building 4.0 crc

SHOWCASED PROJECTS

BUILDING 4.0 CRC

#6 Field Data Collation to Support Real-Time Operational Management (Scoping Study)

PROJECT PARTNERS:
Lendlease Digital, Ynomia, Standards Australia, Monash University,
Queensland University of Technology, The University of Melbourne

PROJECT OVERVIEW:
Accurate and timely information about construction processes is essential to provide greater visibility and understanding of project progress and therefore deliver the projects on-time and on-budget.

This project seeks to make significant advances in the knowledge and practice of acquiring and managing real-time operation data. More specific objectives include 1) understanding how passive data collection can improve the management and coordination of on-site activities, 2) analysing state-of-the-art in sensing and analytics technologies, and 3) conducting field tests to assess and validate the key assumptions underlying an implementation roadmap.
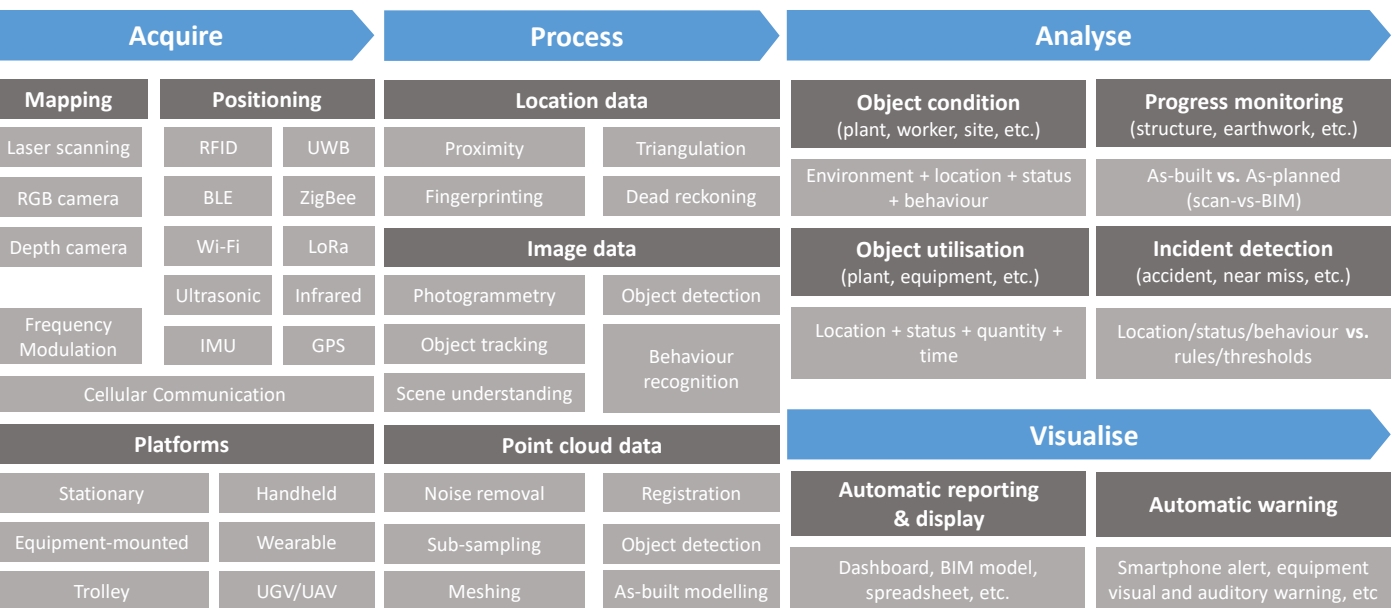
Technological landscape of passive data collation on construction sites

Based on a comprehensive literature review and market survey, we establish a technological landscape with respect to the four major field data collation processes (i.e., acquire, process, analyse and visualise). Data acquisition technologies are categorised into mapping and positioning given the nature of the data, with the common platforms hosting the sensors listed; processing techniques are summarised with regard to data types; four main focuses for analysis are identified and associated with the specific field data; examples of the two common means to visualise and communicate field operational information are provided.

Credit: Dr Yihai Fang
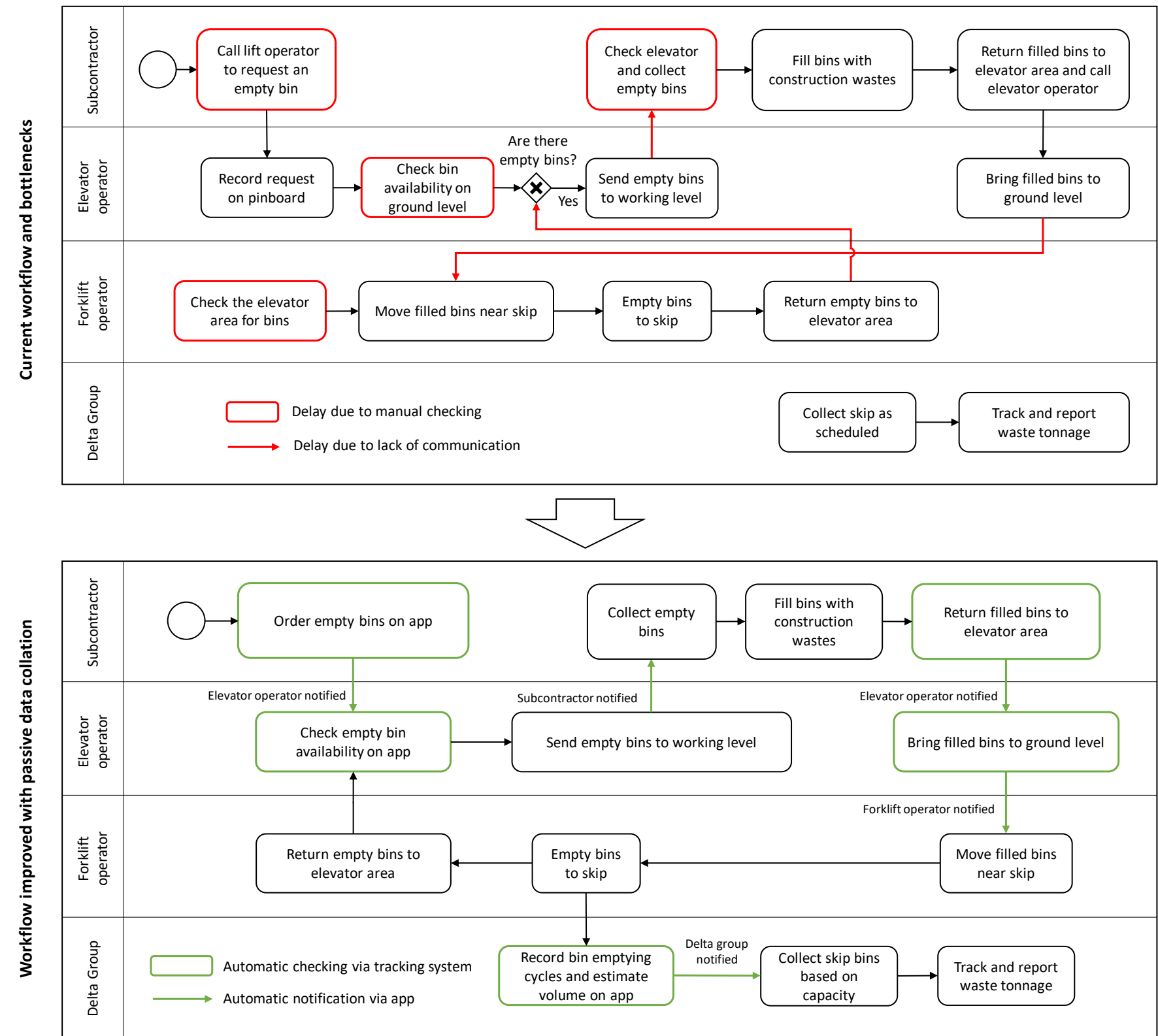
Waste disposal workflow improvement with passive data collation

Through multiple interviews with workers and on-site observations, the current workflow of waste disposal on an active building site was described using a Business Process Model and Notation (BPMN) model, where bottlenecks that cause delays (time wastes) in this process were identified. By taking advantage of passive data collation technologies, a new waste disposal workflow was proposed to demonstrate the anticipated benefits in streamlining the coordination and communication between workers and systems involved.
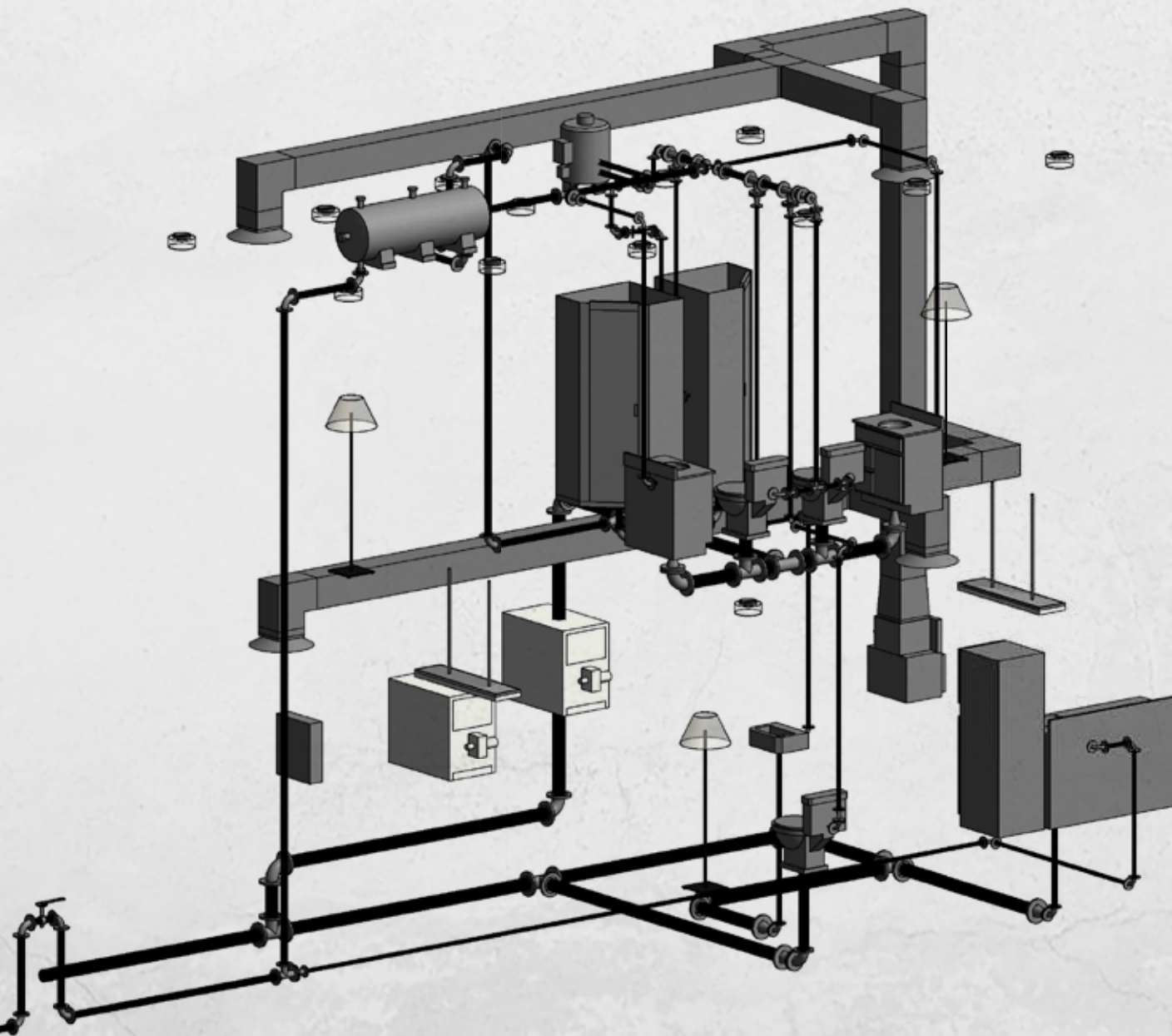
Credit: Dr Yihai Fang

#12 VR/AR Technologies in Vocational Education and Training (Scoping Study)

PROJECT PARTNERS:
Holmesglen Institute, Master Builders Association of Victoria, Monash University, Queensland University of Technology

PROJECT OVERVIEW:
Vocational Education and Training (VET) is a major part of Australia's education system. It is crucial to train practitioners with innovative technologies to gain fundamental skills in critical and creative thinking, ICT capability, and intercultural understanding for meeting Australia's future workforce.

This project aims to explore the integrated utilisation of VR/AR technologies in the VET system. Innovative vocational education based on VR/AR can provide initial skilling and help workers to retrain as jobs and industries evolve.

The scoping study will be used to define desirable extended reality technologies for design and development/evaluation of appropriate skill training platforms in building construction.

Image Right: Augmented and Mixed Reality (AR/MR) Prototype Testing

Image Far Right: Mechanical, Electrical and Plumbing System modelled for 'Clash detection of item-based industrialised building design through mixed reality technology

Image Credit: Project Team

#18 Long Span, Low Carbon Floor Systems (Scoping Study)

PROJECT PARTNERS:
Lendlease Digital, Sumitomo Forestry, Monash University,
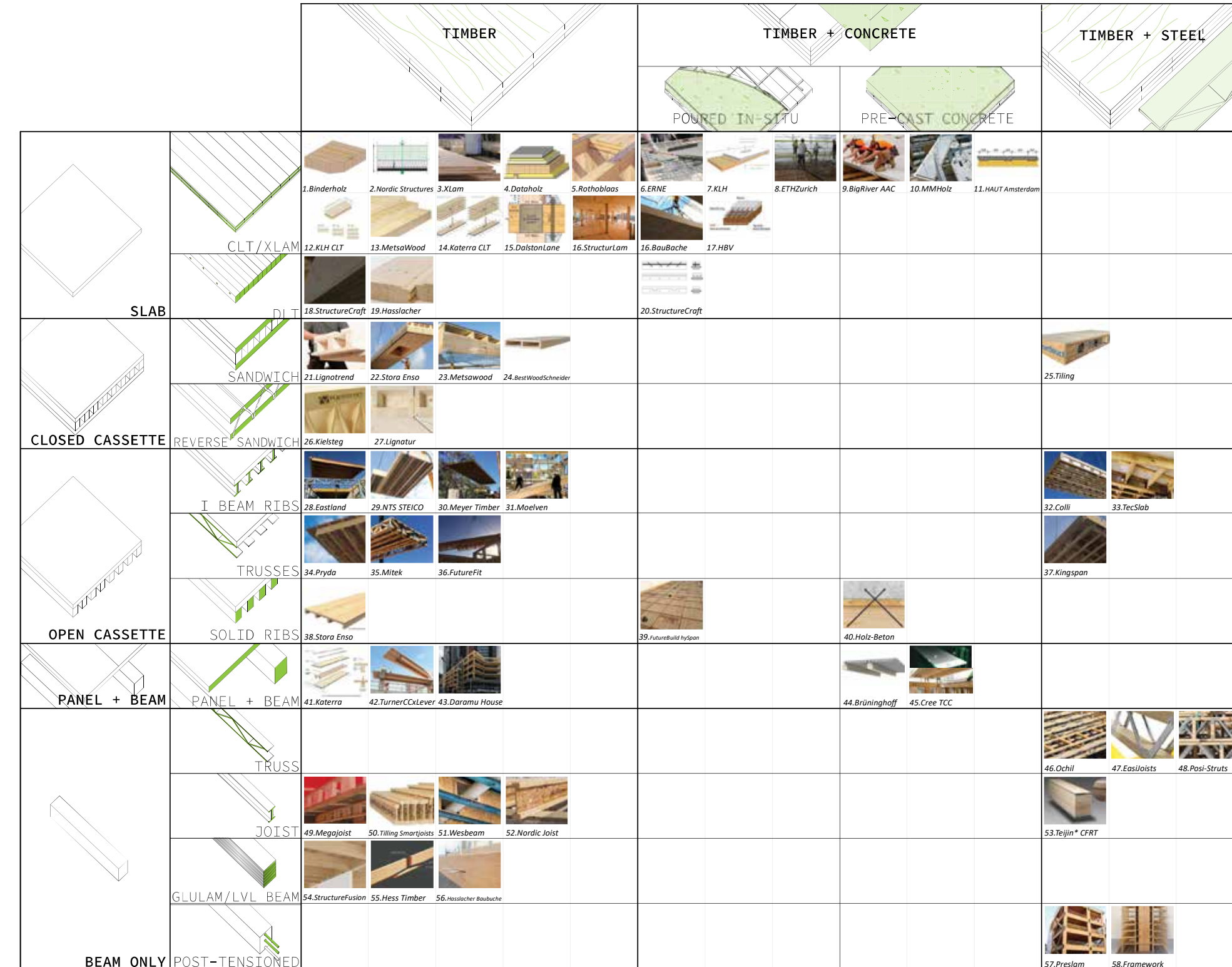The University of Melbourne

PROJECT OVERVIEW:
The last two decades have seen mass timber emerge as a viable, desirable, and sustainable construction material for both commercial and large-scale residential developments.

This scoping study lays the groundwork for developing a low carbon, suspended floor system capable of spanning 8m or more, and satisfying a range of additional criteria necessary for large-scale application in multi-storey mass timber projects.

Existing product solutions in this field tend to be isolated, project-specific, and often detached of market and customer requirements. This scoping study surveys and benchmarks the current systems available, with the aim of delivering a detailed design brief for future development. The study identifies some of the necessary trade-offs in the design of a long span, low carbon floor system, with a view towards meeting acceptable performance requirements and achieving efficient design and production.

Global Warming Potential (with carbon sequestration)

The product matrix that was developed enabled the identification of clear typological groupings, and became a tool for visualising the benchmarking findings. This figure shows the relative performance of the nine benchmarked systems according to their total Global Warming Potential (with carbon sequestration accounted).

Credit: Project Team

Floor Systems Matrix

A product matrix was developed to (1) map the market spread of long span, low carbon, suspended floor systems and (2) guide the process of system selection for benchmarking. The matrix is defined by material strategy along the x-axis and element type along the y-axis.

Credit: Project Team

#20 Systems and Methods for Robustness of Mid-Rise Light Gauge Steel (LGS) Buildings – Phase 1 Scoping Study

PROJECT PARTNERS:
BlueScope, The University of Melbourne, Monash University

PROJECT OVERVIEW:
Unlike hot-rolled steel buildings, where the robustness requirement can be easily met with the use of bolted or welded joining methods with high tensile resistance for connecting structural members, the connections in LGS buildings are made in the form of screws and rivets with low tensile resistance, and thus they are usually vulnerable to progressive failure.

This project will develop cost-effective systems and design methods to achieve suitable robustness in LGS buildings. The success of this study will promote the practical application of LGS to mid-rise construction markets.
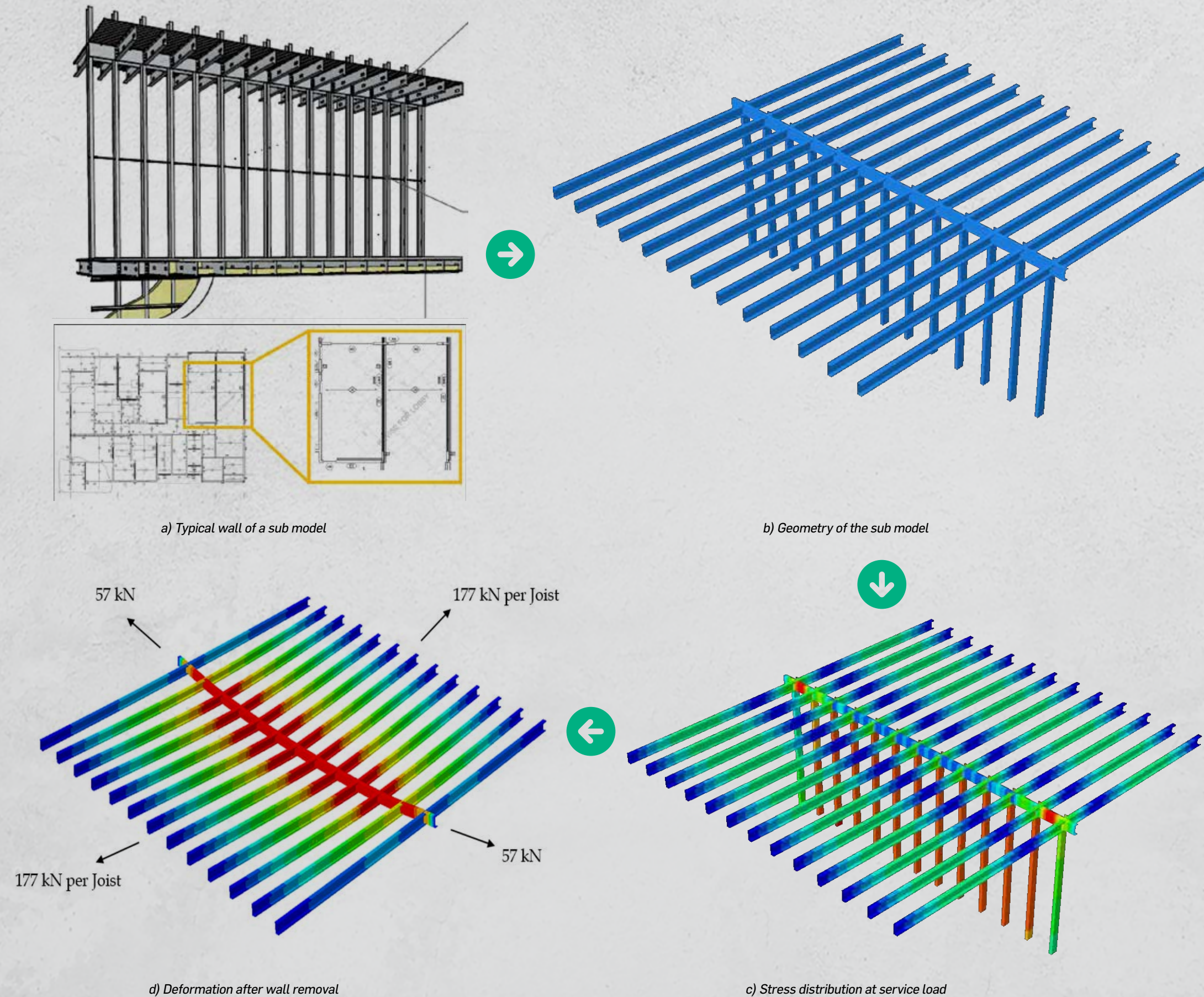
Catenary action of a sub-model of LGS buildings

Catenary action represents one of the primary mechanisms LGS structures use in arresting collapse. Therefore, it is needed to be understood. A sub-model of a single wall and floor system was modelled to isolate this effect and explore associated actions. Figure 1 shows deformation and stress distribution of the sub-model under different scenarios. 'D' became clear that other mechanisms provided by the entire structural system were needed to alleviate some of the connection demands associated with catenary action.

Credit: Project Team

#4 Computational Design and Optimisation Tools for Prefabricated Building Systems – Phase 1 Scoping Study

PROJECT PARTNERS:
M-Modular, The University of Melbourne,
Queensland University of Technology

PROJECT OVERVIEW:
This scoping study identified challenges with the modular building process, reviewed leading research on prefabricated building systems, evaluated current prefab systems in the market, and assessed/tested numerous computational modelling tools in terms of their potential/capabilities for automating the modular design/construction process.

Although modular construction brings several benefits to the construction industry, including reduced onsite costs and construction time, improved quality and accuracy in manufacture, and decreased construction waste and CO2 emissions, it was found that the challenges faced by the modular building process mostly come from the design phase.

To this end, a case study was also presented to demonstrate the potential of computational design in automating workflows and achieving synergies between the BIM modelling, structural analysis and design, and energy/thermal/daylighting analysis processes for a modular building model.

A computational workflow was developed and demonstrated, which captured the intricate details of complex modular systems and connections, whilst conserving several minutes to generate the building information model of the structural elements and connections), run the structural, energy and daylighting analysis, and generate the drawings and design reports.
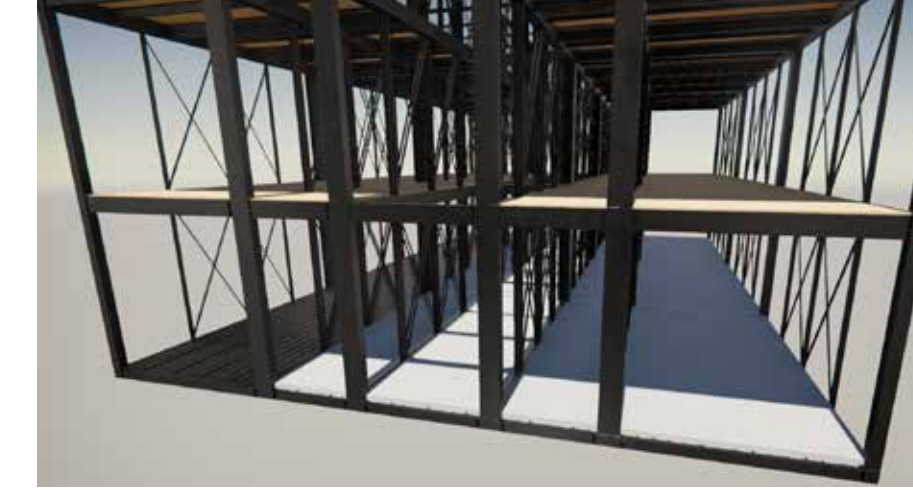
Building information model of a modular building automatically generated using the computational workflow (flowchart). The workflow captures many components, including the steel framing, modular connections, bracing, concrete flooring and so on.

Credit: Project Team
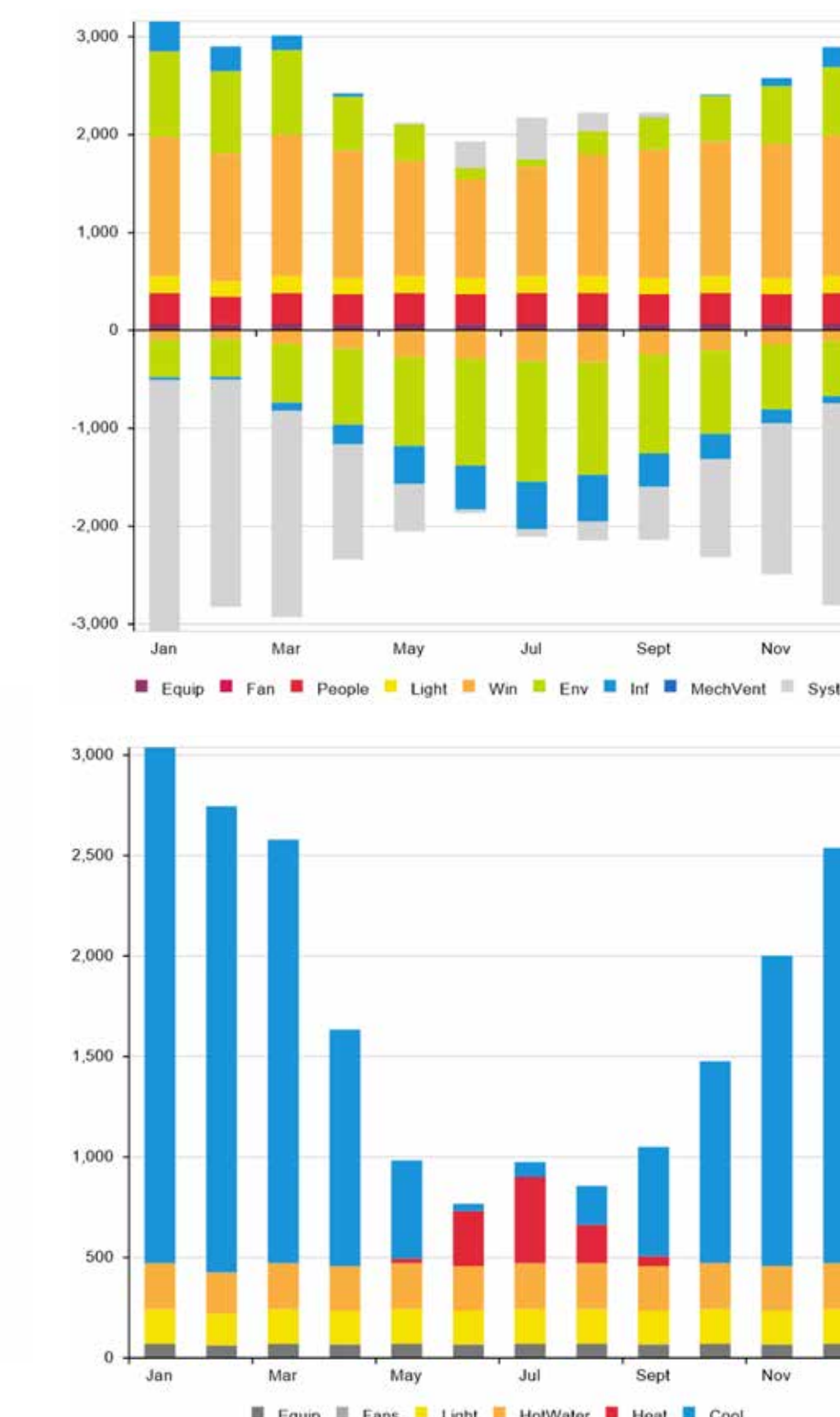
Sample results from the structural and energy/daylighting analysis of a building module, including the shear forces in the beams, mean useful daylight illuminance, heating and cooling loads.

Credit: Project Team

BUILDING 4.0 CRC SHOWCASED PROJECTS & HOSTS

An opportunity for partners to meet and be updated on projects.

HYBRID SIMULTANEOUS EVENT ACROSS 3 STATES

VICTORIA
AG COOMBS & HOLMESGLEN
HVAC Centre of Excellence
Holmesglen Institute, Chadstone Campus

NEW SOUTH WALES
LENDLEASE DIGITAL
International Tower 3 Barangaroo

QUEENSLAND
HYNE & SONS
Timber Factory
Hyne Gluelam Commercial
Maryborough Fire Station
Tuan Mill

building 4.0 crc

Australian Government
Department of Industry, Science,
Energy and Resources

AusIndustry
Cooperative Research
Centres Program

SHOWCASE INFO

#23 When Prefab Hits The Ground: Barriers And Opportunities In The Australian Housing Market

PROJECT PARTNERS:
Fleetwood Building Solutions, Sumitomo Forestry, Monash University, Swinburne University of Technology

PROJECT OVERVIEW:
Traditional construction practices in Australia have been criticised for their house and site construction costs at the expense of quality, performance the liveability of Melbourne

Current and emerging prefabrication processes could provide the efficiency and quality of construction to the traditional built-to-sell market, however by incorporating the possibilities to cater for the recently developing built-to-rent sector is considered to drive it even stronger.

This is because Build-to-rent shifts the housing profit model from capital gains to one based on ongoing rental income, with viability tied to minimising ongoing expenditure.

THIS scoping study seeks to maximise the intersection of these assets and prefabrication processes, to identify opportunities for the housing and construction sector to reduce ongoing greenhouse gas emissions and increase the quality of stock.
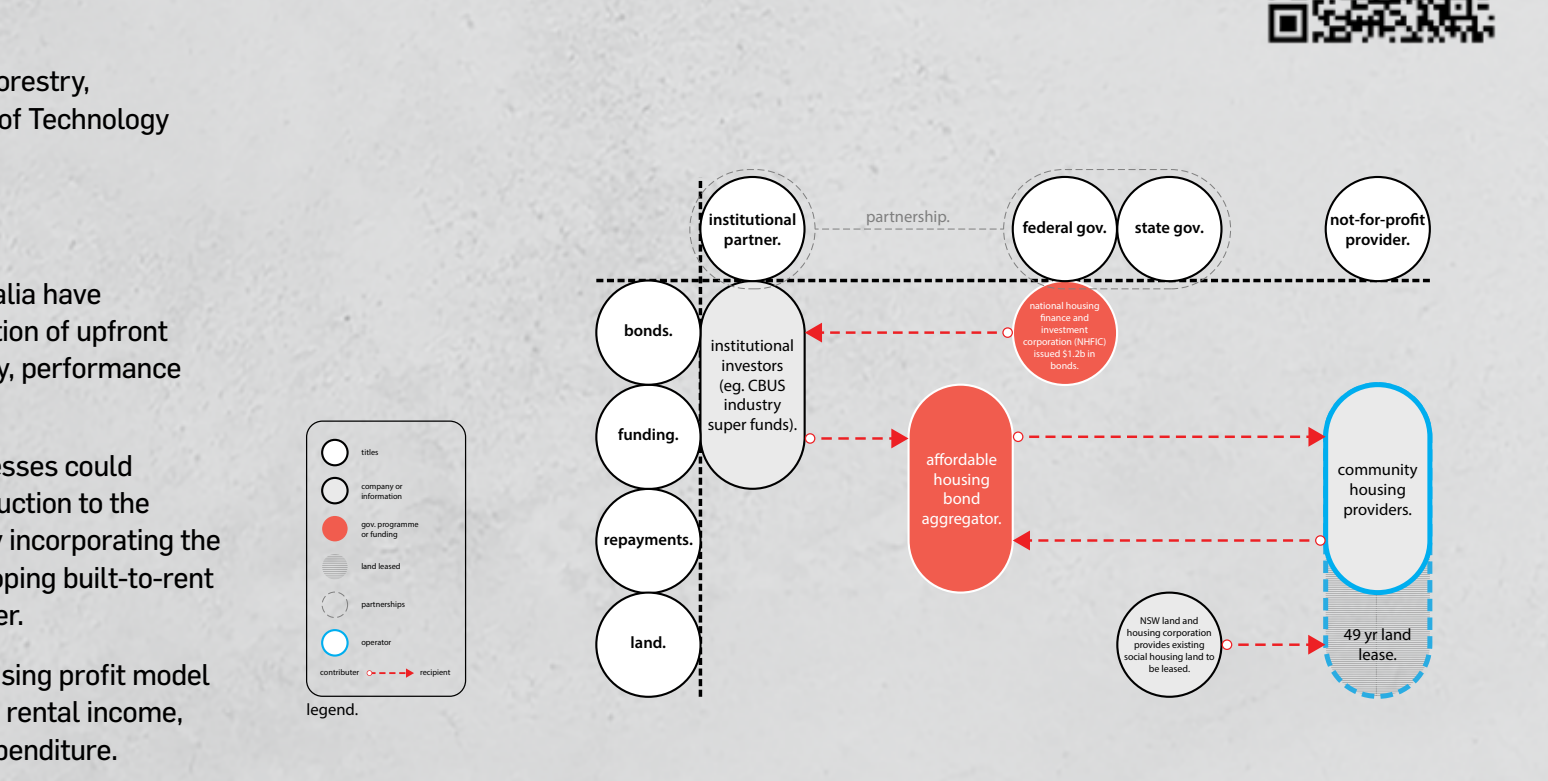
Case study 1: BTR Cbus
Emerging Australian Housing Models

- Cbus is an example of Australian superannuation companies investing in local BtR developments
- CBus is one of Australia's largest super funds, with more than 775,000 members and a portfolio of over $65 billion
- The scheme is a version of PPP's developments: It lets providers access a 75% debt-funding package provided by NHFIC, with the remaining costs covered by CBus super:
- CBus will lend for 12 years (i.e., two years during the construction period and ten years during the asset's life), after which CBus will exit the agreement. The provider is then required to refinance the 25% loan with NHCFC.

Timeline
Turnkey

#28 Componentised Internal Wall Systems for Multi-residential Applications

PROJECT PARTNERS:
Lendlease Digital, Monash University, The University of Melbourne

PROJECT OVERVIEW:
Internal wall systems in multi-residential applications continue to rely on labour intensive and wasteful on-site processes despite advances in prefabrication and other aspects of multi-residential construction.

The described performance requirements for internal walls rely heavily on craftsmanship and supervision – when these fail, significant and costly legacy issues arise.

A different approach is required to the design of internal walls; one which considers a componentised solution rather than customisation, providing a model for onsite/legacy and site-time value, and allowing services and performance-based criteria to be integrated in a controlled, off-site environment.

This project explores questions of digital connectivity, new design and material possibilities, and alternative methods for understanding the life-time cost and value of internal walls.

PROVOCATIONS

BAU | SLEEVE | SUPER-FLEXI | NO WALLS | EXPOSED SERVICES

Constraint-driven plasterboard wall solutions have limited the possibility for more fundamental innovations to be explored. New approaches to componentised internal walls have potential to achieve cost and performance advantages on the supply-side, as well as engage with demand-side drivers, such as preferred wall finish, dwelling quality and flexibility. These four provocations, Sleeve, Super Flexi, No Walls and Exposed Services, challenge the status quo approach and draw on new principles for the design of internal walls for multi-residential applications.

Credit: Diagrams by Lee-Anne Khor

The integration of services, and the sequencing of servicing, plastering, finishing is linked to a wide range of legacy issues with performance and defects. How services can be better integrated and partially installed off-site becomes a key question for componentised walls. Digital integration of services design is part of the solution in this category, enabling fabrication of components which integrate servicing requirements, or enabling services to partially be installed off-site. Raised floors allow new potentials, both for the flexibility of wall components and layouts, as well as for access for maintenance.

Credit: Drawings by Daniela Tinios

#5 Automatic Compliance and Energy Rating System

PROJECT PARTNERS:
uTecture, Green Building Council of Australia, The University of Melbourne, Monash University, Queensland University of Technology

PROJECT OVERVIEW:
This project will transform the current manual process of energy compliance checks for new-residential homes by integrating existing rapid digital building software with Australia's building regulation and performance assessment requirements. The outcome is intended to be a fully integrated and seamless workflow with home design and subsequent implications, and energy performance assessment performed in real time.

Current Build Cost
$174,438*
Floor Area
240 m²

Extract and evaluate building envelope data to perform elemental NCC compliance check.

Passing of data is accurate to perform NatHERS assessment.

Portal enabling users to see snapshot of emissions and build costs to make more informed decisions.

This project developed a comprehensive workflow to take Utecture's existing home design and costing engine and propose subsequent compliance and NatHERS energy rating assessment procedures utilising CSIRO's Accurate engine. The developed road map has paved the way for designers, builders, and clients to understand the energy performance and compliance of a home whilst also having an estimate of the capital and ongoing costs in near real time during design

Credits:
https://www.monash.edu/made/research/utecture-industry-test-group-report1
Icon designs by Flaticon.com

utecture | Floorplan Exterior Interior Options 3D View Finalise | $566,708* 318.5m²

#11 Environmental Credentials For Building Technology Platforms

PROJECT PARTNERS:
uTecture, Coresteel, Monash University

PROJECT OVERVIEW:
There is a growing need for environmental credentials to support B2B and B2C communication in the building industry.

Solutions based on the Life Cycle Assessment (LCA) methodology are the most comprehensive, covering all the stages of the building's lifecycle – from extraction of raw materials to their end-of-life stages.

Despite the potential efficiencies of loosely-coupled supply chains, distributed decision-making, and increased levels of digitalisation, there are no readily available methods to systematically assess the environmental impacts of building technology platforms.

This project will develop an ISO-compliant LCA framework to quantify and communicate these impacts using the uTecture and Airbuildr platforms as cases.

Airbuildr™ design platform
Credits: The Donovan Group

Donobeam™ structural system
Credits: The Donovan Group

ALL ACTIVATED PROJECTS

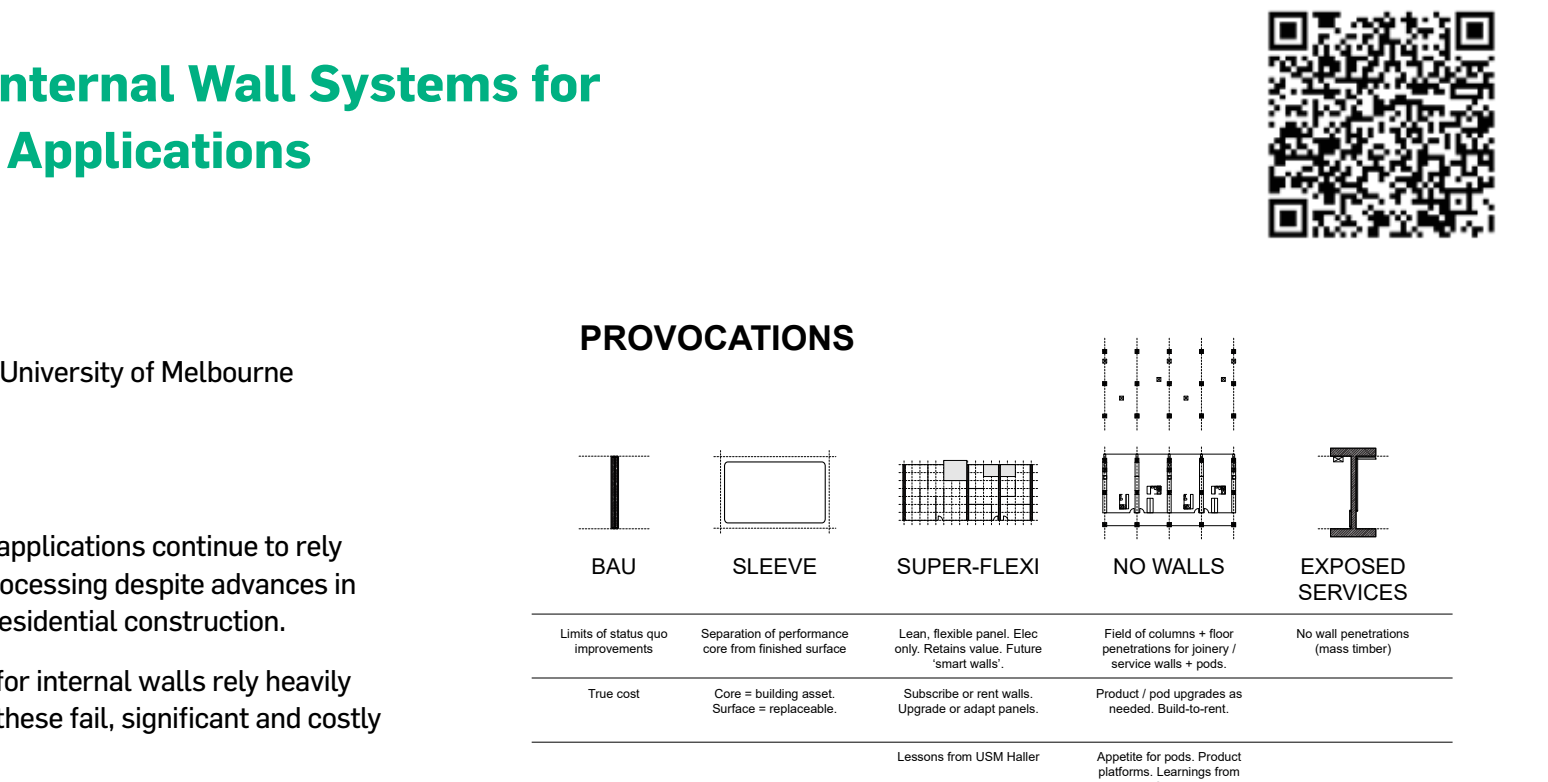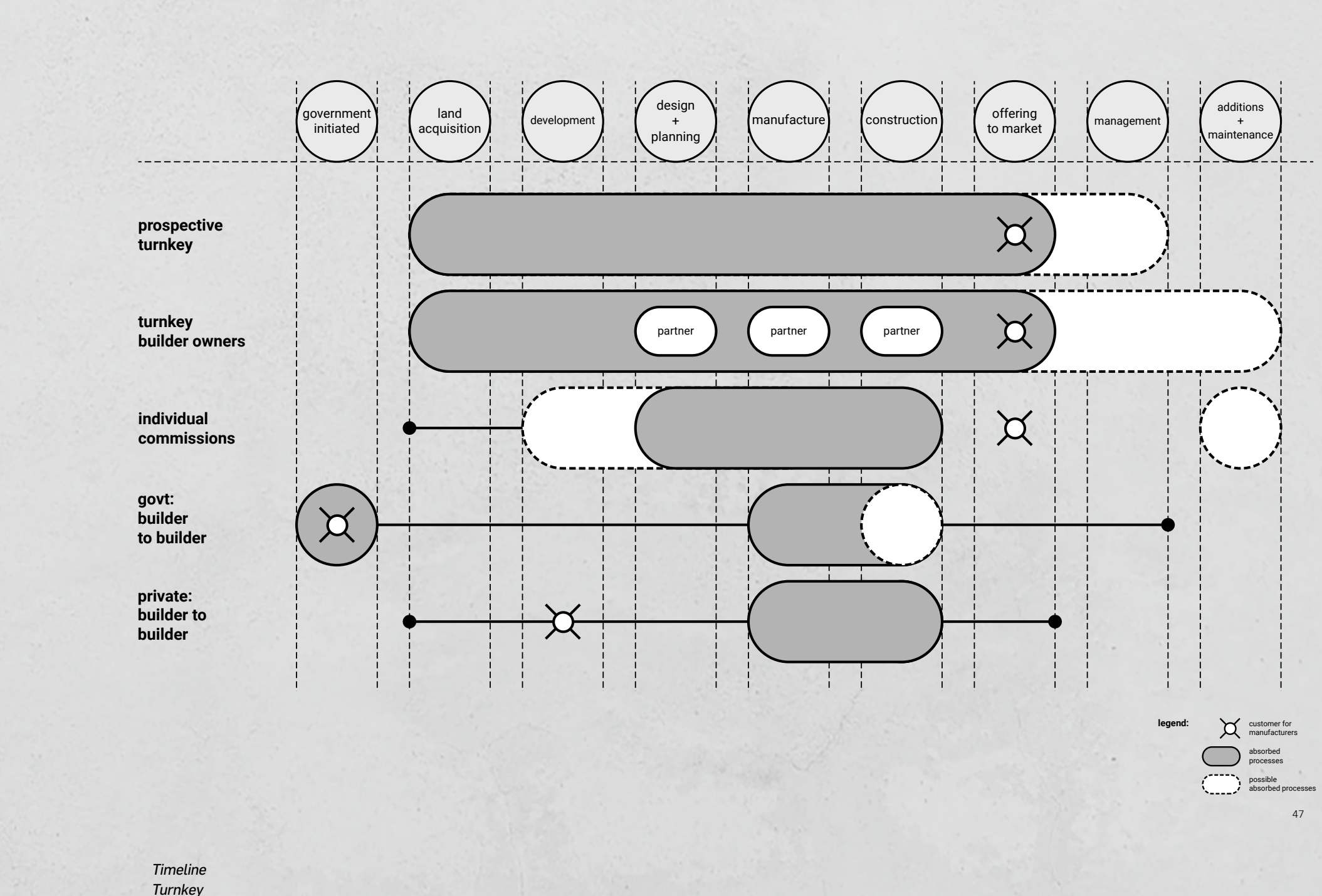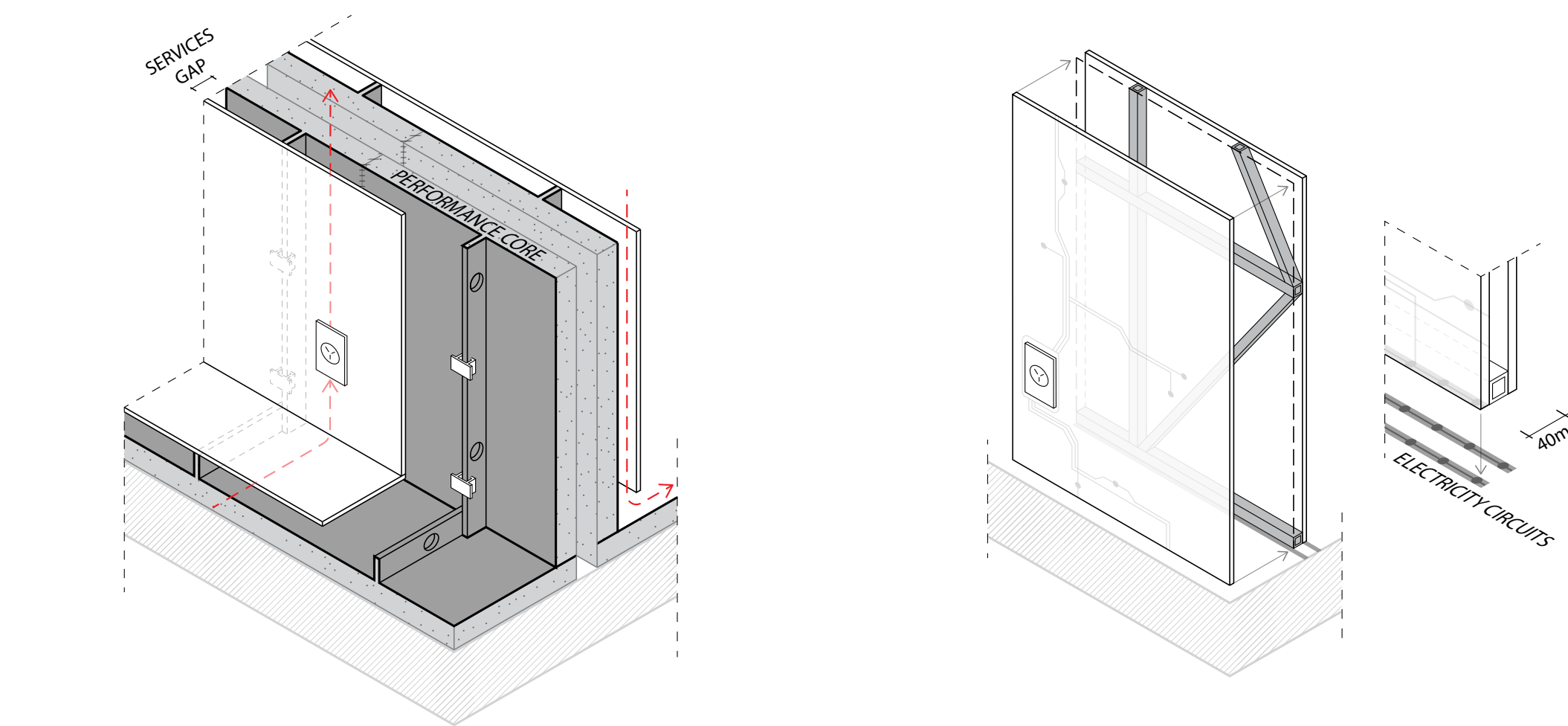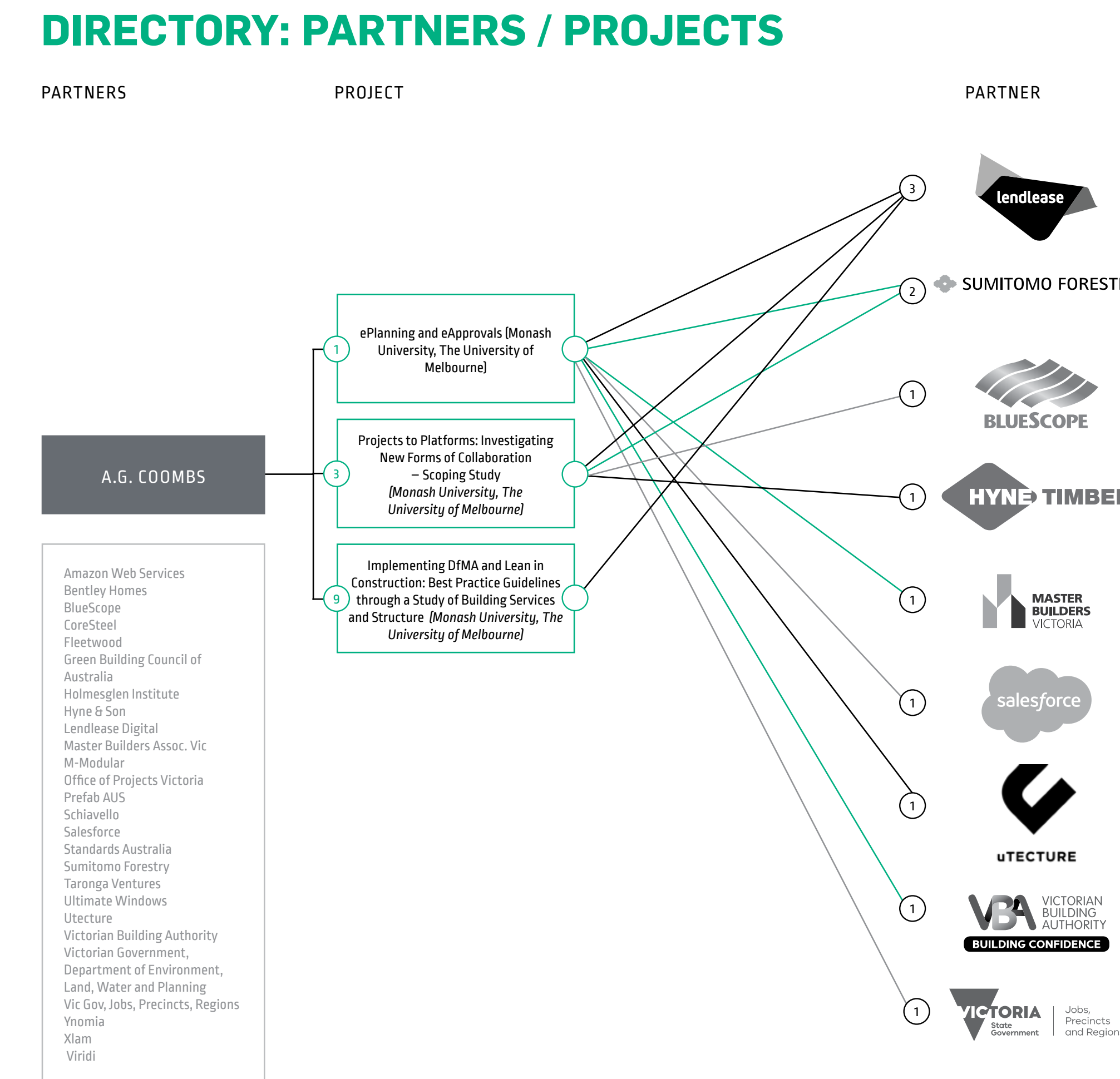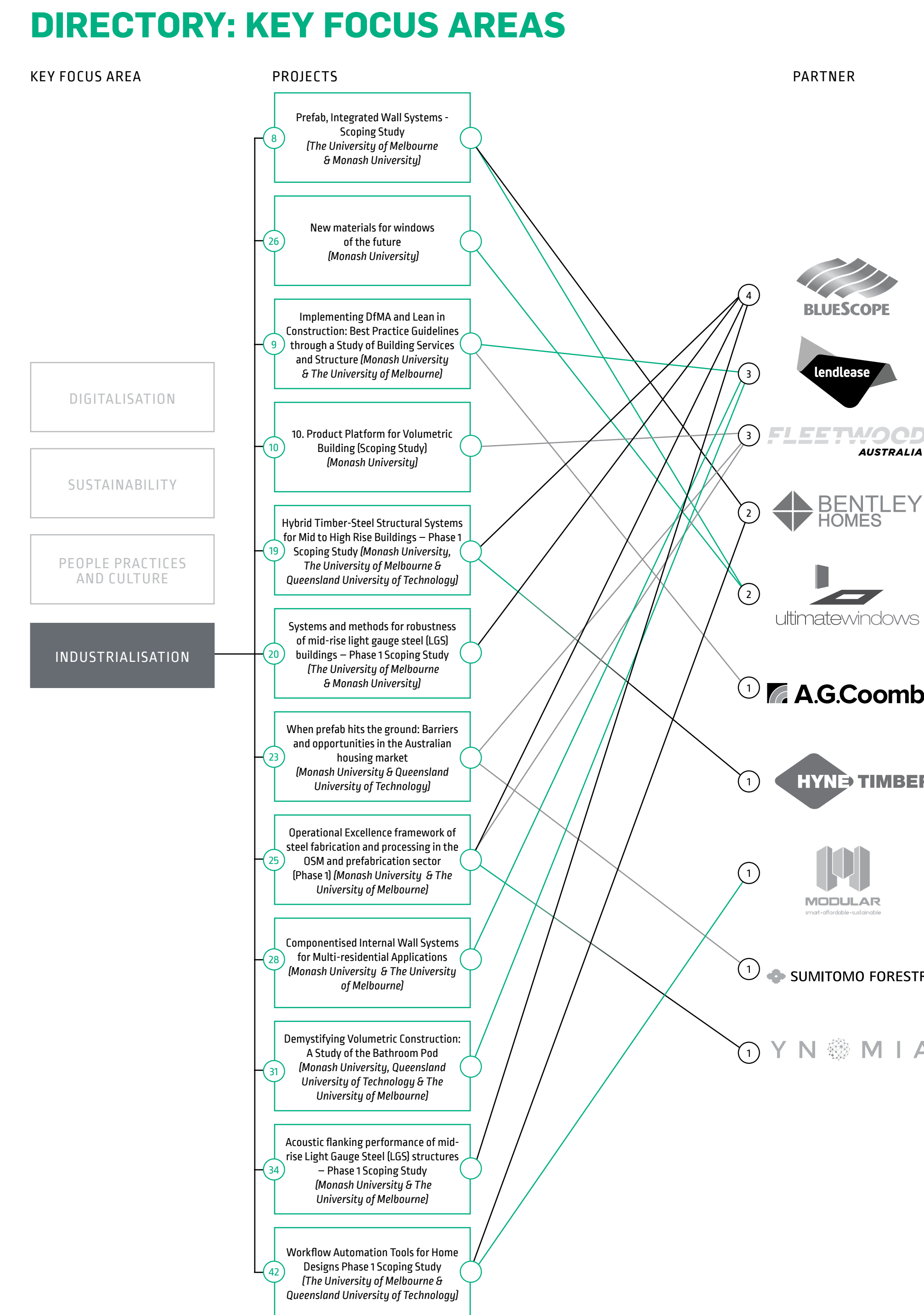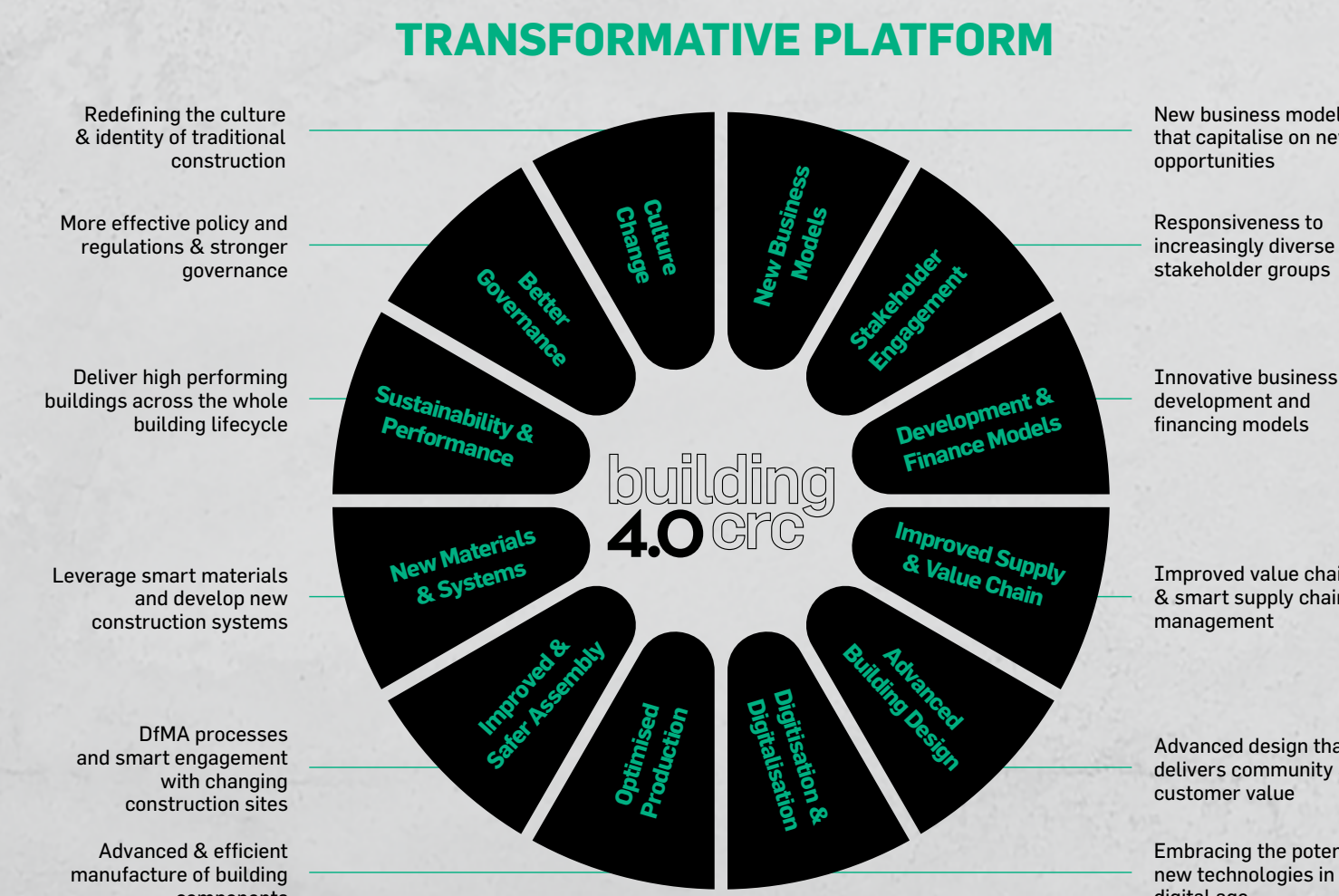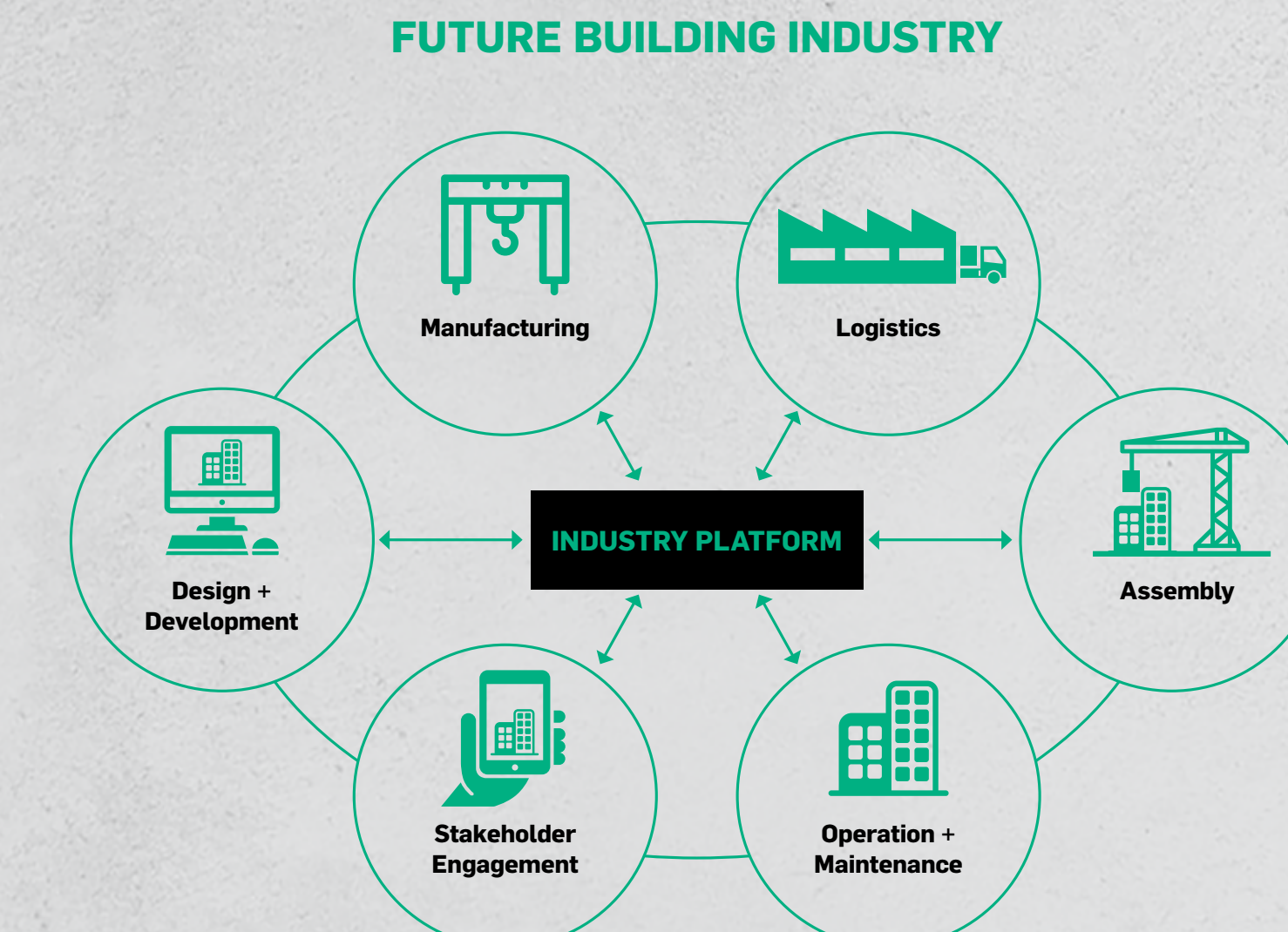| Project No.	Title	Participants	Prefab facilities and platforms	Sustainability	Digitalisation	Industrialisation
1	ePlanning and eApprovals	Lendlease Digital, Utect, Sumitomo, AG Coombes, SALESFORCE, MBIA, UNSW, UoM, Monash, UoM			●	
2	Automated tracking of construction materials for improved supply chain logistics and provenance	Sumitomo, AWS, SALESFORCE, VBA, Yixmia, Homesglen, Lendlease Digital, Bluescope, MBAV, UoM, MU, QUT			●	
3	Projects to Platforms: Investigating New Forms of Collaboration – Scoping Study	A.G. Coombs, BlueScope, Hyne & Son, Lendlease Digital, Monash University Swinburne Forestry, The University of Melbourne			●	
9	Implementing DfMA and Lean in Constructed Best Practice Guidelines through a Study of Building Services and Structure	A.G. Coombs, Lendlease Digital, Monash University, The University of Melbourne				●
10	Product Platform for Volumetric Building (Scoping Study)	Fleetwood Building Solutions, Monash University	●			
11	Environmental Credentials for Building Technology Platforms	uTecture, Corecteel, Monash University		●		
13	VR/AR Technologies in Vocational Education and Training (Scoping Study)	Holmesglen Institute, Master Builders Association of Victoria, Monash University, Queensland University of Technology			●	
17	The Implications and Opportunities from Industry 4.0 for the Building Industry: towards smart prefab	AMGC and Prefab (execution Hub (Funding body), Versus Building 4.0 CRC Industry Partners, Monash University, The University of Melbourne, Queensland University of Technology	●			
18	Long-Span Low-Carbon Floor Systems	Lendlease Digital, Sumitomo Forestry, Monash University, The University of Melbourne		●		
19	Hybrid Timber-Steel Structural Systems for Mid to High Rise Buildings – Phase 1 Scoping Study	BlueScope, Hyne & Son, Monash University, The University of Melbourne, Queensland University of Technology				●
20	Systems and methods for robustness of mid-rise light gauge steel (LGS) buildings – Phase 1 Scoping Study	BlueScope, The University of Melbourne, Monash University				●
22	Generative design and BIM-based Design Automation methods for Steel Framed Buildings – Phase 1 Scoping Study	BlueScope, The University of Melbourne, Queensland University of Technology			●	
23	When prefab hits the ground: Barriers and opportunities in the Australian housing market	Fleetwood Building Solutions, Sumitomo Forestry, Monash University, Queensland University of Technology	●			
25	Operational Excellence framework of steel fabrication and processing in the OSM and prefabrication sector (Phase 1)	BlueScope, Fleetwood Building Solutions, Monash University, The University of Melbourne, Ynxmia				●
27	Environmental Decision-Support for Structures	BlueScope, Monash University, The University of Melbourne		●		
28	Componentised Internal Wall Systems for Multi-residential Applications	Lendlease Digital, Monash University, The University of Melbourne				●
30	Critical Path IMPACT through Productisation	Lendlease Digital, Monash University, Queensland University of Technology, The University of Melbourne			●	
31	Demystifying Volumetric Construction: A Study of the Bathroom Pod	Lendlease Digital, Monash University, Queensland University of Technology, The University of Melbourne				●
34	Acoustic flanking performance of mid-rise Light Gauge Steel (LGS) structures – Phase 1 Scoping Study	BlueScope, Monash University, The University of Melbourne				●
35	Prefab Housing Solutions for Bushfire & Disaster Relief	AMGC and Prefab Innovation Hub, Various Building 4.0 CRC Industry Partners, Monash University, The University of Melbourne	●			
37	Australian Timber Fibre Insulation Scoping Study	Hyne & Son Pty. Limited, The University of Melbourne, Ultimate Windows		●		
42	Workflow Automation Tools for Home Designs Phase 1 Scoping Study	Bentley Homes, M-Modular, The University of Melbourne, Queensland University of Technology			●	
46	Data analytics for structural fibre resources optimization	Hyne & Son, Queensland University of Technology			●	
4	Computational Design and Optimisation Tools for Prefabricated Building Systems – Phase 1 Scoping Study	M-Modular, The University of Melbourne, Queensland University of Technology			●	
5	Automatic compliance and energy rating system	uTecture, Green Building Council of Australia, the University of Melbourne, Monash University, Queensland University of Technology			●	
6	Fold-data collation to support real-time operational management	Lendlease, Ynxmia, Standards Australia, Monash University, Queensland University of Technology, The University of Melbourne			●	
8	Prefab, Integrated Wall Systems – Scoping Study	Bentley Homes, Ultimate Windows, The University of Melbourne, Monash University				●
26	New materials for windows of the future	Ultimate Windows, Monash University		●		

Completed Projects

building 4.0 CRC

ABOUT BUILDING 4.0 CRC

Building 4.0 CRC is a Cooperative Research Centre funded by the Australian Government.

Building 4.0 CRC seeks to achieve better buildings and new efficiencies through technology, collaboration and innovative research

FUTURE BUILDING INDUSTRY

Manufacturing — Logistics
Design + Development — INDUSTRY PLATFORM — Assembly
Stakeholder Engagement — Operation + Maintenance

TRANSFORMATIVE PLATFORM

Redefining the culture & identity of traditional construction

More effective policy and regulations & stronger governance

Deliver high performing buildings across the whole building lifecycle

Leverage smart materials and develop new construction systems

DfMA processes and smart engagement with changing construction sites

Advanced & efficient manufacture of building components

New business models that capitalise on new opportunities

Responsiveness to increasingly diverse stakeholder groups

Innovative business development and financing models

Improved value chain & smart supply chain management

Advanced design that delivers community and customer value

Embracing the potential of new technologies in this digital age

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DIRECTORY: KEY FOCUS AREAS

KEY FOCUS AREA — PROJECTS — PARTNER

DIGITALISATION
SUSTAINABILITY
PEOPLE PRACTICES AND CULTURE
INDUSTRIALISATION

Projects:
- Prefab, Integrated Wall Systems - Scoping Study (The University of Melbourne) [a Monash University]
- New materials for windows of the future [Monash University]
- Implementing DfMA and Lean in Construction: Best Practice Guidelines through a Study of Building Services and Structure [Monash University & The University of Melbourne]
- VI. Product Platform for Volumetric Building [Scoping Study] [Monash University]
- Hybrid Timber-Steel Structural Systems for Mid to High-Rise Buildings – Phase 1 Scoping Study [Monash University, The University of Melbourne & Queensland University of Technology]
- Systems and methods for robustness of mid-rise light gauge steel (LGS) buildings – Phase 1 Scoping Study (The University of Melbourne & Monash University)
- When prefab hits the ground: Barriers and opportunities in the Australian housing market [Monash University & Queensland University of Technology]
- Operational Excellence Framework of steel fabrication and processing in the DfM and prefabrication sector [Phase 1] [Monash University & The University of Melbourne]
- Componentised Internal Wall Systems for Multi-residential Applications [Monash University & The University of Melbourne]
- Demystifying Volumetric Construction: A Study of the Bathroom Pod [Monash University, Queensland University of Technology & The University of Melbourne]
- Acoustic flanking performance of mid-rise Light Gauge Steel (LGS) structures – Phase 1 Scoping Study [Monash University & The University of Melbourne]
- Workflow Automation Tools for Home Designs Phase 1 Scoping Study [Monash University of Melbourne & Queensland University of Technology]

PARTNER logos: Lendlease, BLUESCOPE, FLEETWOOD AUSTRALIA, BENTLEY HOMES, ultimatewindows, A.G.Coombs, HYNE TIMBER, MODULAR, SUMITOMO FORESTRY, YNOMIA

DIRECTORY: PARTNERS / PROJECTS

PARTNERS — PROJECT — PARTNER

A.G. COOMBS

PROJECT:
- ePlanning and eApprovals [Monash University, The University of Melbourne]
- Projects to Platforms: Investigating New Forms of Collaboration – Scoping Study [Monash University, The University of Melbourne]
- Implementing DfMA and Lean in Construction: Best Practice Guidelines through a Study of Building Services and Structure [Monash University, The University of Melbourne]

PARTNERS (list):
Amazon Web Services
Bentley Homes
BlueScope
CoreSteel
Fleetwood
Green Building Council of Australia
Holmesglen Institute
Hyne & Son
Lendlease Digital
Master Builders Assoc. Vic
Mi Modular
Office of Projects Victoria
Prefab AUS
Schiavello
Salesforce
Standards Australia
Sumitomo Forestry
Taronga Ventures
Ultimate Windows
Utecture
Victorian Building Authority
Victorian Government,
Department of Environment,
Land, Water and Planning
Vic Gov, Jobs, Precincts, Regions
Viridi
Vinzi
Vinidi

PARTNER logos: Lendlease, SUMITOMO FORESTRY, BLUESCOPE, HYNE TIMBER, MASTER BUILDERS VICTORIA, salesforce, uTECTURE, VICTORIAN BUILDING AUTHORITY, VICTORIA

DIRECTORY: THEMES

THEME — PROJECT — PARTNER

1. PEOPLE PRACTICES AND CULTURE
Business Model Innovation
Supply Chain Management, Logistics
Finance and Property Development
Economics
Contracts and Procurement
Culture and Diversity
Construction Safety
Policy and Regulation
Risk Management
Change Management
Customers and Markets

2. DIGITALISATION
Platforms and Futures
Digital and Automated Fabrication
Cobotics and Robotics
Artificial Intelligence and Machine Learning
Data Science, Visualisation and Analytics
IoT, Sensors and Construction Tech
Building Systems and Performance
Materials
ePlanning and eApprovals
Digitising and Modelling of Physical Assets
Digital Project Management
Computational Design
Optimisation
Complex Systems Modelling

3. INDUSTRIALISATION
Materials and Systems Innovation
Production Process Systems Advanced
Manufacturing
Construction Management
Structural Systems

4. SUSTAINABILITY
Sustainable Materials and Design
ESD
LCA
Energy Usage
Indoor Environment Quality

PROJECT:
- Automated tracking of construction materials for improved supply chain logistics and provenance – Phase 1 Scoping Study [Monash University and Queensland University of Technology, The University of Melbourne]
- Implementing DfMA and Lean in Construction: Best Practice Guidelines through a Study of Building Services and Structure [Monash University, The University of Melbourne]
- Product Platform for Volumetric Building [Scoping Study] [Monash University]
- Long Span, Low Carbon Floor Systems [Scoping Study] [Monash University, The University of Melbourne]
- Hybrid Timber-Steel Structural Systems for Mid to High-Rise Buildings – Phase 1 Scoping Study [Monash University, The University of Melbourne, Queensland University of Technology]
- Critical Path IMPACT through Productisation [Monash University, The University of Melbourne]
- Demystifying Volumetric Construction: A Study of the Bathroom Pod [Monash University, Queensland University of Technology & The University of Melbourne]

BUILDING DESIGN AND DfMA
Housing and Urban Design
DfMA Method of
Commercial Construction Sites
Planning, Costs and Pricing
Prototyping and Fabrication
Technologies

PARTNER logos: Lendlease, BLUESCOPE, SUMITOMO FORESTRY, A.G.Coombs, FLEETWOOD AUSTRALIA, holmesglen, HYNE TIMBER, MASTER BUILDERS VICTORIA, salesforce, VICTORIAN BUILDING AUTHORITY, YNOMIA

DIRECTORY: PARTNERS / THEMES

PARTNERS — THEME — PARTNER

Business Model Innovation 3
[Monash University,
The University of Melbourne,
Queensland University of Technology]

PARTNERS (list):
A.G. Coombs
Amazon Web Services
Bentley Homes
BlueScope
Coresteel
Fleetwood
Green Building Council of
Australia
Holmesglen Institute
Hyne Timber

THEME (list):
Materials 1
Platforms and Process 1
Architecture and Building
Design 1
Building Design and DfMA
Construction Management 1
Industrialised Construction 2
Logistics 2
Prefabrication 2
Supply Chain Management 2
Advanced Manufacturing 1
Robotics Processes 1
Circular Economy 1
Data Management 1
DfMA 1
Digital and Automated 1
Fabrication 1
Contracts and Procurement 1
Engineering and Approval 2
Environmental Performance 1
ePlanning and eApprovals 1
Building Performance 1
Building 1
Fire Safety 1
Innovation 1
Internet of Things 1
LCA 1
System Innovation 1
Innovation 1
Planning, Costs and Zoning 1
Production 1
Building design and DfMA 1
Sensor Technology 1
Workforce Management 1

PARTNER logos: BLUESCOPE, A.G.Coombs, FLEETWOOD AUSTRALIA, HYNE TIMBER, SUMITOMO FORESTRY, YNOMIA

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elevator initiative

Building 4.0 CRC has launched a new opportunity called the Elevator Initiative.

Like many in the building industry, we're seeking validated, leading solutions to streamline business processes, remove inefficiencies, increase value proposition for customers, and support global ESD standards – all with a vision to help lead the future industry.

Through our Elevator Initiative, we're bringing together leading research, industry, and emerging property and construction technology businesses/SMEs through a consortium approach, providing opportunity to collaborate, and accelerate the validation process.

Join today and leverage the best in property and construction technology and innovation.

The Value

For Industry:
- Access to industry insight and data collated from the Building 4.0 CRC extensive industry partner consortium.
- Access to a validated portfolio of emerging technology and innovation businesses.
- Be at the forefront of property and construction innovation.
- Exclusive access to Building 4.0 CRC networking activities, forums, and conferences.
- A branded presence at the Building 4.0 CRC annual conference.
- Opportunity to join the collaborative network for existing Building 4.0 CRC research projects.
- Exclusive access to the quarterly Elevator Initiative industry engagement forum.

For SMEs:
- Access to industry insight and data collated from the Building 4.0 CRC extensive industry partner consortium.
- Crucial industry validation and industry product market fit from leading property and construction organisations.
- Exclusive access to Building 4.0 CRC networking activities, forums, and conferences.
- A branded presence at the Building 4.0 CRC annual conference.
- Opportunity to join the collaborative network for existing Building 4.0 CRC research projects and
- Exclusive access to the quarterly Elevator Initiative industry engagement forum.

Interested?

For more information, please view the guideline that is relevant to your business:

People & Partners

Meet the people and partners who are helping to make Building 4.0 CRC possible.

COMMERCIAL INDUSTRY:

PEAK INDUSTRY BODIES:

RESEARCH AND EDUCATION:
Monash University, RMIT, QUT, holmesglen

GOVERNMENT:

The Directories

We are pleased to announce we are launching NEW Web-based Searchable Directories for the CRC

THE NEW DIRECTORIES INCLUDE:
- Overall Directory;
- Industry Partners Directory;
- Projects Directory;
- Research Capacity Directory; and,
- SMEs and Other Organisations Directory.

Users can open and browse each directory independently, or across all directories at once.

SEARCH OUR NEW DIRECTORIES NOW
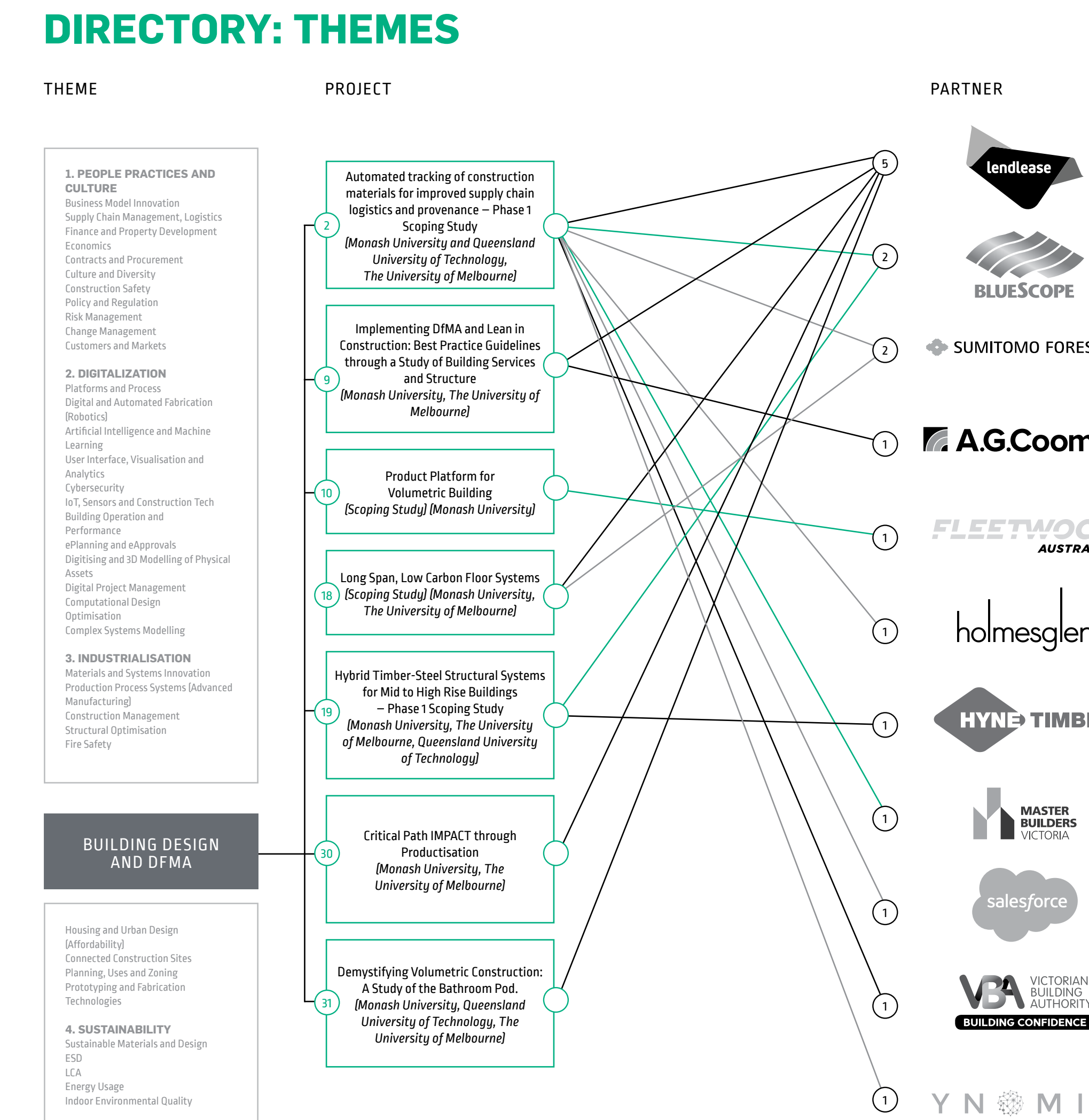
Education & Training

Working together to deliver the new skills and advanced technology needed for the future building industry

Building 4.0 CRC is committed to Training through Holmesglen Institute and Education through our University Partners.

INTERESTED IN A RESEARCH CAREER IN BUILDING 4.0 CRC?

We often release fully-funded PhDs across our program of research

FIND OUT MORE

Future Building Podcast

Future Building podcast takes a fresh look at the opportunities for change, examining news and trends along with research and developments from the building industry.
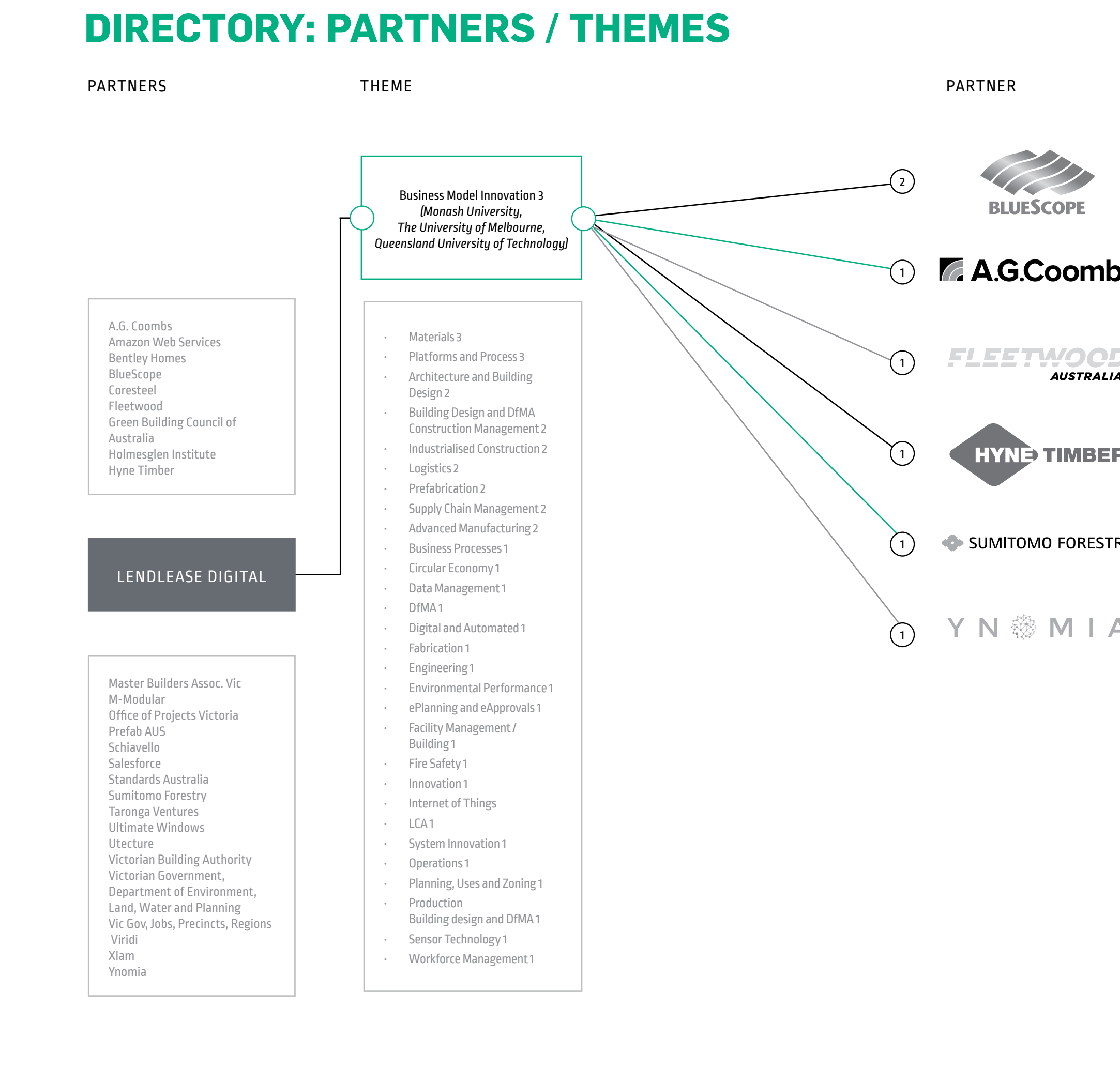
CHECK OUT OUR PODCAST HERE.

Listen on Apple Podcasts · LISTEN ON Spotify · Google Podcasts

News & Events

KEEP UP TO DATE WITH OUR NEWS AND EVENTS

Videos

Building 4.0 CRC interviews experts from our partners and beyond on topics that are most relevant and pressing to the advancement of the Building Industry.

CHECK OUT OUR VIDEOS HERE

Annual Report

READ OUR ANNUAL REPORT HERE

CONTACT
info@building40crc.org

READ ALL ABOUT OUR CURRENT PROJECTS HERE