

Prof. dr. Keith Hampson



Opening Conference 2019 | Intelligence & Sustainability

IFMEC Conference

International Facility Management Expert Centre
Doorn, The Netherlands – 26 April 2019

SBEnc

***Industry, Government and Research Collaboration
in the Built Environment***

Professor Keith Hampson, CEO (SBEnc)



Sustainable
Built Environment
National Research Centre

Growth of Collaborative Research through Australia's SBEnc

Construction Research Alliance



CRC Construction Innovation
BUILDING OUR FUTURE



Sustainable
Built Environment
National Research Centre

1996



2001



2009

2010



2012



2018/21



Ongoing



**Sustainable
Built Environment**
National Research Centre



Program 1 - Greening the Built Environment

Program 2 – People, Processes and Procurement

Program 3 - Productivity through Innovation

- » **Collaborative research centre with key international partners**
- » **Industry, government and research partners**
- » **Applied research and industry outreach across integrated themes**



Sustainable
Built Environment
National Research Centre

Our Mission

To be a world-class research and knowledge broker in sustainable infrastructure and building design, construction and management

*To deliver research that adds value
to our partners' businesses*

SBEnc Core Partners



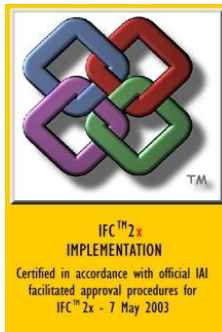
Collaborating Partners



Australian Government
Department of Education, Employment
and Workplace Relations
Office of the Federal Safety Commissioner



Australian Government
Department of Infrastructure, Transport,
Regional Development and Local Government



Collaborating Partners



Collaborating International Partners



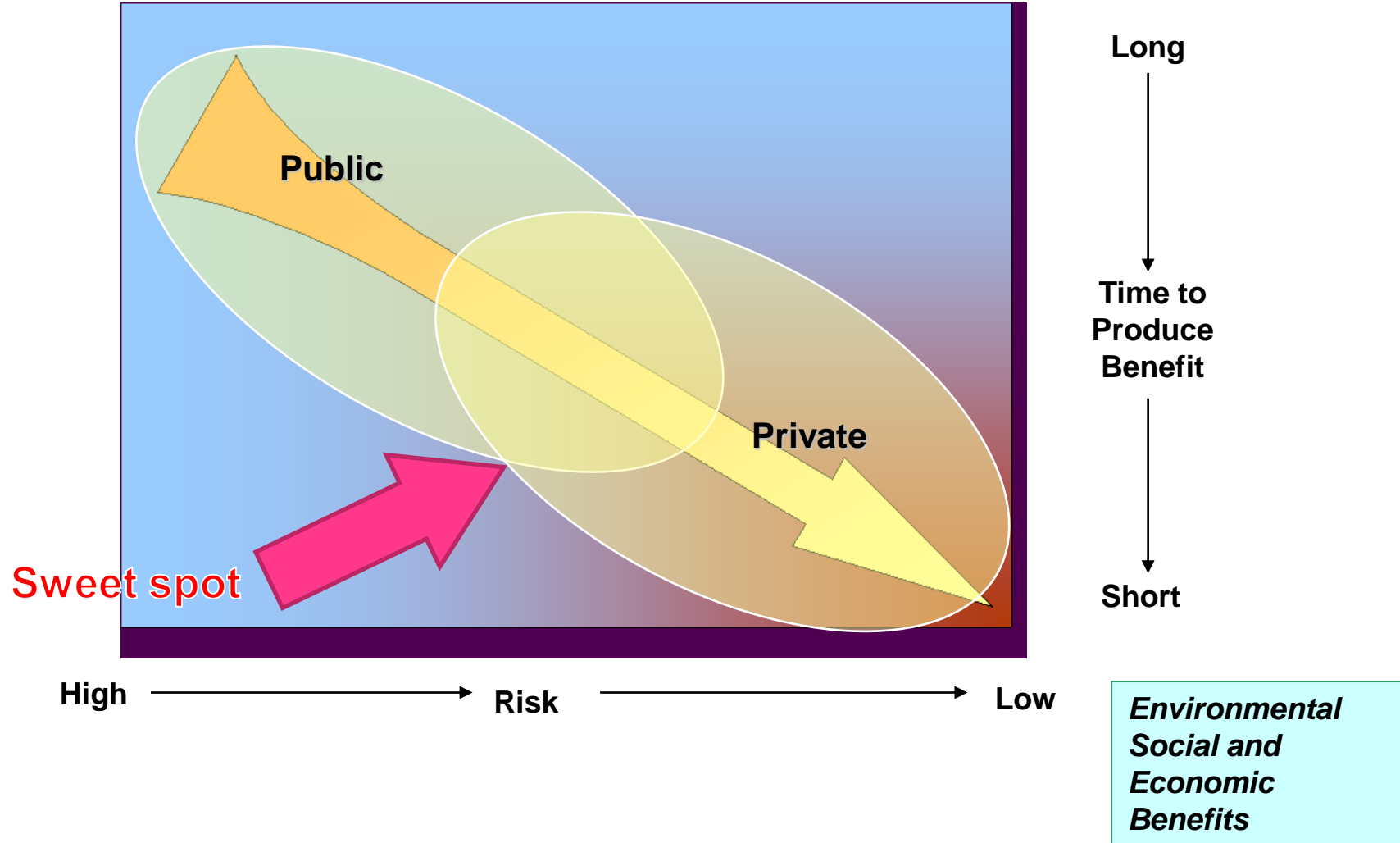
University of Zagreb



International Council
for Research and Innovation
in Building and Construction



Research Space

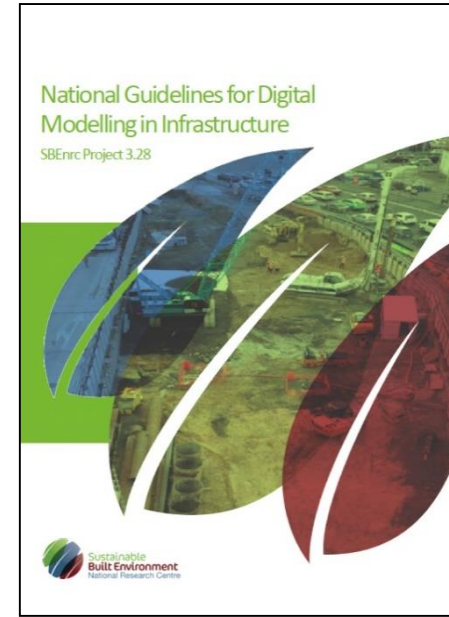
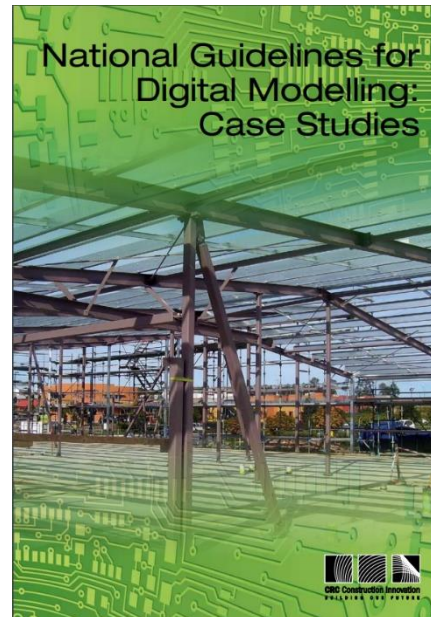
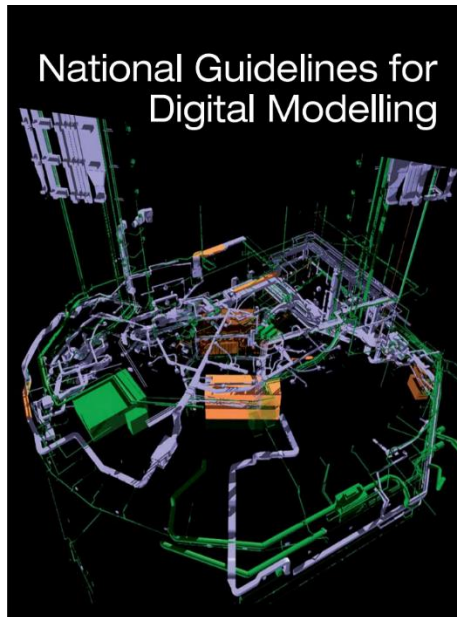


What do we really do?

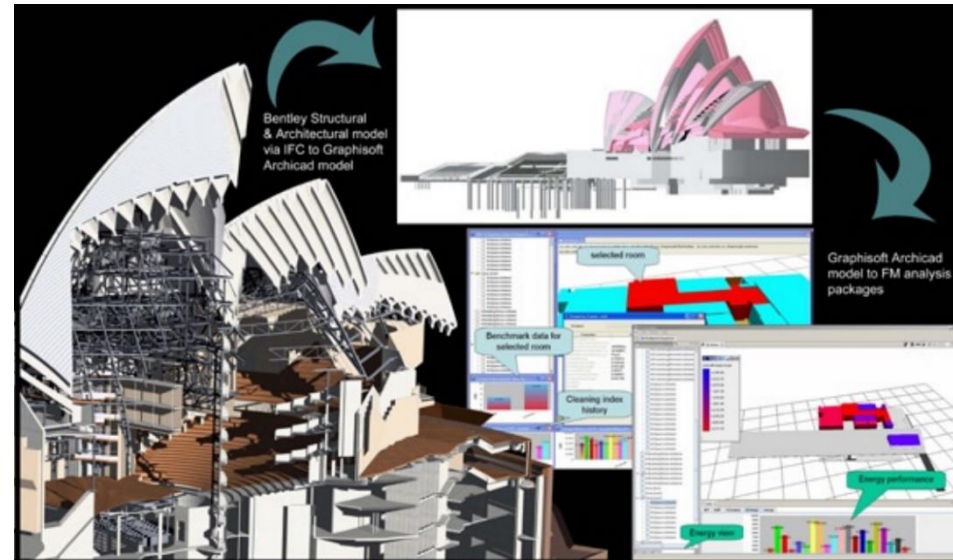
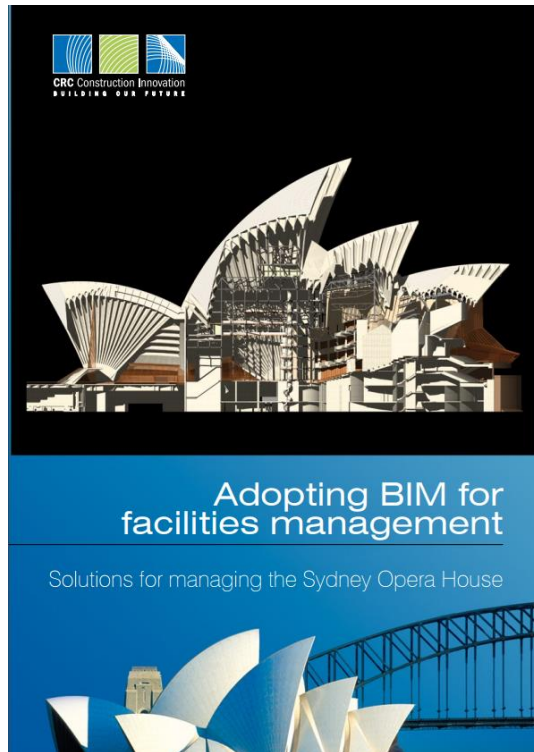
Public-Private Partnerships in R&D

- **Build innovative networks of industry, government and researchers for applied research**
- **Research skills training for industry**
- **Respond to global challenges with national and international partnerships**

Two National BIM/DE Guidelines



Adopting BIM for Facilities Management



Australian Research Council (ARC)

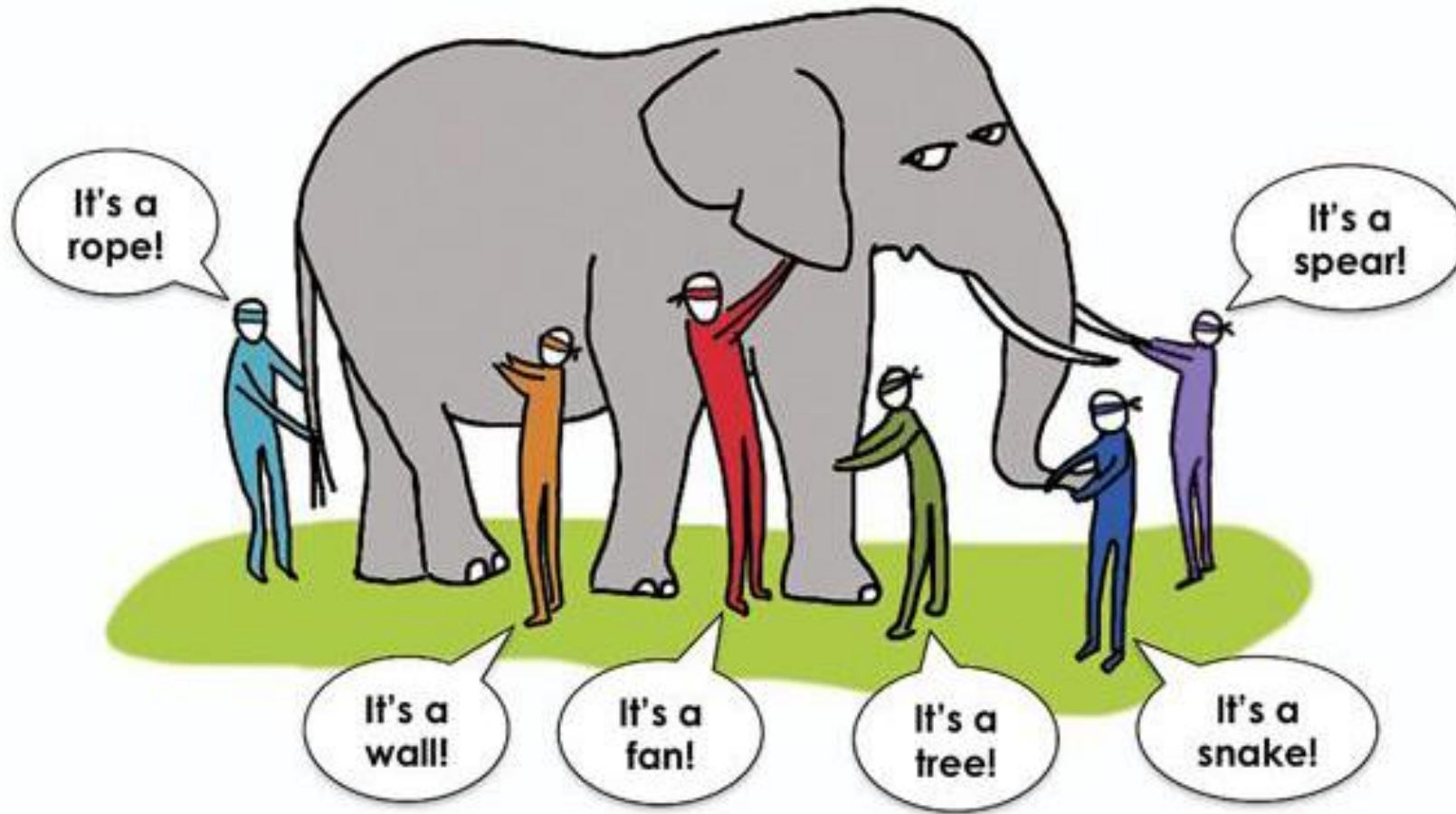


Australian Government

Australian Research Council

A glance into our DE journey

What is DE/BIM?



SBE nre Projects – Organic Evolution

Completed



2.34 Driving Whole-of-life Efficiencies through BIM and Procurement

In 2013, the Australian Department of Industry identified lifting productivity and economic growth as

Processes **Completed**



3.27 Using Building Information Modelling (BIM) for Smarter and Safer Scaffolding Construction

Information Sheet (544Kb, Sept 2014) Temporary structures like scaffolding have a significant impact

Productivity **Completed**



3.28 National BIM Guidelines and Case Studies for Infrastructure

Information Sheet (472Kb, March 2015) Mechanisms that improve collaboration and communication in the

Productivity **Completed**



3.48 Sustainable Asset Management: Selecting Optimal Maintenance Strategies Based on Multi-criteria Decision Making

Project Fact Sheet In an economic downturn, it is of critical importance to

Productivity **Completed**



2.46 Whole-of-life Value of Constructed Assets through Digital Technologies

In the coming decades Australia and other countries will be facing challenges as a

Processes **Current**



Unlocking Facility through Lifecycle

Project Fact Sheet (320Kb, 2018) Lifecycle thinking significant potential for

improving the

Processes **Current**



SBEnc Project 2.51

Developing a Cross-Sector Digital Asset Information Model Framework for Asset Management (DAIM)

Project Team

Colin Jordan, Project Chair
Former VicRoads Chairman & CEO



Keith Hampson, Project Leader
Curtin University



Will Hackney, Industry Leader
Aurecon



**Xiangyu Wang, Research
Leader/Infrastructure**
Curtin University



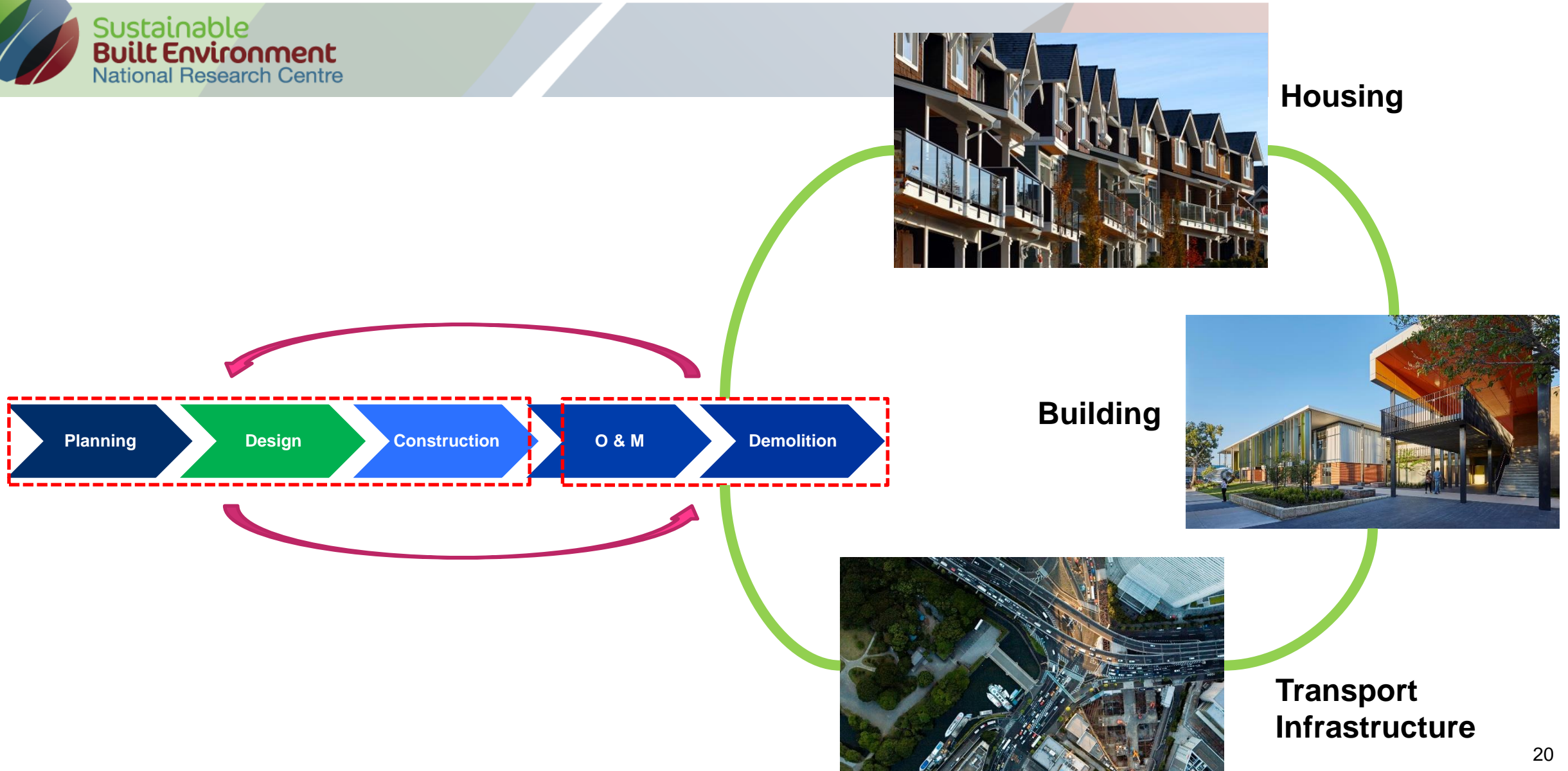
**Sherif Mohamed, Research
Leader/Housing and Building**
Griffith University

Ammar Shemery, Project Manager
Curtin University



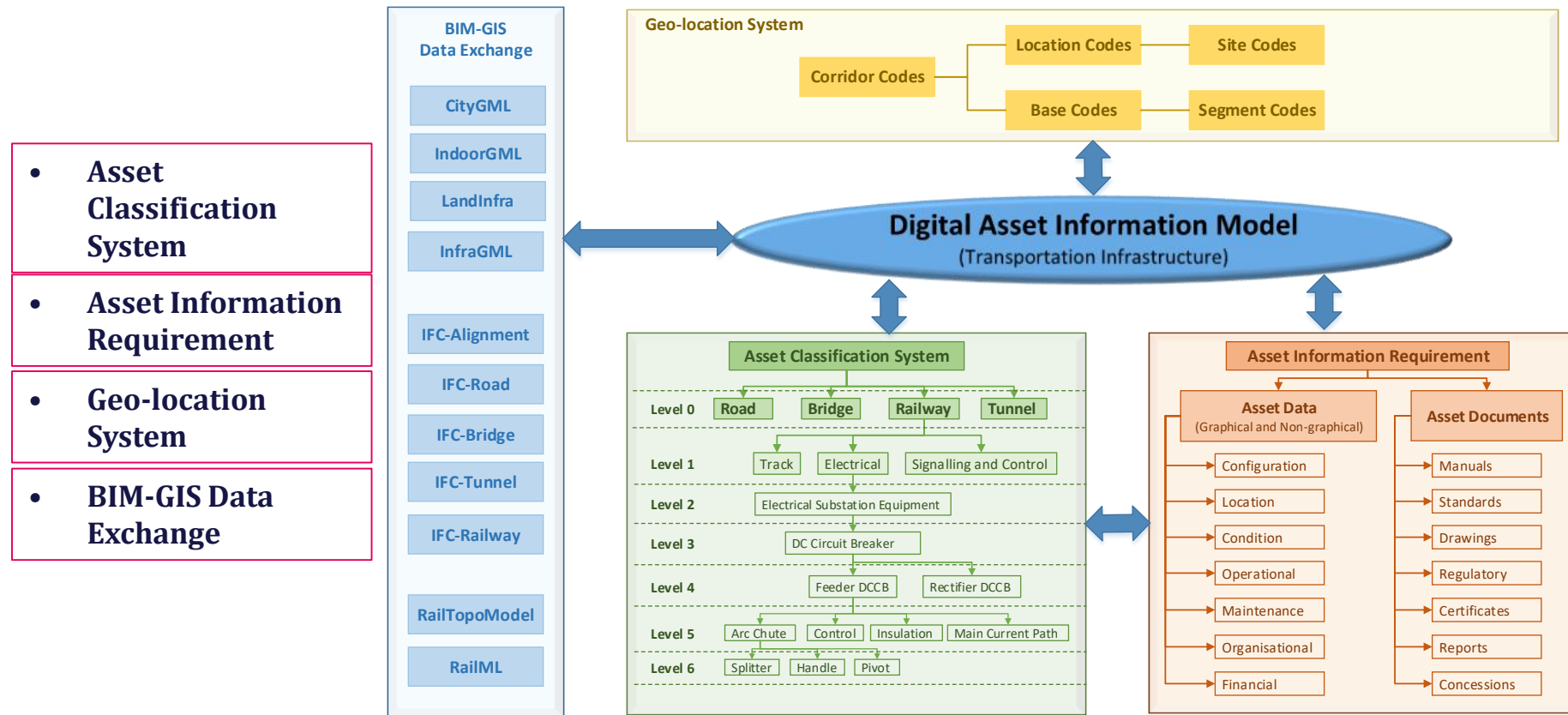
What is P2.51?

From D&C to Asset Management



How P2.51?

Digital Asset Information Model Framework

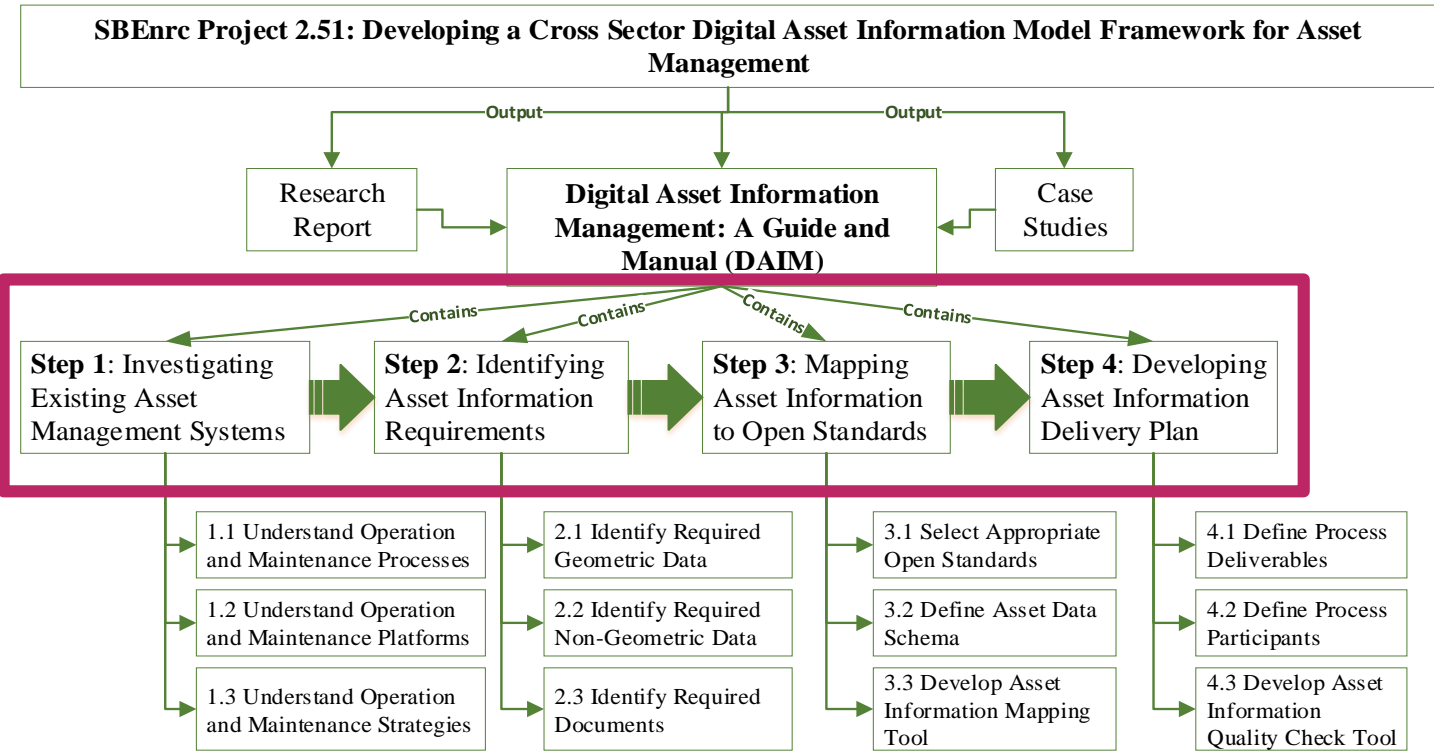
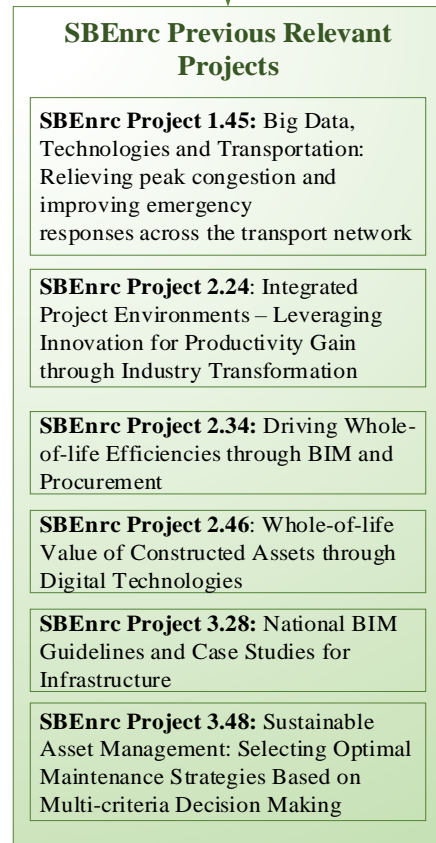


- Asset Classification System
- Asset Information Requirement
- Geo-location System
- BIM-GIS Data Exchange

P2.51 Overarching Process Chart



Future Trends: Digital Transformation of Housing, Buildings and Infrastructure



Project 2.51 Outputs




**Digital Asset Information Management (DAIM):
A Guide and Manual**

Final Industry Report
Project 2.51: Developing a Cross-sector Digital Asset Information Model Framework for Asset Management

October 2018
Keith Hampson, Jun Wang, Peng Wu, Robin Drogemuller, Sara Omrani, Ammar Shemery


**Digital Asset Information Management:
Case Studies**

Final Case Studies Report
Project 2.51: Developing a Cross-sector Digital Asset Information Model Framework for Asset Management

December 2018
Keith Hampson, Jun Wang, Robin Drogemuller, Peng Wu, Sara Omrani, Ammar Shemery


**Digital Asset Information Management:
Research Report**

Project 2.51: Developing a Cross-sector Digital Asset Information Model Framework for Asset Management

XXXX 2019
Keith Hampson, Jun Wang, Robin Drogemuller, Peng Wu, Sara Omrani



**Digital Asset Information Management:
Good Practice Guide**

Project 2.51: Developing a Cross-sector Digital Asset Information Model Framework for Asset Management

XXXX 2019

P2.51 Recommendations and Conclusions

Should we 'BIM' or 'not BIM'?

Available Information
No existing documentation
Existing 2D design documentation
Existing BIM
New project



SBEncr Project 2.64

Unlocking Facility Value through Lifecycle Thinking (October 2018 to March 2020)

Project Team

Steve Golding AM RFD - Project Chair

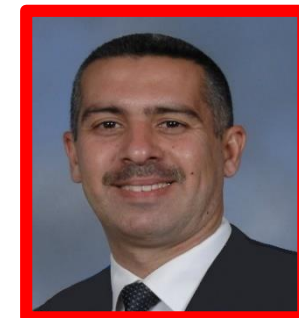
Former Director General – Queensland Department of Transport and Main Roads



Peng Wu, Project Leader
Curtin University

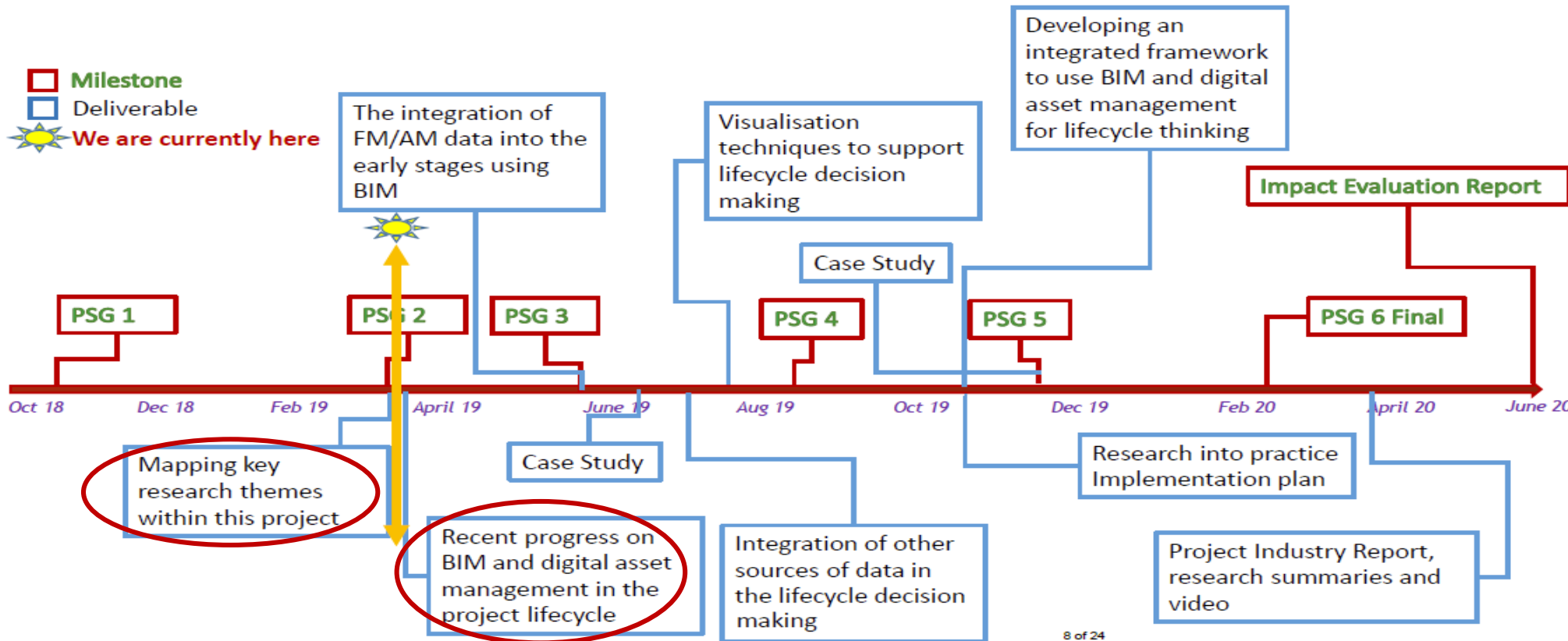


Ammar Shemery, Project Manager
Curtin University



Project 2.64

Aim: to use smart frameworks to appropriately capture information required for key decisions made across the life-cycle of facilities through developing an automated integrated system for asset management.



Key Research Theme Mapping



Research interests based on discussion with SBEnrc Core Members



MRWA and BMW



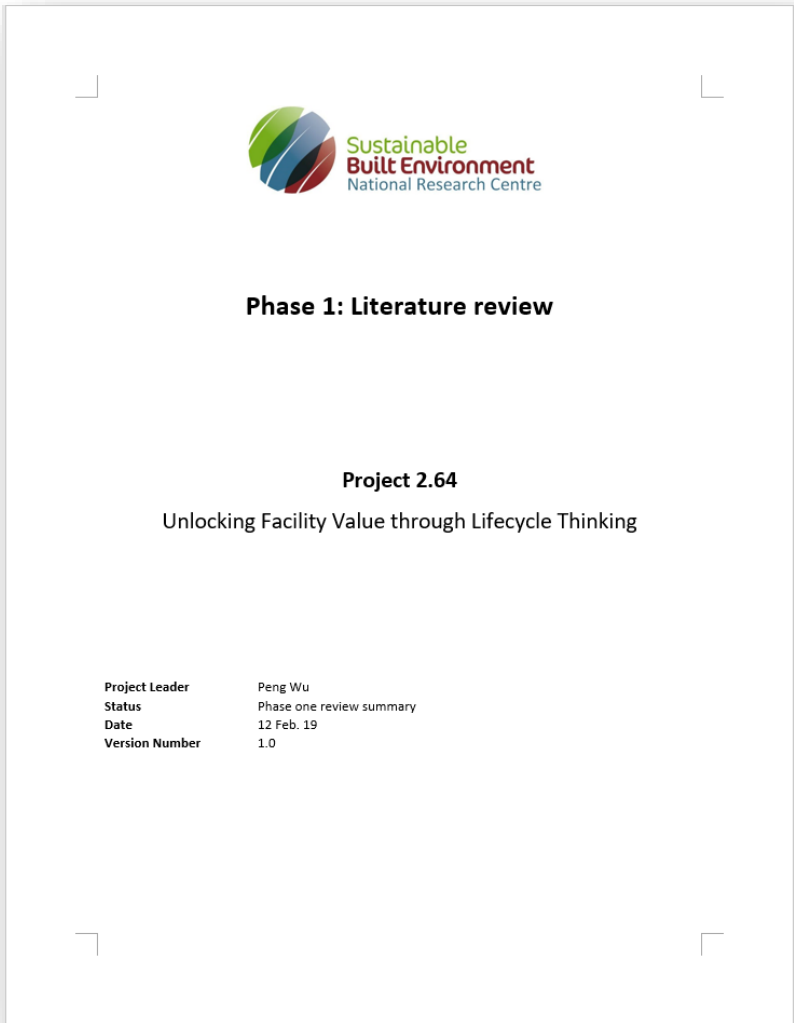
QDHPW



NSW RMS



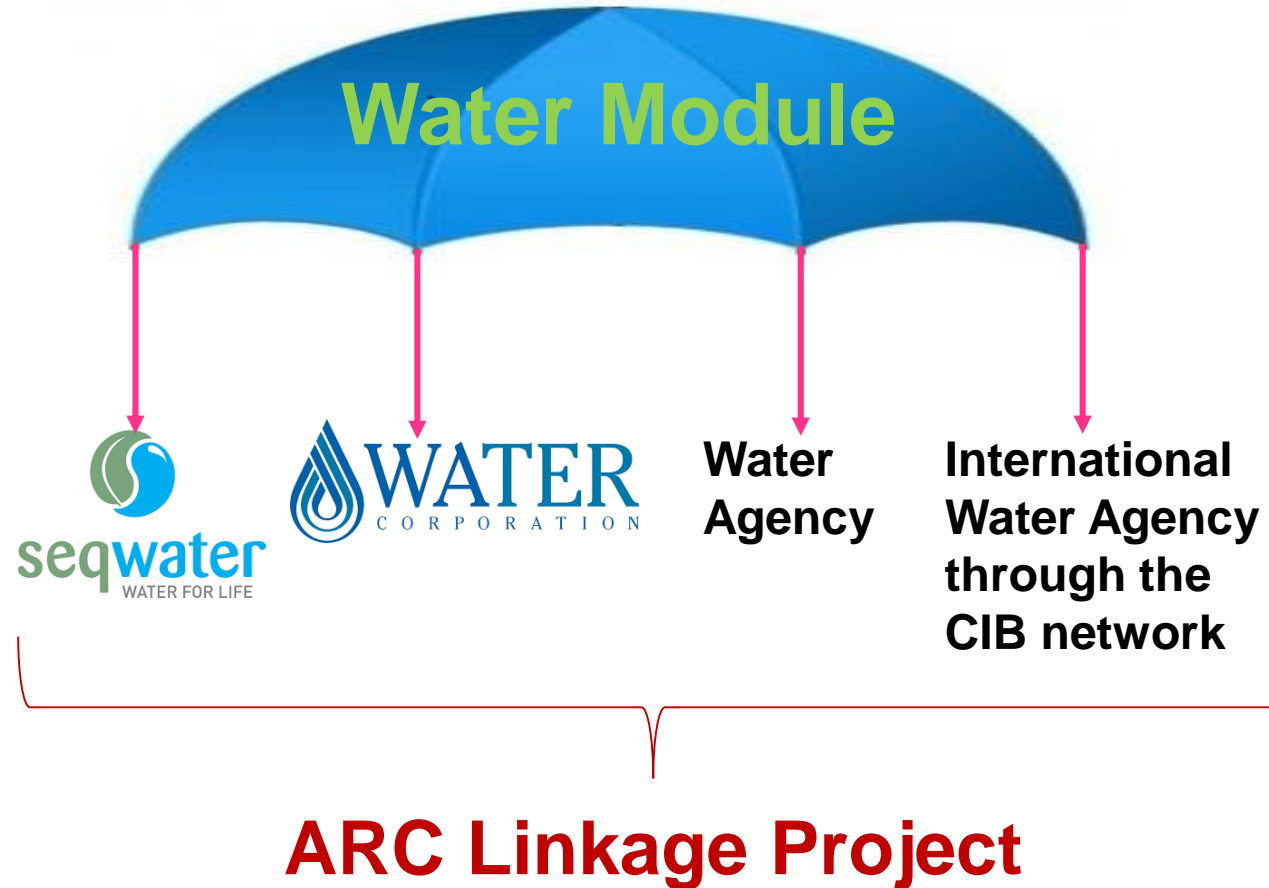
Literature Review: BIM and Digital Asset Management



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- 3. BIM and Digital Asset Management..... 5

P2.64 Add-on Modules



Lessons to date



Research

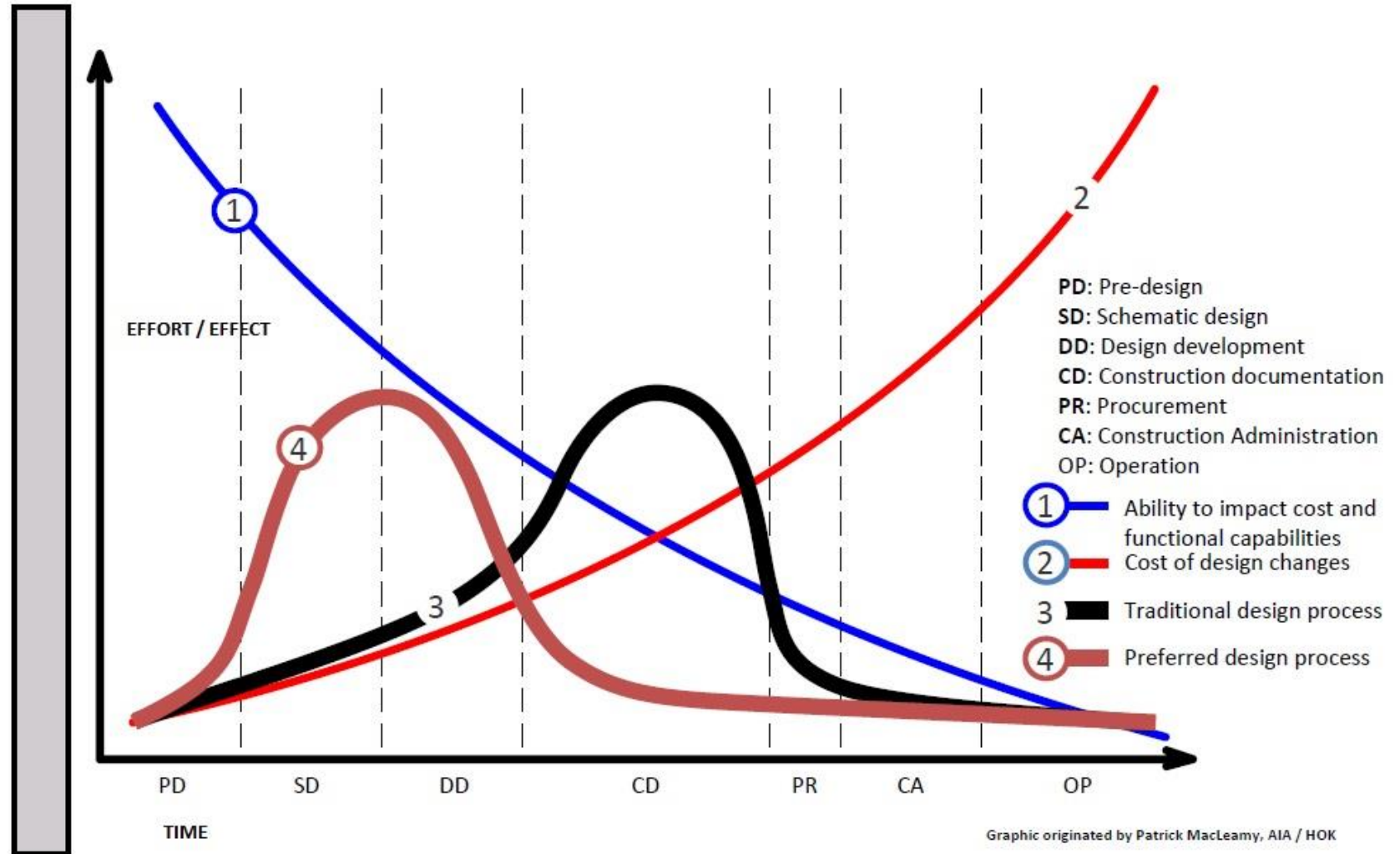
- Industry leadership
 - Engage, engage, engage
- Client buy-in is essential
- The early bird catches the worm

Practice

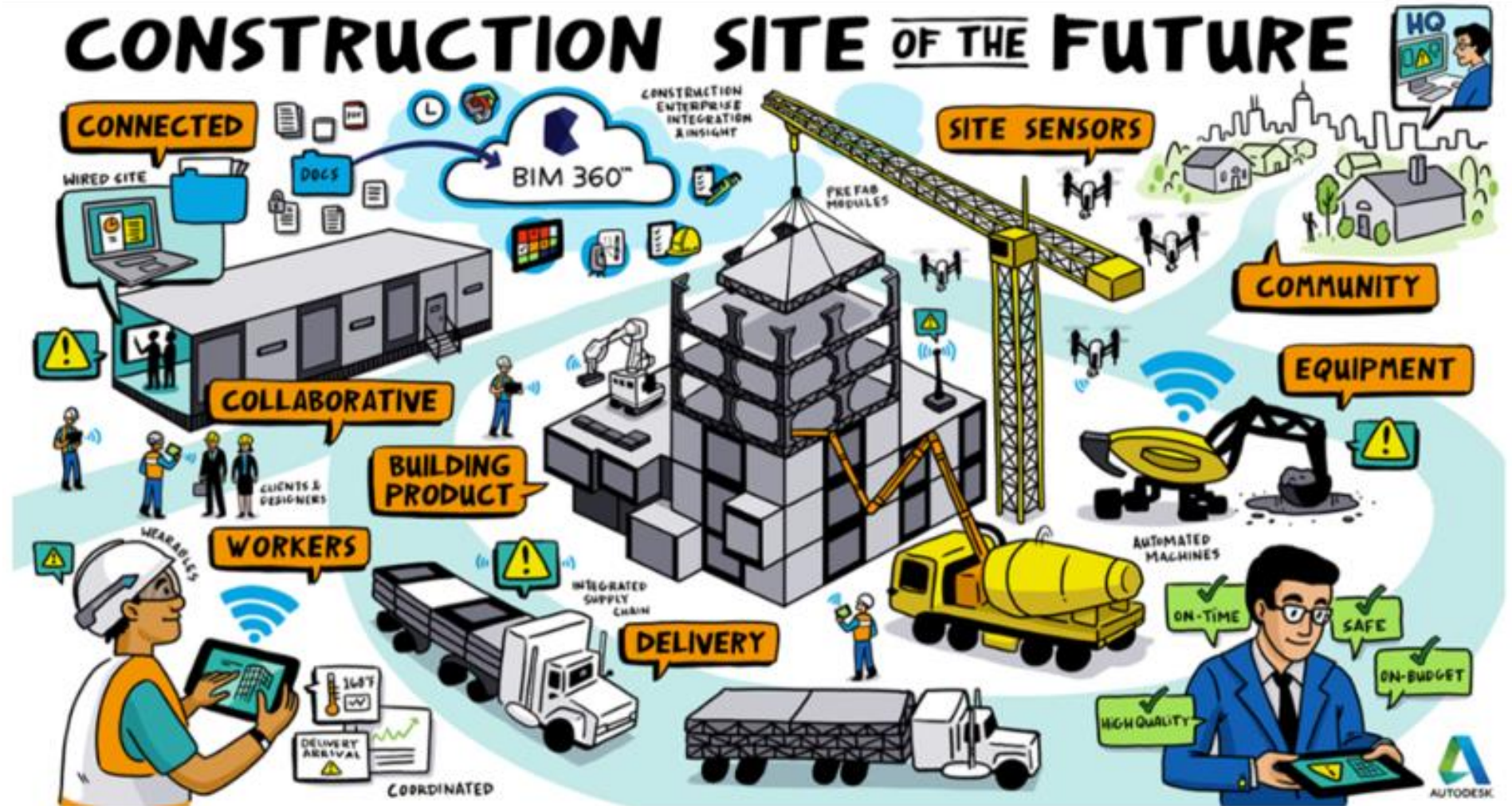
- Industry leadership
 - Engage, engage, engage
- Client buy-in is essential
- The early bird catches the worm

MacLeamy Curve

**BIM workflow
versus traditional
process**



Future of DE/BIM





Sustainable
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National Research Centre
Australia

www.sbenrc.com.au

Building a safer and more productive industry