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

Keith Hampson, CEO  
Sustainable Built Environment National Research Centre (SBEnrc)

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**Growth of Collaborative Research through Australia’s SBEnrc**

1996  
2001  
2009  
2010  
2012  
2018/21  
Ongoing
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

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
SBEnrc Core Partners

SBEnrc Collaborating Partners
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
How? Developing New Projects

- Industry-led themes
  - Existing and future partners lead the agenda
- National process (Sydney, Melbourne, Brisbane and Perth)
- 3 questions:
  - What keeps you awake at night?
  - What is the research that could make a difference?
  - How will you implement outcomes in your business?
- RUC recommends => Board invests
- February Workshops => October commencement

Completing Projects

- 1.41: Valuing Social Housing
- 1.42: Innovative Industrialised Buildings
- 1.43: Retrofitting Public Buildings for Energy and Water Efficiency
- 1.44: Scenario Planning Transport Futures
- 1.45: Big Data, Technology and Transportation
- 3.48: Sustainable Asset Management
Current Projects

- 1.54: Procuring Social and Affordable Housing: Improving Access and Delivery
- 1.53: Resilient Buildings: Informing Maintenance for Long-term Sustainability
- 1.55: Integrated Cities: Procuring Transport Infrastructure through Integrating Transport, Land Use and Finance
- 1.52: Tech-enabled Transport: Informing the Transition to Technology-enabled Transport Vehicles and Infrastructure
- 2.51: Developing a Cross-Sector Digital Asset Information Model Framework for Asset Management

Transport Focused Projects

1.3 The Future of Roads: Reducing Environmental Pressures, Sustainability Reporting, and Considering Future Scenarios
1.35 Transport Network Resilience: Disaster Logistics and Infrastructure Vulnerability
1.22 Strategies and Solutions for the Future of Roads: The Future of Roads – Information Sheet The coming decades will see a great
3.28 National BIM Guidelines and Case Studies for Infrastructure

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Transport Focused Projects

1.55 Integrated Cities: Procuring Transport Infrastructure through Integrating Transport, Land Use and Finance

Project Fact Sheet Cities in Australia and globally find it difficult to integrate

2.51 Developing a Cross Sector Digital Asset Information Model Framework for Asset Management

Project Fact Sheet Asset management in the built environment has been the

1.52 Tech Enabled Transport: Informing the Transition to Technology Enabled Transport Vehicles and Infrastructure

Project Fact Sheet The coming decades will see a significant increase in the level

1.44 Scenario Planning Transport Futures: Improved Road and Transport Planning using Digital Scenario Planning Tools

Project Fact Sheet New data suggests Perth and Brisbane are likely to reach a

1.45 Big Data Technologies and Transportation

Project Fact Sheet A key focus for the management of main roads is to

Two National BIM/DE Guidelines

National Guidelines for Digital Modelling

National Guidelines for Digital Modelling: Data Studios

National Guidelines for Digital Modelling in Infrastructure: Workshops

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Adopting BIM for Facilities Management

Australian Research Council (ARC)
ARC Project 1: Scaffold Life Cycle Management

ARC Project 2: Bridge Performance Assessment

Topic 1: Multi-Criteria Optimisation for Sensor Deployment
Topic 2: Reserve Capacity Estimation Based on Error Domain Structural Identification
Topic 3: BIM Integrated Decision Support System
P2.51: Asset Information Delivery Manual

Digital Asset Information Manual
(Preliminary structure post workshop discussions)

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1. Introduction
   1.1 Standards and International Best Practices (e.g., International Asset Management Standards)
   1.2 Asset Management overview
   1.3 Asset Management in a plethora
2. Asset Management Process
   2.1 Policy and Procurement
   2.2 Operations
   2.3 Maintenance
3. Asset Classification System

The aim of asset classification is to create an improved understanding of asset features, asset risks, asset uncertainty, asset life, and value, which assists in the management, investment in, planning, prioritisation, operation, and maintenance of the asset.

4. Asset Location Referencing

To assist with its implementation, a series of investment options with appropriate risk and rewards should be considered. The identification of major reference points is necessary to enable asset prioritisation and management decisions. The implementation of the asset location referencing and its benefits will be discussed in the next section.

5. Asset Information Management

Our work into asset information management is based on the successful implementation of the asset information management system and its benefits. The implementation of the asset information management system will be discussed in the next section.

6. Asset Data Storage Standards (Metadata)

This section will discuss the standard of the metadata, including data sources, such as iDLS, IES, ESRI, ZMD, and others. The discussion will include data storage standards and their benefits.

7. Cost Studies

8. Case Studies
   8.1 Case Study 1
   8.2 Case Study 2

9. Appendix

9.1 Reasons for Existing MANRS Standards

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Building a safer and more productive industry

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