

ARC CAMP.H



Advanced Building Systems and Assembly



- Enable technological advancements in modular building system and assembly by developing new conceptual systems and assembly taking into account the multi-functional requirements
- Optimising and developing efficient methods in overall manufacturing, transport and assembly process
- Evaluate and address performance requirement of modular construction system and assembly using testing, simulation and advanced system analysis



Supply Chain and Financing Innovation



- Mapping new supply chains and creating new financing models for prefabricated building sector with the engagement of financial institutes



Innovation in Design and Manufacturing



- Enable designing and manufacturing of affordable mass customised prefabricated housing using automated manufacturing platforms
- Establish a training platform that engages the workforce in the design and manufacturing processes to site erection
- Moving prefabrication towards high-quality, innovative, high-performance, custom-tailored design products
- Development of interoperable Building Information Modelling (BIM) systems, to enable easy engagement in design, supply chain, manufacturing, and assembly of the prefabricated buildings



Capabilities



- Structural Modelling, Analysis and Optimization



- Non-destructive Testing Equipment and Their Capabilities



- Acoustic, Thermal and Indoor Environment Quality (IEQ)



- Structural Testing



Novel Materials and Composite/Hybrid Systems



- Developing light-weight high strength multi-graded composite materials and elements, and hybrid components
- Enable the use of engineered materials and combination of materials, and hybrid components not possible in traditional construction using manufacturing platforms
- Produce a design platform for prefabricated construction of international standing, positioning Australian industry and research at the cutting edge worldwide
- Develop the skills and expertise engineers, and researchers in the industry through innovating and using novel materials, composites and hybrid components