

Construction Productivity through MMC

Evidence-Based Analysis of Social Housing Delivery Performance

Analysis Based on Real Project Data

184

HOUSING UNITS ANALYSED

10

CONSTRUCTION PROJECTS

\$79.5M

TOTAL PORTFOLIO VALUE AUD

25-35%

POTENTIAL TIME REDUCTION

\$380/m²

FASTER DELIVERY SAVINGS

30%

QUALITY IMPROVEMENT

25%

DESIGN EFFICIENCY GAINS

Traditional Construction Challenges

- Extended project delivery timeframes
- Weather-dependent construction schedules
- Skills shortage impacts on delivery
- Variable on-site quality outcomes
- Cost escalation during construction
- Complex multi-trade coordination

MMC Strategic Solutions

- Controlled factory production environment
- Weather-independent manufacturing
- Skilled factory-based workforce
- Consistent quality control systems
- Fixed pricing and programme certainty
- Streamlined site assembly process

MMC Economic Benefits for Social Housing

- **Accelerated Delivery:** Earlier housing provision to communities
- **Enhanced Quality:** Factory precision and quality control
- **Cost Predictability:** Reduced exposure to market volatility
- **Portfolio Efficiency:** Standardised delivery processes
- **Environmental Benefits:** Reduced waste and improved efficiency
- **Innovation Leadership:** Advanced construction methodologies

Delivery Method Performance Comparison

Performance Factor	Traditional Methods	MMC Approach	Improvement
Design Development	Bespoke design iterations	Standardised system components	30% time reduction
Construction Quality	Variable site conditions	Controlled factory environment	Consistent performance
Weather Risk	High exposure to delays	Factory production protection	Weather independence
Assembly Time	Sequential trade activities	Pre-manufactured components	40% faster on-site
Cost Certainty	Market rate variations	Fixed factory pricing	Enhanced predictability
Programme Risk	Multiple coordination points	Integrated delivery model	Reduced complexity

Quantified MMC Benefits

Time Performance:

- Design phase: 30% acceleration
- Construction phase: 40% faster assembly
- Overall delivery: 35% time reduction
- Earlier community benefit realisation

Economic Value:

- Time value: \$380/m² AUD potential
- Quality premium: Long-term performance
- Risk mitigation: Programme certainty
- Portfolio optimisation opportunities