



# AR-MA

## Customer Success Story



AR-MA is an industry leader in advanced computational design and architecture, offering unique solutions for bespoke, high-end projects.

### Challenge

- AR-MA was tasked with delivering the Darling Square Library project, designed by Kengo Kuma and developed by Lendlease, located in Sydney's CDB
- As the project integration and DfMA consultant, AR-MA needed to integrate the knowledge from each stakeholder (development, design, structure, fabrication, and construction) into a single comprehensive model designed for manufacture and installation.

### Benefits Achieved



Integrated 3D model for design for manufacture and assembly



Reduce material wastage and saved costs



Easily converted 3D data into fabrication instructions to coordinate manufacture



Ensured precise delivery of project

### Solution

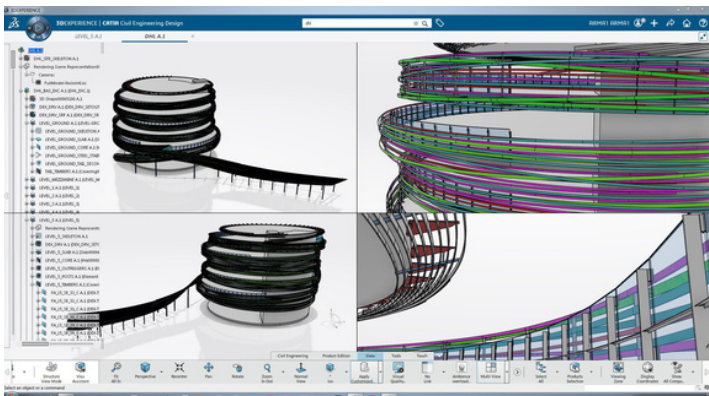
AR-MA utilised 3DEXPERIENCE CATIA to build digital prototypes of the Darling Square Library façade. They then collaboratively developed and reviewed these with design, engineering and fabrication. These prototypes ensured alignment across the team that they met all constraints and objectives.

# Implementation Process

Digitally prototyping the design and construction is essential with modern complex projects. However, building and reviewing physical prototypes is no less essential. Without the detailed resolution a prototype brings, you are leaving problems to be discovered on site. Many problems in design and construction are created and exacerbated by incomplete documentation and latent physical risks that are only understood once fabrication starts.

A comprehensive model designed for manufacture, where the assembly and installation are simulated and rehearsed before construction, creates transparency and surfaces risks. Additionally, rehearsing the manufacture and installation through digital and physical models creates a smooth design and construction experience and maximises project profitability.

Through their integrated and comprehensive model, AR-MA ensured the project came in on time and on budget. The team of three focused on the creation of a complex 3D model, integrating insights from all parties, from design to installation. AR-MA optimized materials, reducing timber wastage by 24%, and expedited the facade construction through early-stage collaboration. The final phase of the project entailed converting 3D data into fabrication instructions to coordinate the manufacture and installation of all components.



“We modelled the entire concrete formwork and output direct to fabrication saving the builder weeks in formwork setout and erection time. This strategy saved time on-site, reduced cost, and ensured precision during the timber facade installation.”

*AR-MA spokesperson*

To see how 3DEXPERIENCE CATIA can be implemented in your business. please get in touch to speak to a product expert or book a demo session

## Contact Us

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## About MEMKO Systems

MEMKO Systems is an Australian-based company with multidisciplinary engineering capabilities supported by highly experienced and skilled staff with an extensive track record working with global OEMs, Defence Primes, and Government Agencies. MEMKO Systems delivers advanced manufacturing solutions, digital transformation technologies and industry upskilling training. Quality management system is ISO9001 and ISO27001:2013

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## Capability Areas

Analysis, Modelling & Simulation	✓
Digital Twin & MBSE as a Service	✓
Design & Engineering	✓
Infrastructure as a Service	✓
Deployment, Support and Upgrade Services	✓
Training Courses	✓