

# Housing For All

## Modern Methods of Construction (MMC)

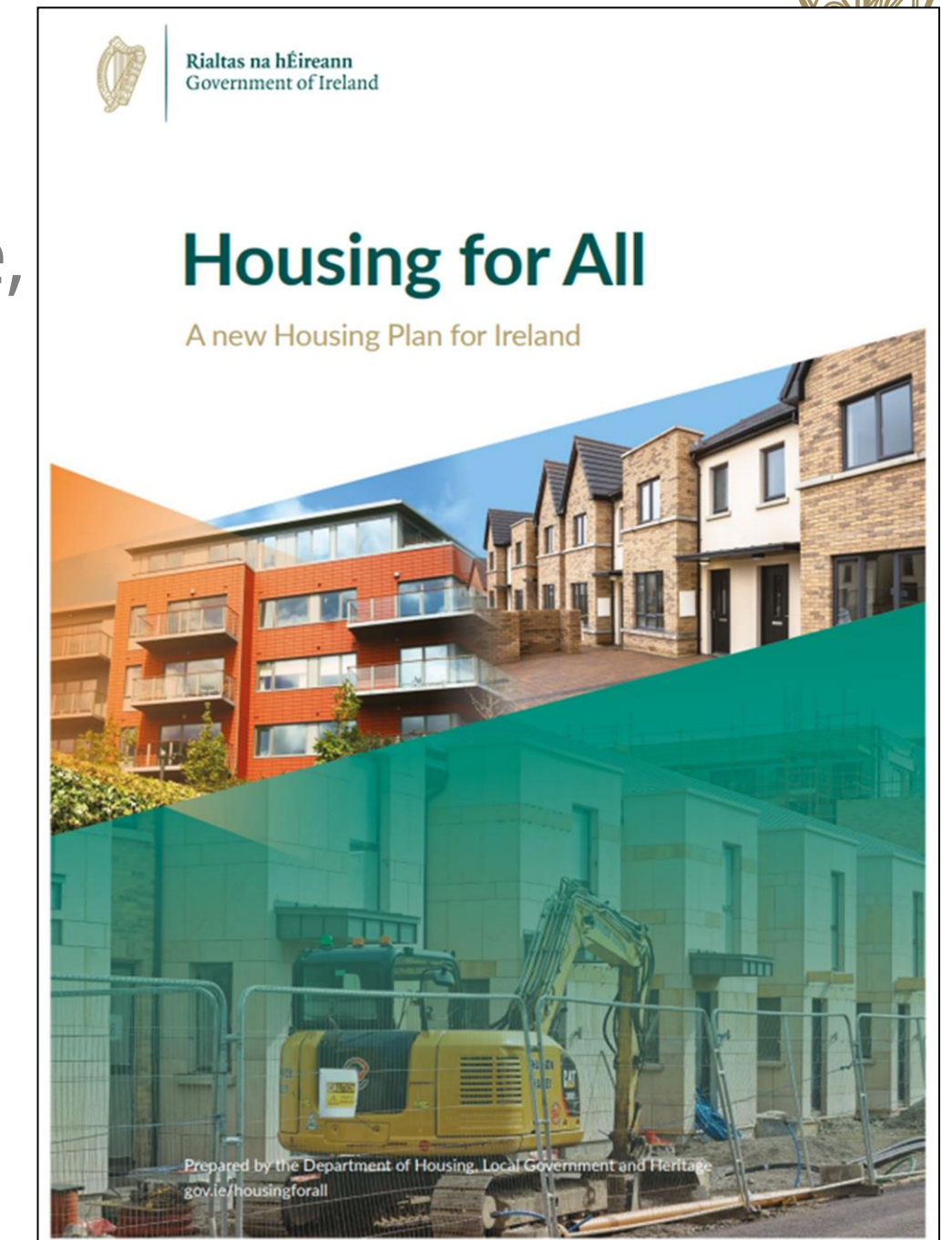
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# Housing for All

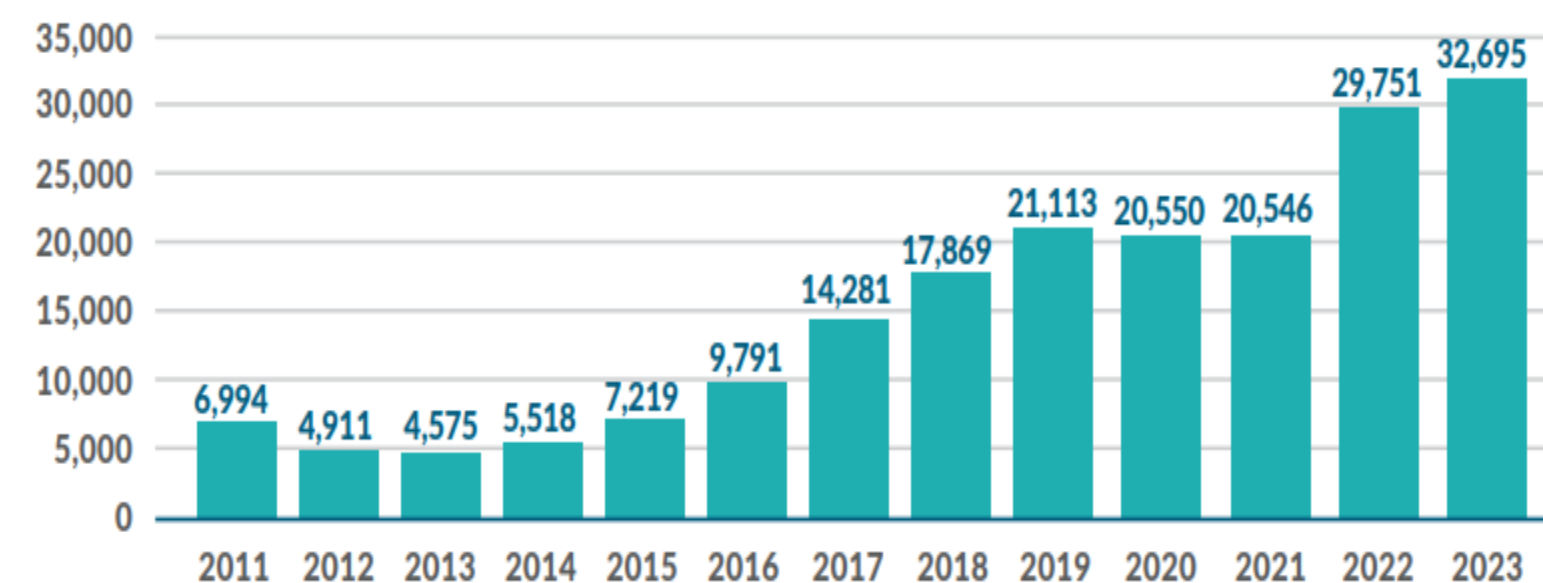


Key objective remains that ‘...everyone in the State should have access to a home to purchase or rent at an affordable price, built to a high standard and in the right place, offering a high quality of life’.

- **2023 Q4 update published in January 2024** – 30 Priority Actions + 83 Tier 2 Actions
- Average 33,000 new homes p.a. until 2030 | 300,000 total | €4bn investment pa
- 2021 – 20,433 | 2022 – 29,851 (24,600) | 2023 – 32,695 (29,000)
- **2024 (33,450) | 2030 (40,500)**
- Targets increasing and expected to be revised upwards



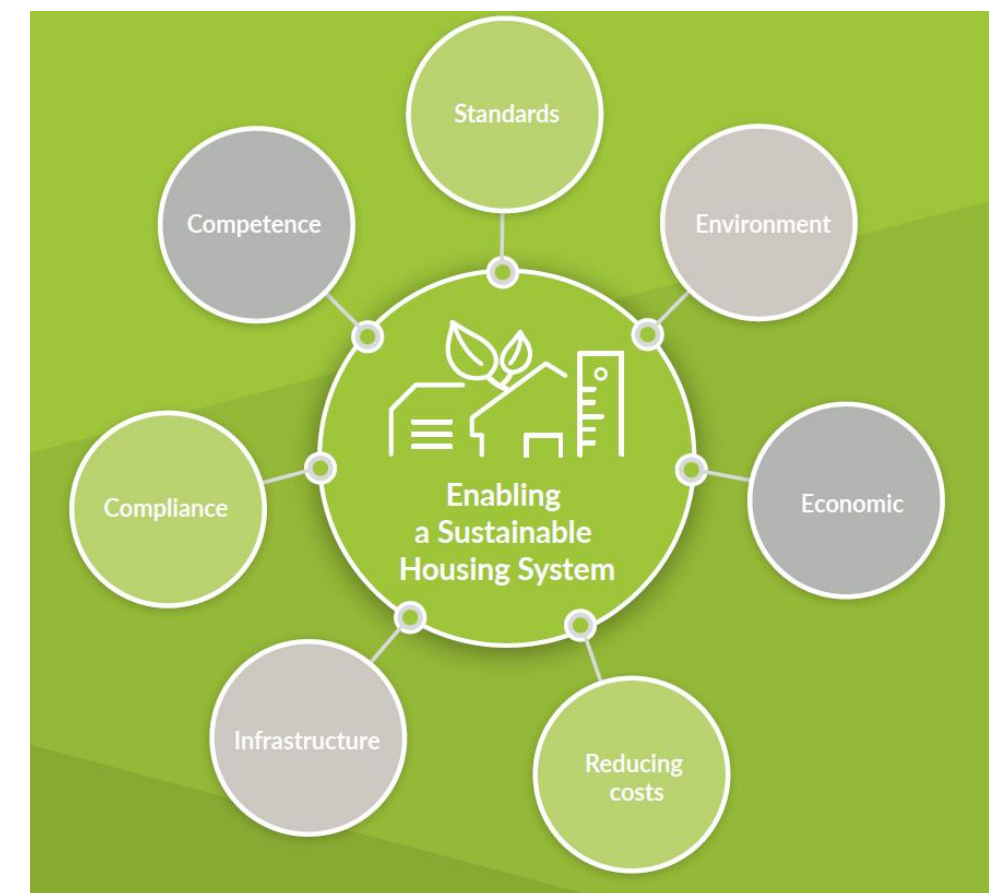
**New Homes Delivered, 2011-2023**



# Housing for All



1. Homeownership & Affordability
2. Homelessness, Social Housing & Social Inclusion
3. **New Housing Supply**
4. Vacancy & Existing Stock
5. Enabling a Sustainable Housing System  
**Section 5.3 Achieve Economic Sustainability**



‘The housing system needs to be placed on a **long-term economically sustainable footing**....

MMC has been identified as a key measure to **enable productivity and the efficient delivery of housing**....

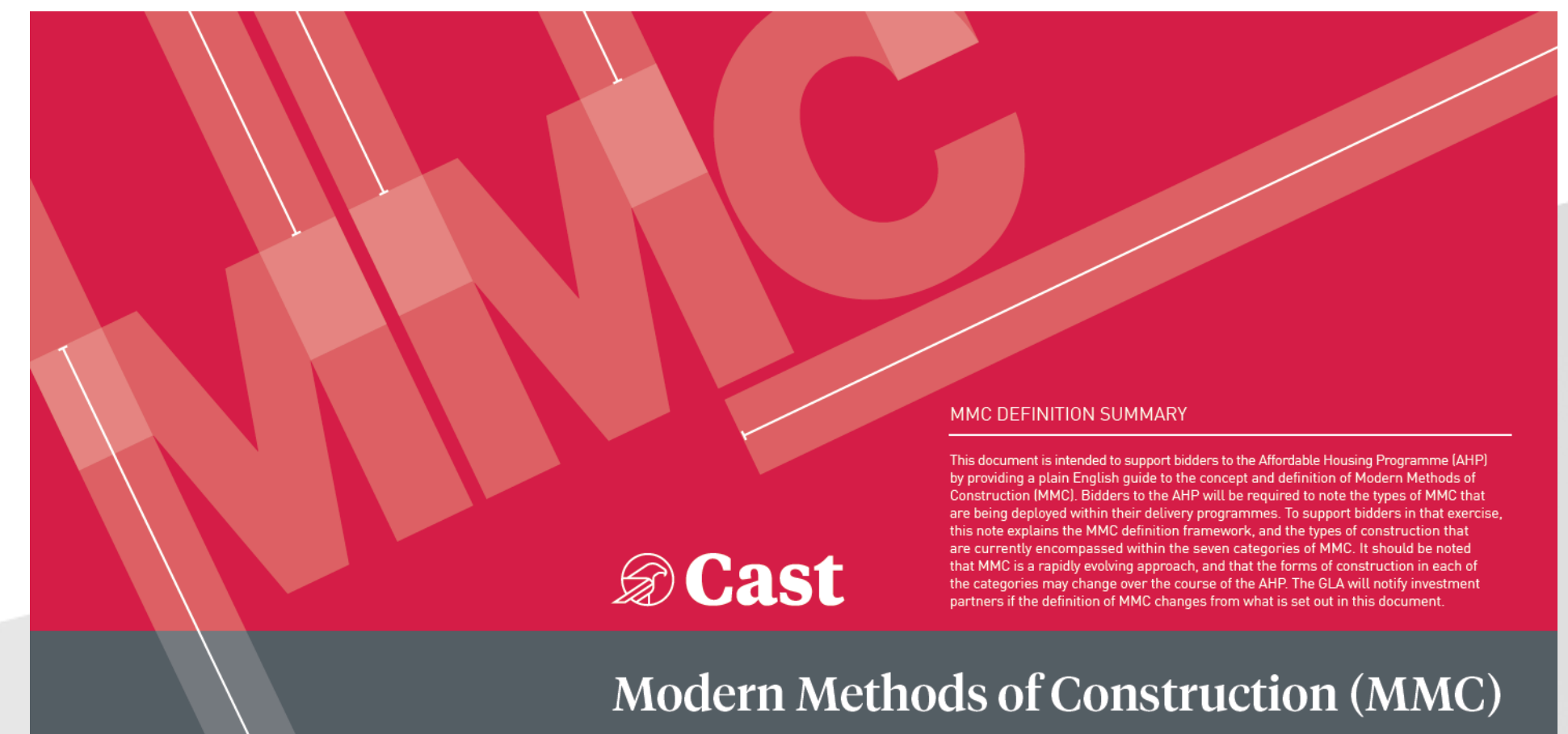
DETE, supported by DHLGH, will **promote a culture of innovation** in residential construction. This will be achieved through development of Modern Methods of Construction (MMC)’

# MMC Terminology



The term Modern Methods of Construction was developed by UK Research and Industry bodies. It is commonly used in the UK and Ireland since 2006 to describe **a range of manufacturing and innovative alternatives to traditional construction.** MMC has the potential to help boost onsite productivity and increase efficiency and environmental sustainability in housing delivery.

Modern Methods of Construction is the established terminology used to describe alternative methods of construction.

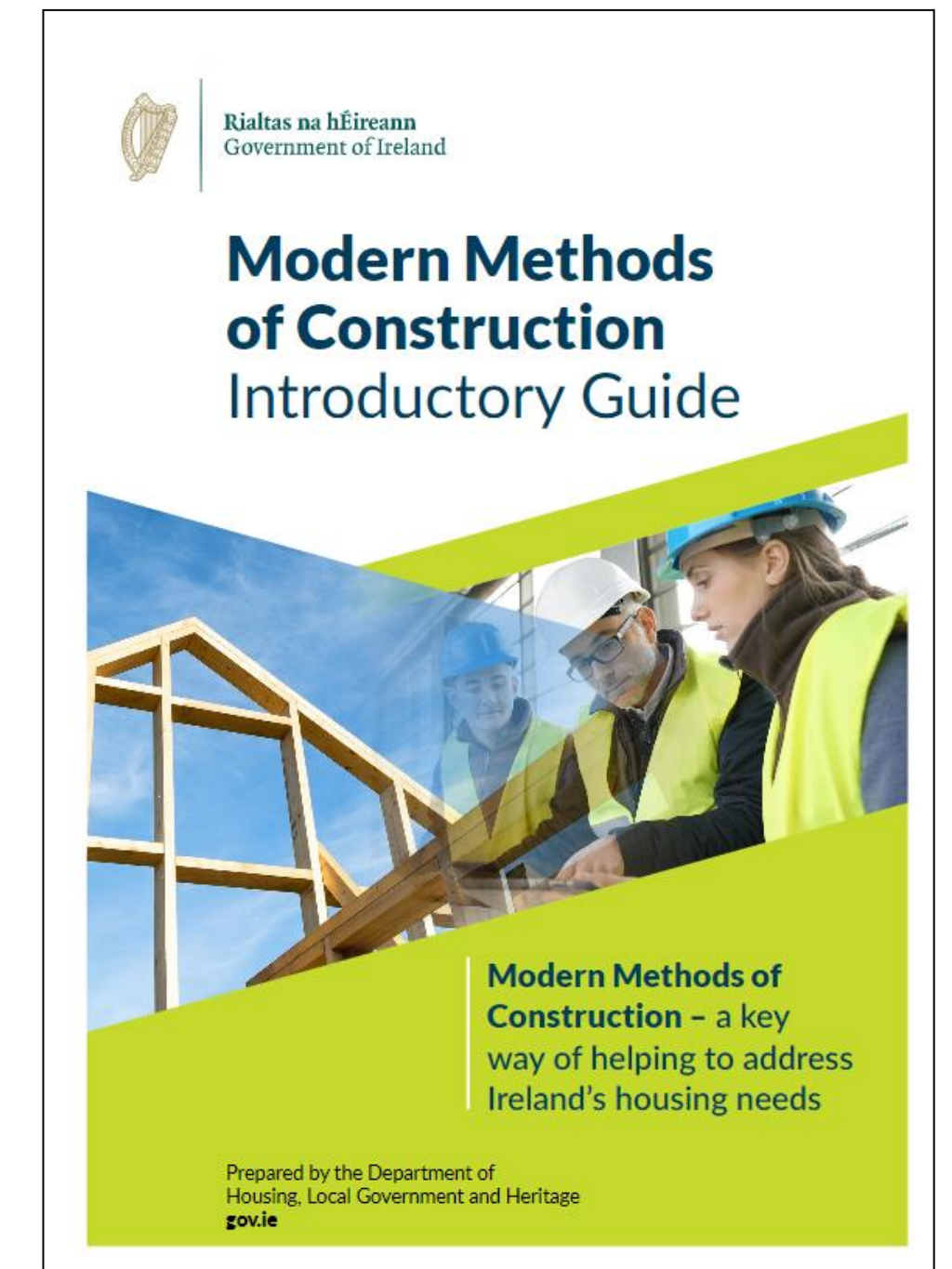


[Modern Methods of Construction working group: developing a definition framework - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

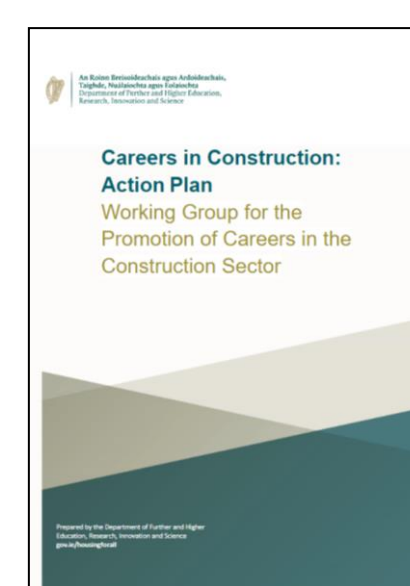
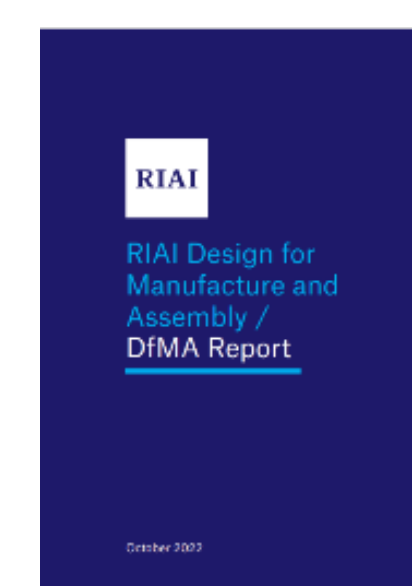
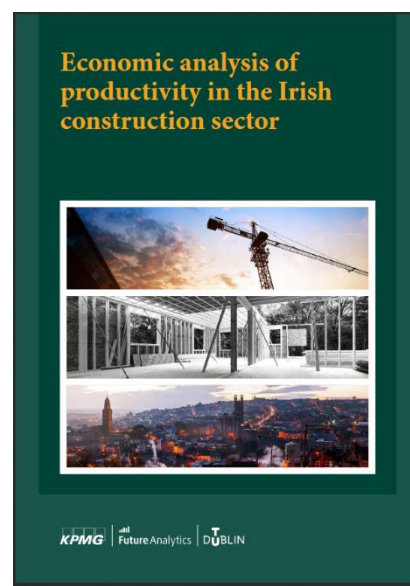
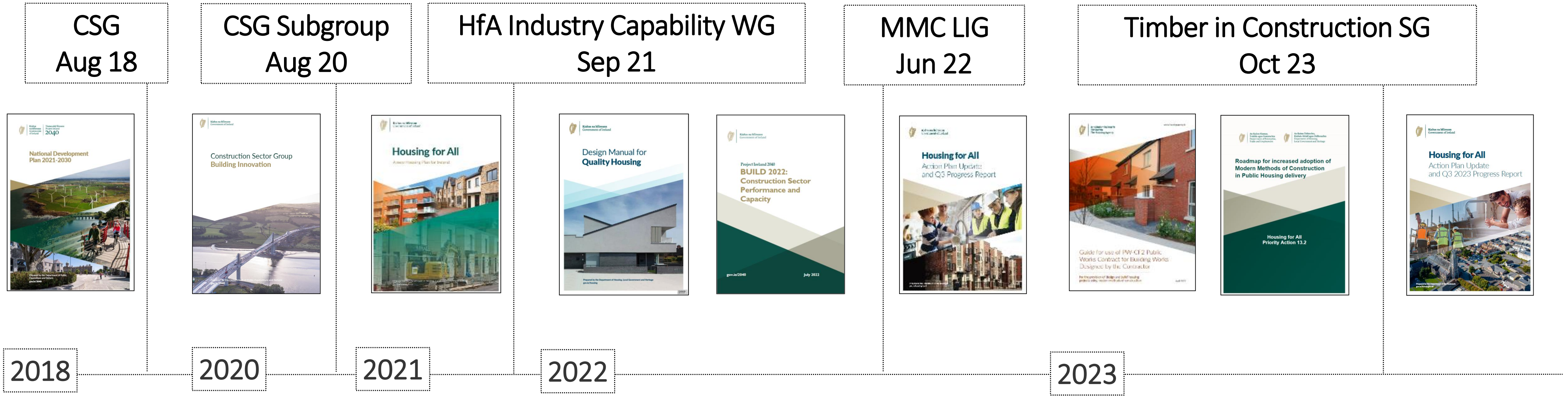
# MMC Opportunities



- Faster Delivery – Construction Programme & Overall Development Programme
- Lower Construction Cost – Economies of Scale
- Different and Lower Labour Requirements
- High Quality & Better Quality Control
- Efficient Use of Resources
- Better Data - Digital
- Supports Circular Economy
- Reduced Construction Waste



# Context



# Construction Sector Group (CSG) & Subgroup



- Formed 2018 to support the delivery of Project Ireland 2040 and comprises:
  - Representatives of key industry bodies - *Association of Consulting Engineers of Ireland, Building Materials Federation, Construction Industry Federation, Engineers Ireland, Irish Congress of Trade Unions, Irish Planning Institute, Royal Institute of the Architects of Ireland and Society of Chartered Surveyors Ireland*
  - Senior representatives of Government departments & agencies with responsibility for policy & for the delivery of infrastructure
  - Chaired by DPENDR
- Digital Adoption and Innovation Subgroup formed 2020
  - 7 Priority Actions including MMC
- Increased focus of both groups on **residential construction**



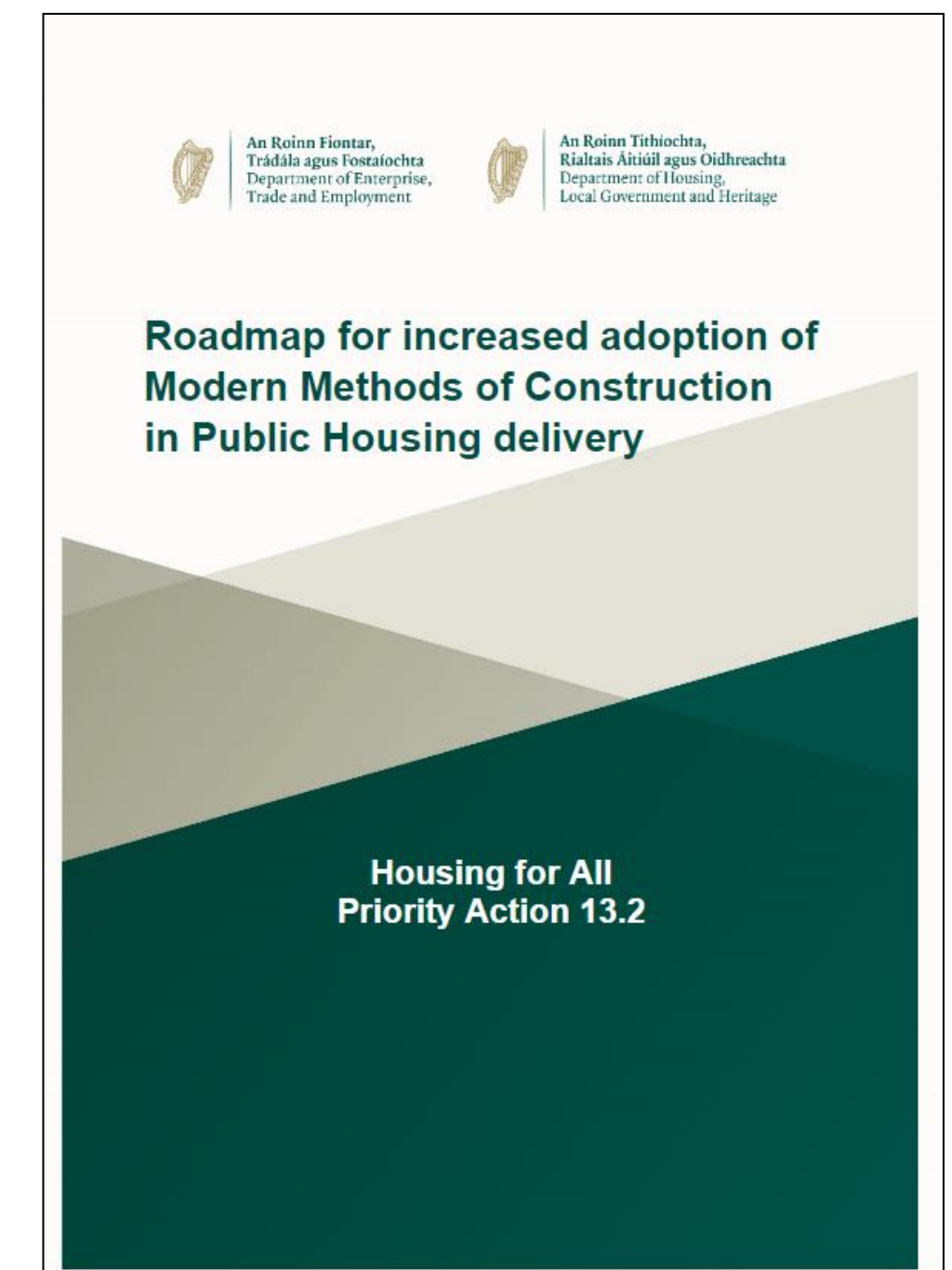
# MMC Leadership & Integration Group & Roadmap



- MMC LIG established by DETE in **June 2022** to address productivity and innovation challenges identified in HfA and provide oversight and direction to related HfA Actions and reports directly to the Industry Capability Working Group.
- Action include in particular:

## Roadmap for Increased Adoption of MMC in Public Housing Delivery

- Published **July 2023**
- **28 milestones under 6 themes**
  1. Procurement Approaches
  2. Regulations & Standards
  3. Capital, Finance and Insurance
  4. Skills Development
  5. Industry Competitiveness and Capacity
  6. Policy Execution and Communication





# HfA 2023 Priority Actions relevant to MMC



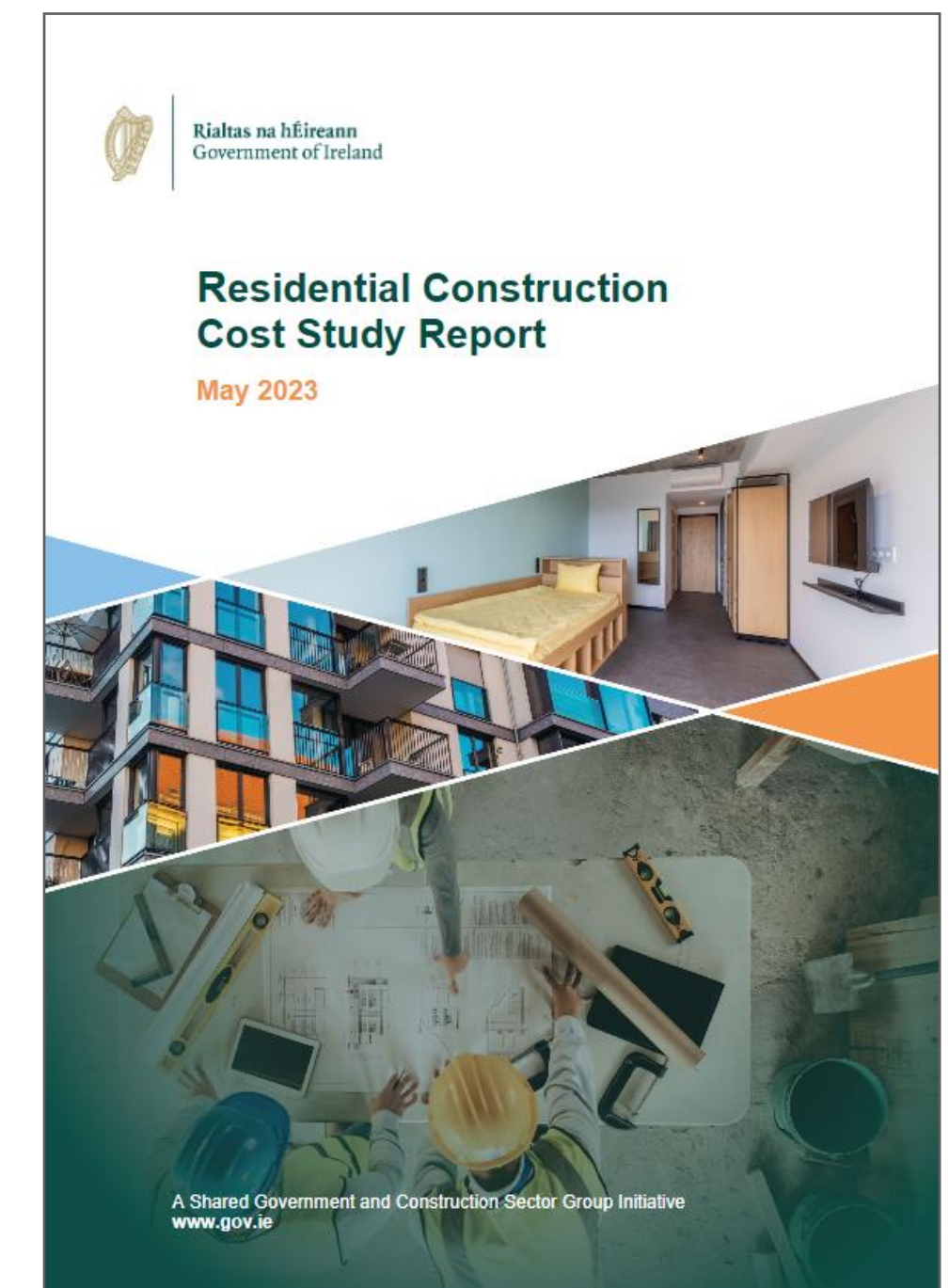
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| 10. Building on the <b>Residential Cost of Construction Study</b> , incorporate construction costs and 'soft' costs (e.g. fees, land) into an overall development cost study  | Q3 2024<br>DHLGH   |
| 11. Publish <b>standardised approaches to the design of housing</b> to include the development of standardised dwelling types and standardised specifications, including for building services, with the aim of reducing the cost of construction and <b>supporting MMC adoption</b> .                                  | Q4 2024<br>DHLGH   |
| 13. Report quarterly on sites identified for <b>accelerated delivery of social housing</b> through utilisation of MMC technologies.   | Quarterly<br>DHLGH |
| 14. Conduct a review of lessons learned, including the approach to procurement, from the pilot programme of sites identified for accelerated delivery of social housing through MMC that will assist in <b>mainstreaming this type of delivery</b> more widely as part of the social and affordable housing programmes. | Q2 2024<br>DHLGH   |
| 15. <b>Expand the use of a Design and Build procurement approach</b> to enable greater use of MMC in social and affordable housing delivery. Details of social housing projects using Design and Build will be reported each quarter in the Construction Status Report.   | Ongoing<br>DHLGH   |
| 16. Phase One of the <b>National Demonstration Park for MMC</b> is opened and operational.  | Q3 2024<br>DFHERIS |
| 63. Promote use of <b>Cross Laminated Timber</b> through the <b>Timber in Construction Steering Group</b> .   | Q3 2024<br>DAFM    |

# HfA 2023 Priority Action 10

## Total Development Cost Study



- Arising from Residential Construction Cost Study – published May 2023
- Main finding - actual construction costs in Ireland account for approximately 50% of overall residential development costs
- Gain deep insights into all facets of development costs, from construction to 'soft' costs, ensuring a holistic understanding
  - Land Acquisition
  - Finance Costs
  - Planning Charges
  - Professional Fees
  - Development Levies/Contributions
- Encourage standardisation within the construction sector, fostering consistency and reliability in cost estimation and project execution.



# HfA 2023 Priority Action 11

## Standardised Design Approaches Study



- Arising from Residential Construction Cost Study – published May 2023
- Steering Group in place representing Government and Industry
- Building on existing work such as DHLGH’s Design Manual for Quality Housing and LDA’s Apartment Typology Booklet
- The scope of the study is standardised design approaches for new build housing, apartments, duplexes and new typologies, applicable to private and public sector, to include layouts, services and components, optimised for MMC.
- Tender issued in February 2024



# HfA 2023 Priority Actions 13, 14, 15

## Accelerated SH Delivery Programme



- In December 2022, DHLGH approved significant funding (€94m) to address legacy debts on land owned by Local Authorities.
- This funding was contingent on the development of housing proposals that would commence construction by the end of 2024 utilising Design & Build to facilitate MMC.
- These sites are being managed as a cohesive 'Accelerated Delivery Programme'.
- The Accelerated Delivery Programme is intended to facilitate a wider adoption of Design & Build, to add another means of delivery other than traditional 'Design by Employer' approach.

# SITE LOCATIONS



**Circa 1740 units across  
35 sites (33 progressing)  
13 Local Authorities**



County Council	Sites	Circa Number of Units
Dun Laoghaire Rathdown	3	300
Fingal	5	265
Kildare	1	65
Waterford	1	35
Westmeath	1	12
Louth	5	325
Meath	1	47
Galway	1	84
Sligo	7	120
Cork City	1	222 (Competitive Dialogue)
Cork County	4	63
Kerry	4	177
Limerick	1	19



# Example Design-Build vs Traditional Contract

Sample Assessment of 13 projects in Wicklow County Council

PW-CF1 (Designed by the Employer) Five Projects

- Stage 1 submission to completed units on site (4.5 to 5 years typically)
- Average number of Change Orders = 90
- Final Account over run = 10%

PW-CF2 (Designed by the Contractor) Eight Projects

- Stage 1 submission to completed units on site (2.5 to 3 years typically)
- Average number of Change Orders = 10
- Final Account over run = 2%

# D&B BENEFITS



- Once established frameworks are in place, there is a reduction in time spent in the procurement process.
- Standardization of unit types also saves time in the planning process
- Significant reduction in time for the overall design due to gateway sign off process
- Approval process is shorter and streamlined
- MMC saves time on the construction programme, repetitive work due to standardized designs
- Significant reduction in Change Orders & Final Account agreement



# HfA 2023 Priority Action 83

## Timber in Construction



- Steering Group on timber to examine increasing the use of timber in construction established by Minister Hackett in November 2023.
- Mission: To develop a forum with Government and Industry to work collaboratively:
  - i. to create the conditions to increase the use of timber in construction whilst ensuring the highest degree of building safety and property protection;
  - ii. to examine regulatory and standardisation standards challenges; and
  - iii. to maximise the use of home-grown timber in construction.
- The Steering Group will submit an annual report to Government for publication reporting on its progress against terms of reference to communicate progress and making interim recommendations where appropriate.
- 5 thematic groups formed to support actions as identified under the Climate Action Plan and Irelands Forest Strategy - **Market opportunity; Regulation, Standards and Compliance ; Public Procurement and Demonstration Projects; Research and Development; Communication, Education, Training and Public Awareness**



# Construct Innovate



## 'Ireland's National Research Centre for Construction Technology and Innovation

Making Ireland a global research and innovation leader for sustainable construction and built environment technology'

- University of Galway, with TCD, UCD, UCC & Irish Green Building Council (IGBC) awarded contract
- Official launch in December 2022
- €5.5M work programme over 5 years
- Housing research - Year 1-3 priority



<https://constructinnovate.ie/>

# HfA 2023 Priority Action

## Construct Innovate Ongoing Projects



- MMC Standardised Details
- Supporting continuity of MMC from design through to construction
- Durability of Dense Aggregate Concrete masonry units in Irish structures
- Alternative methods of remediation of buildings damaged by defective concrete blocks
- Indigenous test facilities to support testing of construction products and diagnosis of buildings affected by above
- Development of Fire Test facilities in Ireland
- Ageing population and universal access Building Regulations compliance assessment of UD Homes
- Reuse of existing buildings (including traditional buildings)
- Effectiveness of the Technical Guidance Document J

# HfA 2023 MMC Training Actions



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|--|--------------------|
| 53. Introduce <b>training interventions for public procurers</b> of residential construction to address any MMC knowledge gaps, working with the OGP.  | Q1 2024<br>DHLGH   |
| 54. Introduce <b>training interventions for Building Control Authorities (BCAs)</b> , which would include training on relevant standards and certification processes, to address any MMC knowledge gaps.                     | Q2 2024<br>DHLGH   |
| 55. Development of a <b>Continuing Professional Development (CPD)</b> training programme for accreditation, to address identified skills gaps in Modern Methods of Construction (MMC) for construction sector professionals. | Q4 2023<br>DHLGH   |
| 56. Expert Group on Future Skills Needs (EGFSN) to report on the <b>skills requirement</b> for the transition to MMC.  | Q1 2024<br>DETE    |
| 57. Publish an <b>Action Plan</b> in response to the EGFSN report on <b>MMC Skills</b> .   | Q2 2024<br>DFHERIS |

# HfA 2023 Further MMC Actions ctnd



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| 58. Informed by the forthcoming analysis and recommendations of the EGFSN MMC Skills Needs study, investigate the development of an industry lead platform to promote MMC skills development and provide dedicated <b>MMC upskilling programmes</b> across the construction supply chain. | Q3 2024<br>DFHERIS |
| 59. Develop <b>MMC criteria</b> for use in evaluating tenders for <b>public contracts</b> for housing.  | Q2 2024<br>DHLGH   |
| 60. Develop a <b>dashboard of MMC metrics</b> to benchmark, and subsequently track, levels of MMC adoption in Ireland.  | Q2 2024<br>DETE    |
| 61. Drive further process improvements and cycle time efficiencies in <b>NSAI Agrément certification</b> for MMC in residential construction, including development of information supports to assist applicants to prepare for the certification process.                                | Q3 2024<br>DETE    |
| 62. <b>Pilot project</b> initiated to deliver social or affordable housing using a <b>3D Volumetric system</b> .  | Q2 2024<br>DHLGH   |
| 63. Promote use of <b>Cross Laminated Timber</b> through the <b>Timber in Construction Steering Group</b> . Group to update biannually.   | Q3 2024<br>DAFM    |

# Many Thanks

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