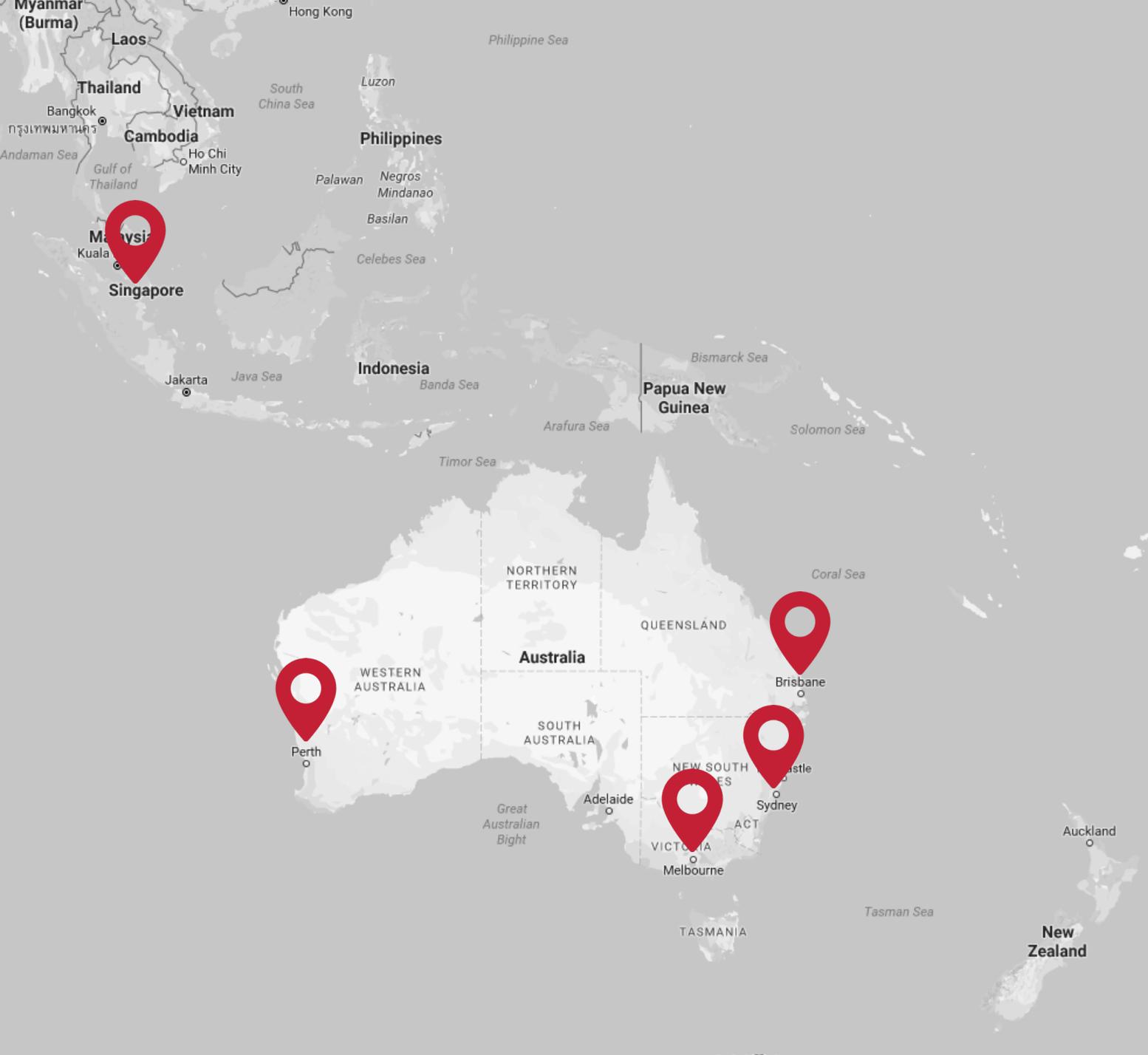
British Standards Institute, <https://www.bsigroup.com/>

Building Smart, <https://www.buildingsmart.org/>

Digital Twin Consortium, <https://www.digitaltwinconsortium.org/>

# Thank You!





# Get in Touch



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# Dark Art or Fine Science

