PSG#3 - P2.11.2 Building Key Digital Capabilities in the Australian Built Environment

Date: Monday 19th October 2026

Time: 09.30am – 11am AWST

Attendance:

- Andrew Curthoys - Meeting Chair
- Peng Wu (Curtin University) – Project Lead
- Yongze Song (Curtin University)
- Shahin Akhter (Main Roads Western Australia)
- Rolf Engel (Sunshine Coast Council)
- Victor Mantilla (Sunshine Coast Council)
- Ario Susanto (Public Transport Authority)
- David Kelly (Transport for NSW)
- Erezi Utiome (Arcsenti)
- Jun Wang (Western Sydney University)
- Dan Luo (University of Queensland)
- Will Hackney (SBEnrc)
- Adriana Sanchez (SBEnrc)
- Lindsay Kyle (SBEnrc)

Notes

Project Progress Across Five Case Studies: Peng Wu reported that the project is broadly on track across five case studies covering interoperable data models, 12d-to-MetaBIM integration, carbon accounting, LiDAR road-asset detection and Atlas precast quality assurance, with automatic carbon accounting requiring further plugin integration before validation.

Carbon Accounting Workflow and Data Requirements: Jun Wang and Peng Wu explained the integrated MetaBIM carbon workflow, while David and Victor discussed its potential adoption; the main current constraint is that 12d and IFC models often lack reliable material identities, classifications and complete 3D elements.

Interoperability and Future Platform Expansion: Ario Susanto asked whether the research could test platforms beyond 12d, including OpenRoads, Civil 3D and IFC; Peng Wu said this case study is limited to the available 12d and converted IFC data, while a newly funded research hub may support broader platform testing.

Deliverables Milestones and Partner Engagement: Peng Wu confirmed that reporting, partner sessions and payment milestones are on schedule, with the unified data-framework report completed and further one-to-one partner reviews and preliminary case-study outputs planned.

Implementation Barriers and Research Uptake: The PSG identified missing material specifications and emission factors as the main implementation barrier, while Peng Wu outlined a temporary ECCL-based workflow and ongoing dissemination through partner and industry events.

Communication and External Visibility: The PSG agreed that the project's outcomes should be made more visible to industry, with Will Hackney confirming the appointment of Lauren Gubbin to

coordinate forward-looking communications and Ario Susanto supporting a structured social-media campaign.

Atlas Engagement and Meeting Scheduling: Will Hackney and Adriana Sanchez confirmed that Atlas participation has been affected by a change in contact personnel and Monday scheduling, so the team will identify a replacement contact and consider moving future PSG meetings to improve Atlas involvement.

Award Submission Exploration: Will Hackney proposed exploring a BuildingSMART award submission to recognise the project's impact, and Andrew Curthoys supported investigating the Australian review route before any international submission.

Actions

1. **Carbon Estimation Validation:** Organise a one-to-one presentation for Sunshine Coast Council on the 12D/IFC carbon-estimation workflow and its findings. (Peng Wu)
2. **Atlas Engagement:** Identify a suitable Atlas contact to support continued engagement on the precast-component and brick-laying case studies, and present preliminary outputs at the next PSG meeting. (Peng Wu, Will Hackney)
3. **Cross-Platform Testing:** Scope the proposed testing of OpenRoads, Civil 3D and IFC alongside 12D through the newly funded construction-productivity research hub. (Peng Wu, Ario Susanto, Victor Mantilla, Rolf Engel)
4. **Industry Dissemination:** Provide suitable opportunities for additional dissemination of the project outcomes beyond the events already completed. (All industry partners)
5. **Award Submission:** Investigate the BuildingSMART award pathway, including the Australian review stage, and report back to the next PSG meeting. (Will Hackney)
6. **PSG Scheduling:** Reschedule the February, May and August 2027 PSG meetings from Mondays where feasible, taking Atlas availability into account, and circulate the revised dates. (Adriana Sanchez, Lindsay Kyle)
7. **Technical Report:** Prepare and share the technical report covering the vision-detection literature review and initial feasibility testing. (Dan Luo)