

Standardisation of Modern Methods of Construction – STANDARDIZE

MMC Ireland National Conference 2025
Johnstown Estate

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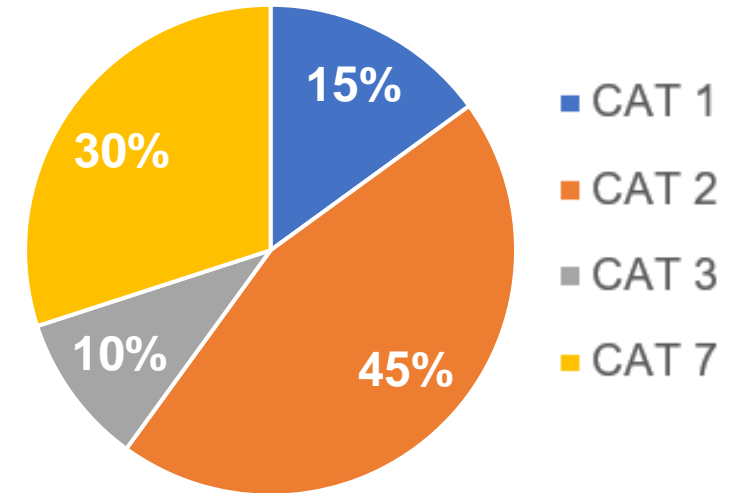
Presentation overview

- Impact of MMC standards/guidance
- Need for MMC standards & standardisation
- STANDARDIZE project
- Indicative test programme
- Standardised typologies + standardised construction details

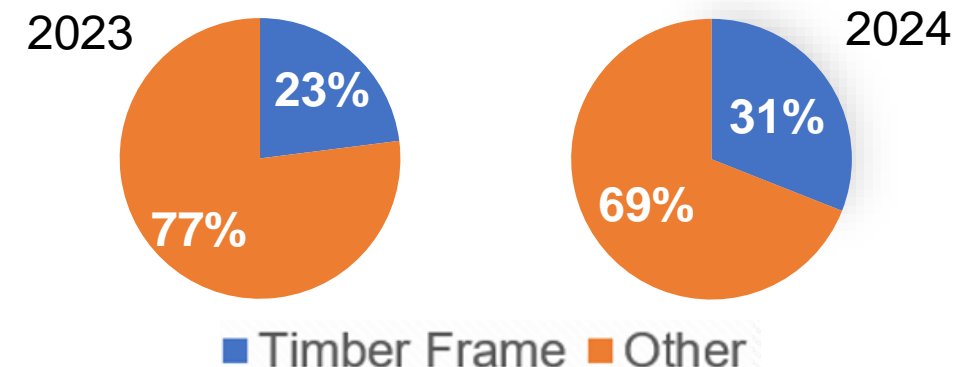
Impact of MMC Standards/Guidance

- Concrete Centre (2007) Design and Construction using ICF (**Cat 7**)
- IS 440:2009 Timber frame dwellings (**Cat 2**)
- SCI P402 (2015) – Light steel framing in residential construction (**Cat 2**)
- Concrete Centre (2019) Offsite concrete construction (**Cat 1-3**)
- ISO/ASTM52939:2023 (2023) Additive manufacturing for construction (**Cat 4**)
- PAS 8700:2025 MMC for new build residential (**Cat 1,2**)
- ISO/TC 59/SC 19 Prefabricated building (**Cat 1**)

**20 No. MMC Agrément certificates -
Building Systems (NSAI website)**



**% Timber Frame New Build Residential
(ITFMA presentation)**

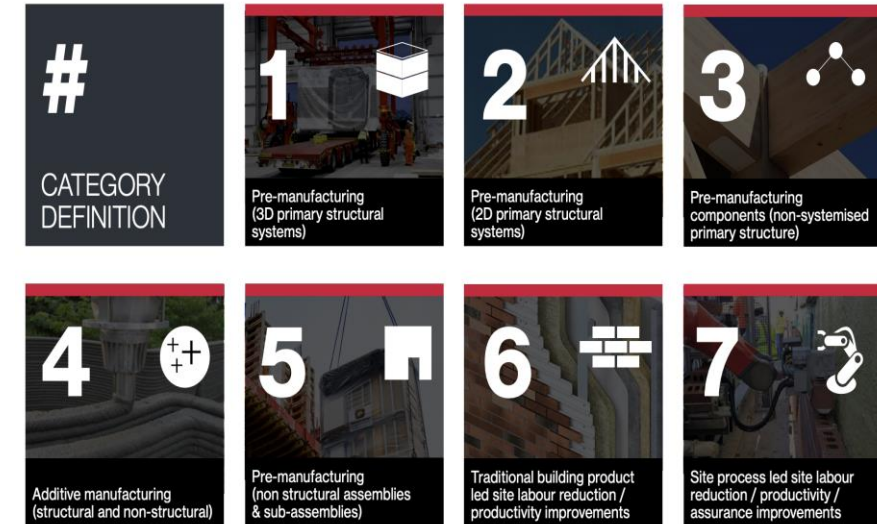


Need for MMC Standards

Ministry of Housing, Communities & Local Government, UK (2024). Volumetric Modular Construction research:

“Current Approved Documents were developed for traditional forms of construction, and do not explicitly focus on volumetric construction or other types of MMC.”

“Different approaches in volumetric construction in relation to warranties, accreditation and certification create confusion. The resulting lack of uniformity and fragmentation that exists points to a need for commonality.”



Research and analysis

Volumetric Modular Construction research

Published 26 November 2024

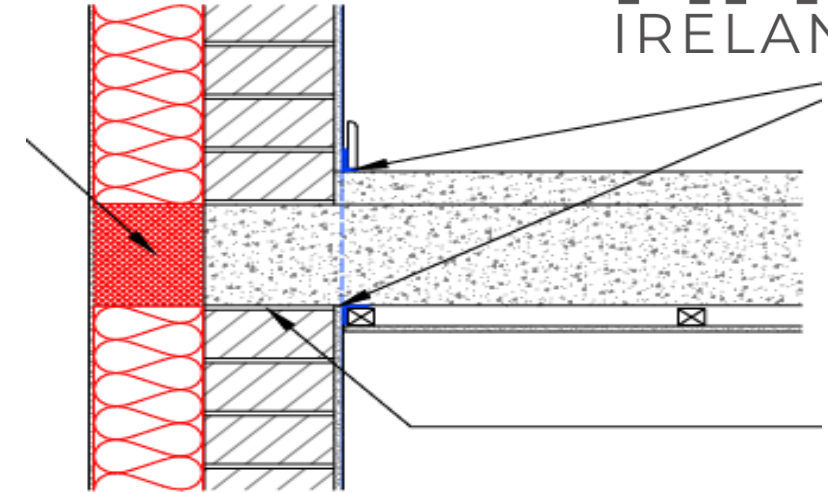


Ministry of Housing,
Communities &
Local Government

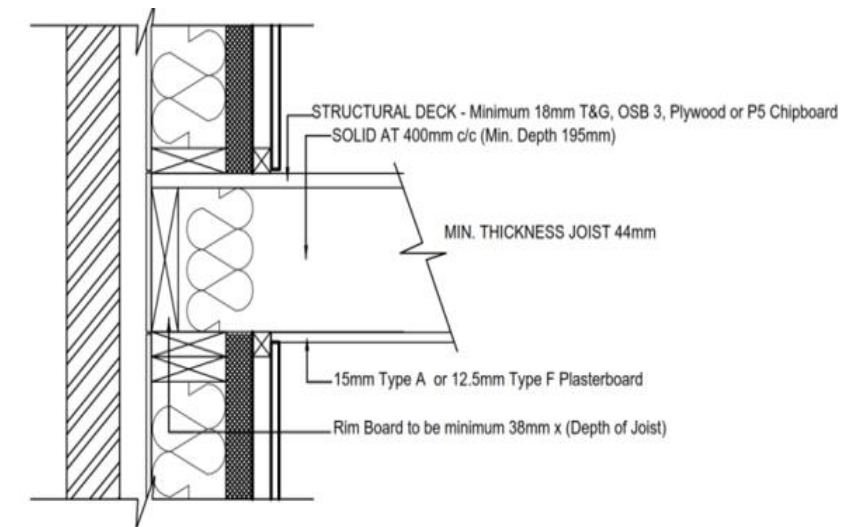
STANDARDIZE project



- Feedback from industry around the **need for standardised details** for residential construction
- **Support HfA** delivery of new housing
- **Open-source MMC standardised construction performance / details** (Structure, Fire, Energy, Durability, Resistance to Moisture and Sound) for all key junctions
- The design and testing of the details are intended to **achieve the performance requirements of the Building Regulations** to support the mainstream development and uptake of the identified MMC system.



Solid Joists - External Wall Junction



Section

Figure 1(a) Solid Joists @ 400mm c/c



STANDARDIZE - Project Objectives

Identify industry need for standardized details/performance

Industry
Need

Production of standardised MMC construction details based on EN standards testing

Standard
Details

Performance

Open
Source

Identify industry performance & durability requirements (Parts A-M)

Open-source publication of test data and verification of performance to simplify and widen access to MMC

STANDARDIZE - Indicative Test Programme



Table of estimated cost of physical testing for compliance

Part	Building Regulation Compliance	Cost of testing (accredited facilities)
A	Structure	€120,000
B	Fire	€960,000
C	Resistance to moisture	€450,000
E	Sound	€90,000

Table of potential certification testing matrix for one MMC system for fire safety (Part B) (repeat for Parts A, C, E)

Test ID	Fire Testing Locations	Internal board 1	Internal board 2	Internal board 3	30 min	60 min	90 min	Test Number	Repetition	Total Test Number
B1	Party Wall Panel	1	1	1	1	1	1	6	1	6
B2	External Wall Panel	1	1	1	1	1	1	6	1	6
B3	Internal Wall Panel	1	1	1	1	1	1	6	1	6
B4	Floor Panel	1	1	1	1	1	1	6	1	6
B5	Roof Panel	1	1	1	1	1	1	6	1	6
B6	Junction 1 - wall to floor	1	1	1	1	1	1	6	1	6
B7	Junction 2 - wall to roof	1	1	1	1	1	1	6	1	6
B8	Junction 3 - wall to wall	1	1	1	1	1	1	6	1	6

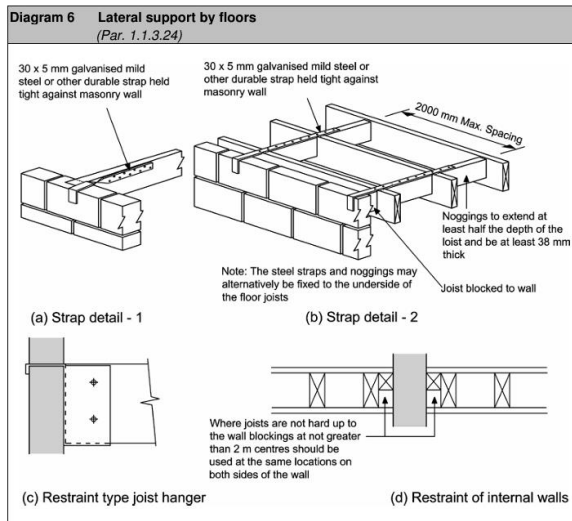


Repeatability and Scalability

STANDARDIZE

Supplementary Guidance to
TGDs or ACDs for one MMC

Standardised typologies



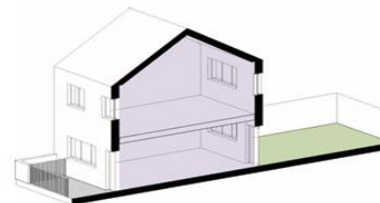
Standardised Design
Approaches Study
Stakeholder Workshop

Work in Progress

Hawkins\Brown
Studio Ireland



Compliance
Reduced risks
Repeatability
Scalable
Grow MMC market
share



STANDARDIZE - Next steps

Workshop 1 – Phase 1 (Q2 2025)

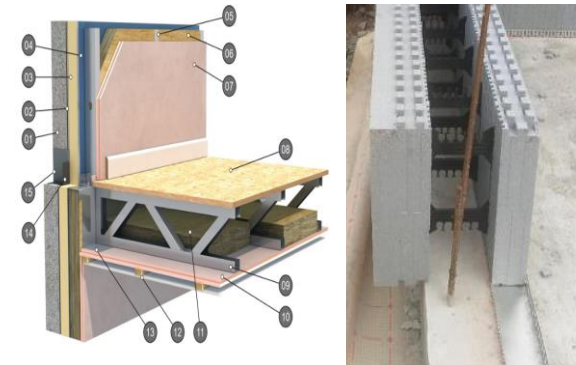
- Stakeholder needs analysis – all categories of MMC
- Gap analysis of all MMC standardised performance and details
- Any IP issues discussed
- Typical construction details already available to share?



Most market ready and impactful MMC category & material is selected
-> i.e. who goes first?

Workshop 2 – Phase 2 of Chosen Category & Material (Q2/3 2025)

- Identify MMC build-up and locations for standardised performance & detailing for the chosen MMC category & material



Agrément Certs (NSAI website)

Summary to-date

93 associate members
1 patron member



11 RPOs



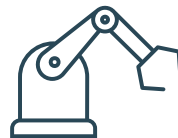
26 industry professionals completed 1st year of PgDip in Construction Innovation



7 Graduates placed through for Work-ready Graduate programme, started Sept 2024

€5 million

DHLGH Housing Related Research funding awarded



€2.65 million

in capital equipment to support construction industry in RD&I needs



9 research projects completed (€290k)



18 Seed Fund 2024 projects awarded (€1.1m)

18 Seed Fund 2024 projects awarded (€1.1m)

8 working groups



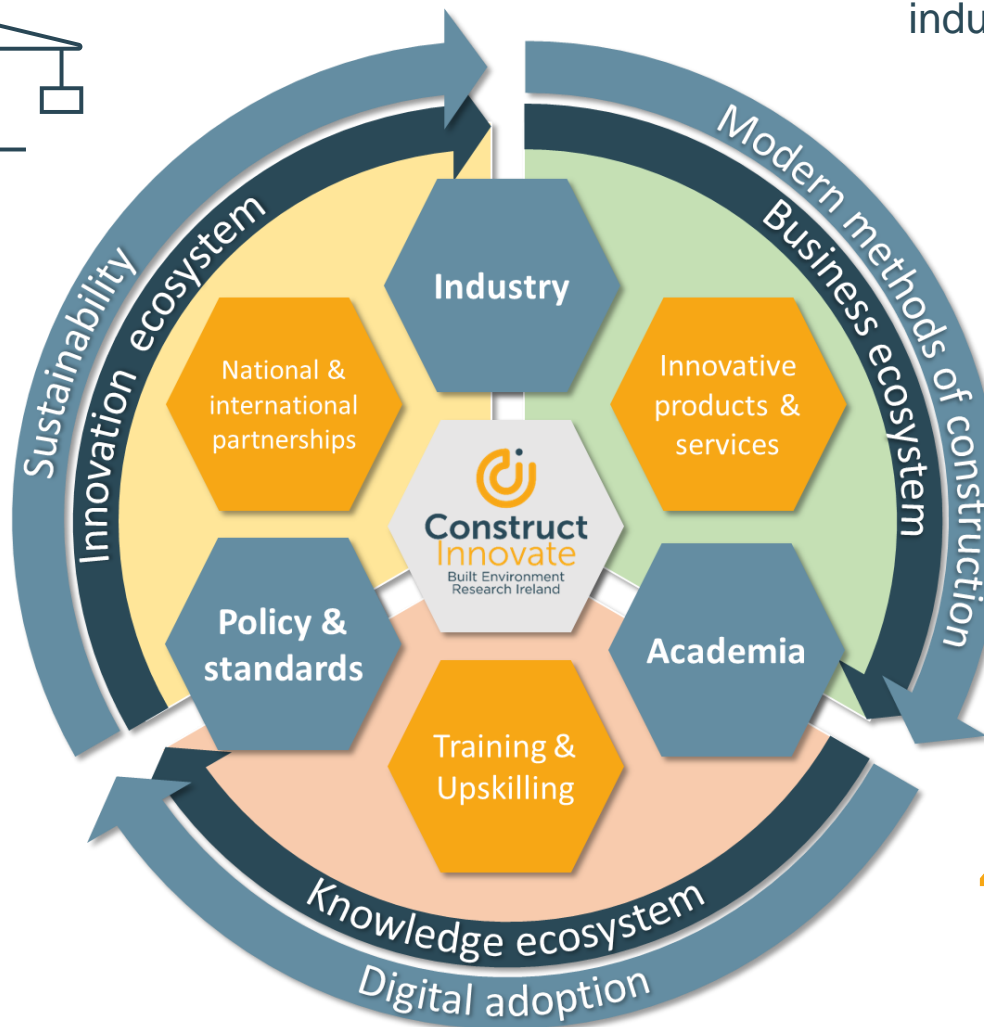
43 webinars delivered



3 AIMday Events

1 Industry Day

1 joint event with PHAI



MSc in Construction Innovation,
5 micro-creds & **1** PgCert in MMC
launched in Sept 2024

Thank you

Please feel free to contact me

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