

*Innovating for a safer, better, and
sustainable future*

MMC Certification overview

12th March 2025

MMC
IRELAND





Agenda

- 1 **MMC Certification update**
- 2 **6M's + I&C Approach**
- 3 **MMC Documentation**
- 4 **MMC Quality Control**





MMC Updates



Why Agrément Certification?

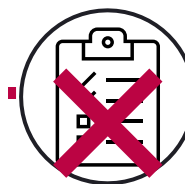
Agrément Certification is designed specifically for **new innovative building materials, products and systems** that do not yet have a long history of use.



Products and systems for which there may be **no national standard**



Products and systems for which there may be **no harmonised European product standard (hEN)**



Products and systems for which there may be **no European Technical Assessment (ETA)**

Part D of the Second Schedule to the **Building Regulations** states: **Materials and workmanship D1**- All works to which these Regulations apply shall be carried out with **proper materials and in a workmanlike manner**. “Proper materials” means materials which are fit for the use for which they are intended and for the conditions in which they are to be used, and includes materials which:

(a) **bear a CE Marking** in accordance with the provisions of the Construction Products Regulation;

(b) **comply with an appropriate harmonised standard or European Technical Assessment** in accordance with the provisions of the Construction Products Regulation;

(c) **comply with an appropriate Irish Standard or Irish Agrément Certificate or with an alternative national technical specification** contracting party to the Agreement of the European Economic Area (EEA), which provides in use an equivalent level of safety and suitability.

MMC Building System applications

Company	Material type	Date of Application	Agrément status	Notes
MMC Client #1	Timberframe / CLT	Jan 2024	Tech Review	2nd Offsite Factory visit carried out. Technical Assessment stage ongoing.
MMC Client #2	Welded steel frame	Nov 2021	Tech Review	Technical Assessment stage ongoing – final supporting documentation under review.
MMC Client #3	Steel frame	Feb 2023	Tech Review	Currently in Technical Assessment stage – 2 module type solutions submitted to NSAI.
MMC Client #4	Light Guage Steel	May 2024	Tech Review	Three applications in process with NSAI – 2D panelised and 3D volumetric solutions.
MMC Client #5	Steel frame	Feb 2024	Tech Review	MMC Manufacturer providing additional supporting documents to NSAI, for review.
MMC Client #6	Welded steel frame	Feb 2024	Tech Review	A NSAI FPC Audit report issued for follow-up / action by MMC Manufacturer.
MMC Client #7	Steel frame	Feb 2023	ON HOLD	No MMC correspondence since Sept 2024.
MMC Client #8	Welded steel frame	Nov 2022	ON HOLD	No MMC correspondence since Nov 2024.
MMC Client #9	Welded steel frame	Oct 2024	Application received	Previous Application received in 2021. A new Revision Application has been requested. Technical Pack submitted 16th October 2024.
MMC Client #10	Welded steel frame	July 2024	Application received	A NSAI Gap Analysis report issued for follow-up / action by MMC Manufacturer.

MMC Building System applications

Company	Material type	Date of Application	Agrément status	Notes
MMC Client #11	Steel frame	Expected	Tech Review	Nearing final Draft Certificate stage.
MMC Client #12	Welded / Composite	Oct 2024	Gap Analysis	Contract issued to MMC Client by NSAI.
MMC Client #13	Light Guage Steel	March 2024	Gap Analysis	Contract signed in March. Client to proceed.
MMC Client #14	Welded Steel frame	Oct 2024	Tech Review	No MMC correspondence since October 2024.
MMC Client #15	TBC	TBC	PENDING	No MMC correspondence since May 2024.
MMC Client #16	Welded Metal Post system	Nov 2024	Tech Review	At an advanced Technical Review stage.
MMC Client #17	Mass Engineered Timber (MET)	May 2024	Tech Review	Contract Scope document issued to client. Client undertaking MMC value engineering.
MMC Client #18	ICF	Feb 2022	Gap Analysis	No MMC correspondence since Oct 2024.
MMC Client #19	Mass Engineered Timber (MET)	Withdrawn	CANCELLED	MMC Application withdrawn by the company.
MMC Client #20	Structural Insulated Panel (SIP)	Nov 2022	Tech Review	Initial gap analysis has been completed by NSAI. Fire testing scheduled for March 2025.
MMC Client #21	Precast Concrete	Feb 2024	Tech Review	At an advanced Technical Review stage.
MMC Client #22	Not confirmed yet	Nov 2024	Application received	A more detailed Technical Pack to follow. Kick-off meeting held in Jan & March 2025.

MMC Building System applications

Company	Material type	Date of Application	Agrément status	Notes
MMC Client #23	Precast Concrete	March 2024	Gap Analysis	A more detailed Technical Pack to follow.
MMC Client #24	Structural Insulated Panel (SIP)	Nov 2024	Gap Analysis	A NSAI Gap Analysis report issued for follow-up / action by MMC Manufacturer.
MMC Client #25	Structural Insulated Panel (SIP)	Expected	PENDING	An initial Kick-off meeting held 6th Jan 2025.
MMC Client #26	Wood / Concrete Composite	Expected	PENDING	Currently hold an ETA certificate. Awaiting an Application to be submitted to NSAI or not.
MMC Client #27	TBC	TBC	TBC	No MMC correspondence or enquiry received.
MMC Client #28	Hot Rolled Steel	Nov 2024	Gap Analysis	Contract Scope drawn up for MMC Client.
MMC Client #29	Light Guage Steel	Nov 2024	Application received	Kick-off meeting to follow. Awaiting further supporting technical documentation.
MMC Client #30	Light Guage Steel	March 2024	Tech Review	Technical Pack and associated documentation under technical assessment by NSAI.
MMC Client #31	Hot Rolled Steel	Jan 2025	Application received	Certificate revision application received (2D) and for a New 3D-Volumetric application.
MMC Client #32	Light Guage Steel	Jan 2025	Certified	New Certificate revision application received.
MMC Client #33	Mass Engineered Timber (MET)	Nov 2024	Application received	Technical Pack and associated Certificates issued. Initial Gap Analysis completed.

MMC Building System applications

Company	Material type	Date of Application	Agrément status	Notes
MMC Client #34	Light Guage Steel	Nov 2024	Application received	Initial kick-off meeting held in December 2024. A more detailed Technical Pack to follow, for NSAI to review.
MMC Client #35	Mass Engineered Timber (MET)	Nov 2024	PENDING	Currently hold an ETA certificate. Awaiting an Application to be submitted to NSAI or not.
MMC Client #36	TBC	On Hold	ON HOLD	Awaiting Director approval within MMC organisation, if they wish to proceed or not.
MMC Client #37	Steel structure	On Hold	ON HOLD	Awaiting Director approval within MMC organisation, if they wish to proceed or not.
MMC Client #38	3DCP	TBC	TBC	TBC – If an application will be submitted to NSAI, or not.
MMC Client #40	TBC	TBC	PENDING	TBC – If an application will be submitted to NSAI, or not.
MMC Client #41	Perlite	Feb 2024	Gap Analysis	Application submitted to NSAI, and a gap analysis carried out, though does not comply with TGD Part A (2012) requirements, at present. Holds a CE marking certificate.
MMC Client #42	TBC	TBC	PENDING	TBC – If an application will be submitted to NSAI, or not.

MMC Building Systems

Key Findings:

1. Some MMC Clients do not engage with NSAI **nor** advise of any change in circumstances.
2. **60%** of new 3D-Volumetric applications have only been received in 2024.
3. Each have different strategic directions and focussed on certain sectors, due to demand.
4. **Factory Production Control** (FPC) audits have commenced, for some clients [Stage 5].
5. Clients / Manufacturers are not fully utilising 3D-Volumetric building systems, at present.
6. 3D Volumetric systems are typically **Welded Steel Frames** predominantly used.





NSAI

6M's + I&C approach



What is Quality...?

*“The **Totality** of features and characteristics of a Product or **Service** that bears on its ability to satisfy a customer’s **stated** and/or **implied** needs.”*

(ANSI / ASQ 1978)

- ✓ Totality of features and characteristics
- ✓ Product or Service
- ✓ Ability to satisfy
- ✓ **Stated:** i.e. Specifications, Drawings, Engineering requirements.
- ✓ **Implied:** i.e. Legislation, Standards, Building Regulations, Codes of Practice / CE Marking

QA vs QC

Quality Assurance (QA):

Any action or framework directed towards providing assurance that the **Project requirements** will be met.

Ref: ISO 9000: 2015 – Quality Management System standard

Quality Control (QC):

Is a part of quality management focused on fulfilling the **Project quality requirements**. The system used to maintain standards is by inspecting or testing a sample of the output against the specification(s).

Ref: ISO 9000: 2015 – Quality Management System standard



QA vs QC

Quality Assurance (QA):

NSAI Agrément Certification i.e. An 'end-to-end' technical assessment process and Factory Production Control review.



Quality Control (QC):

BC(A)R 2014 i.e. a project-by-project sample inspection process, as per the PIP & INF documents.



Building Control Regulations 2014
February 2014



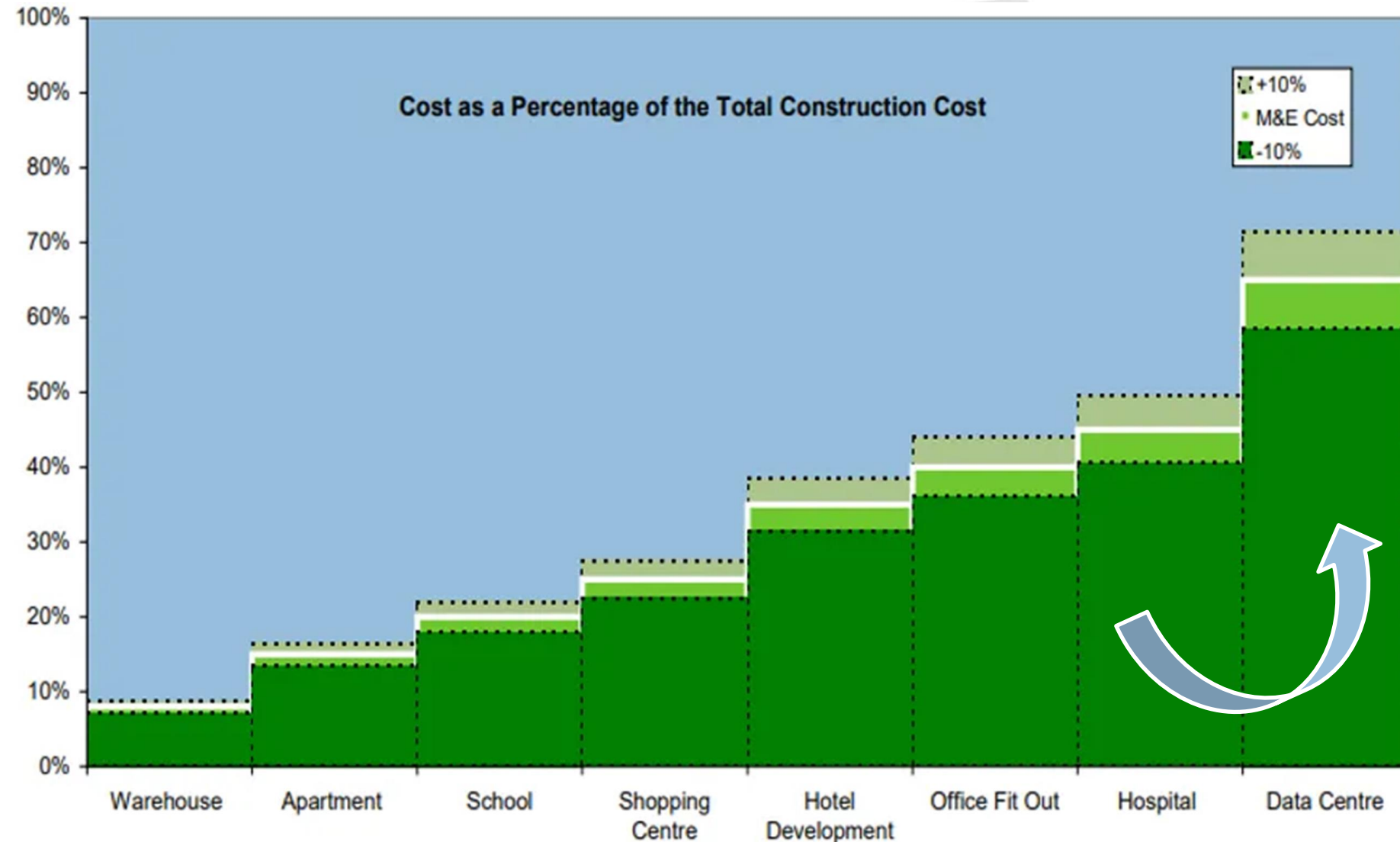
Construction issues

“Design errors and omissions, upstream, were deemed to be the primary causes of rework on construction projects.”

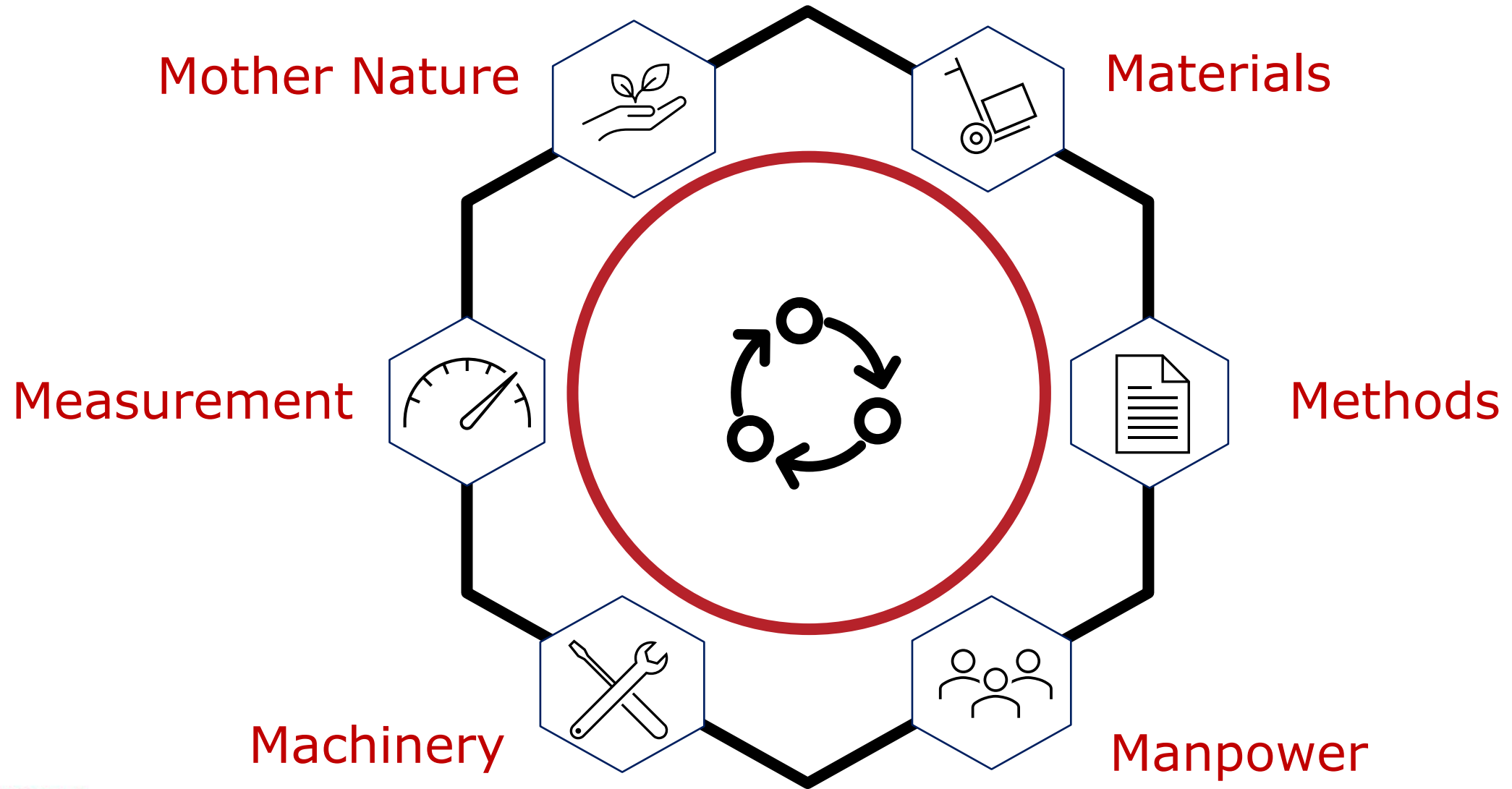
ZERO DEFECTS

Construction requirements

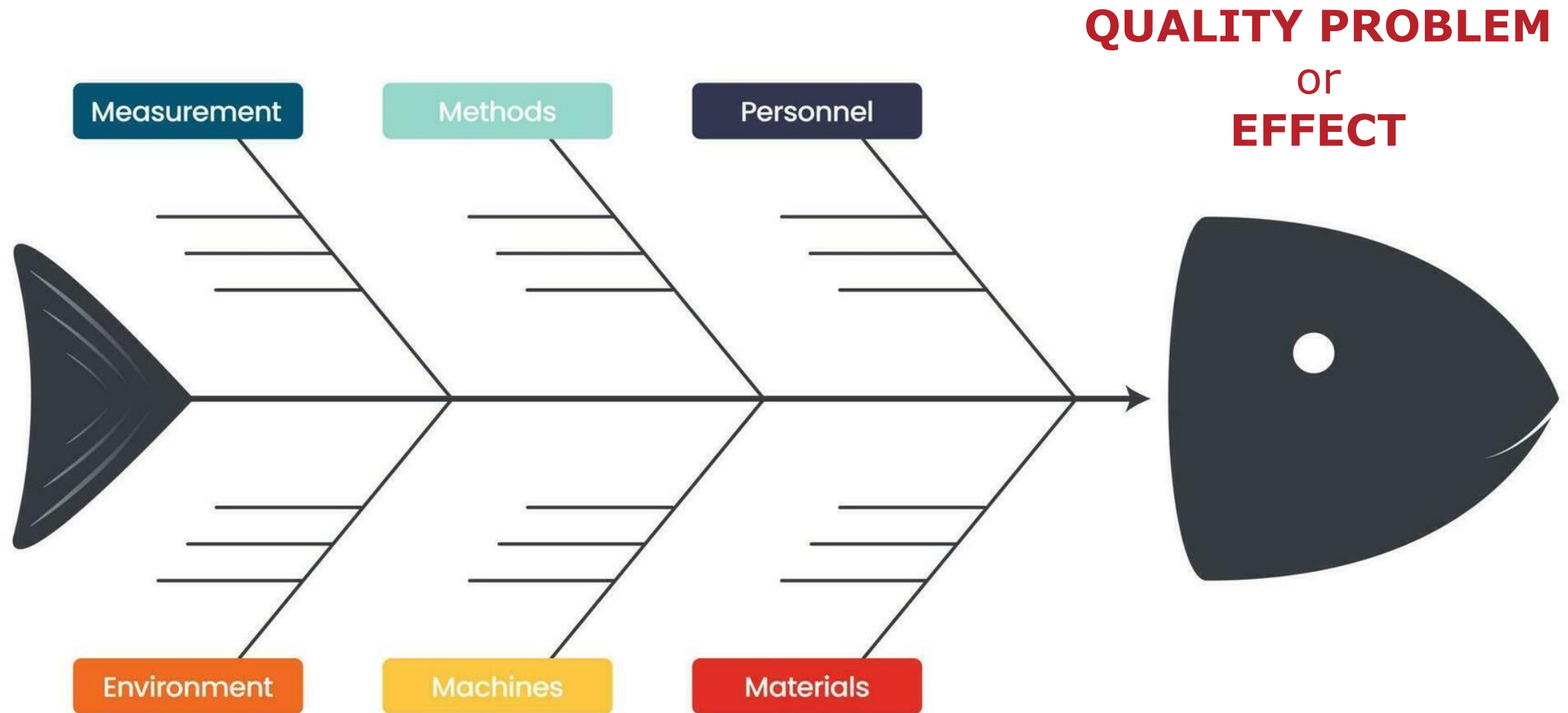
- TGD's Parts A-M
- Design Manual for Quality Housing
- Standardisation (new approach)
- SDG's Parts A-M
- HTM requirements
- BioPharma GMP
- Data Centre CxA



MMC Quality – 6M's + I&C



Cause & Effect Analysis





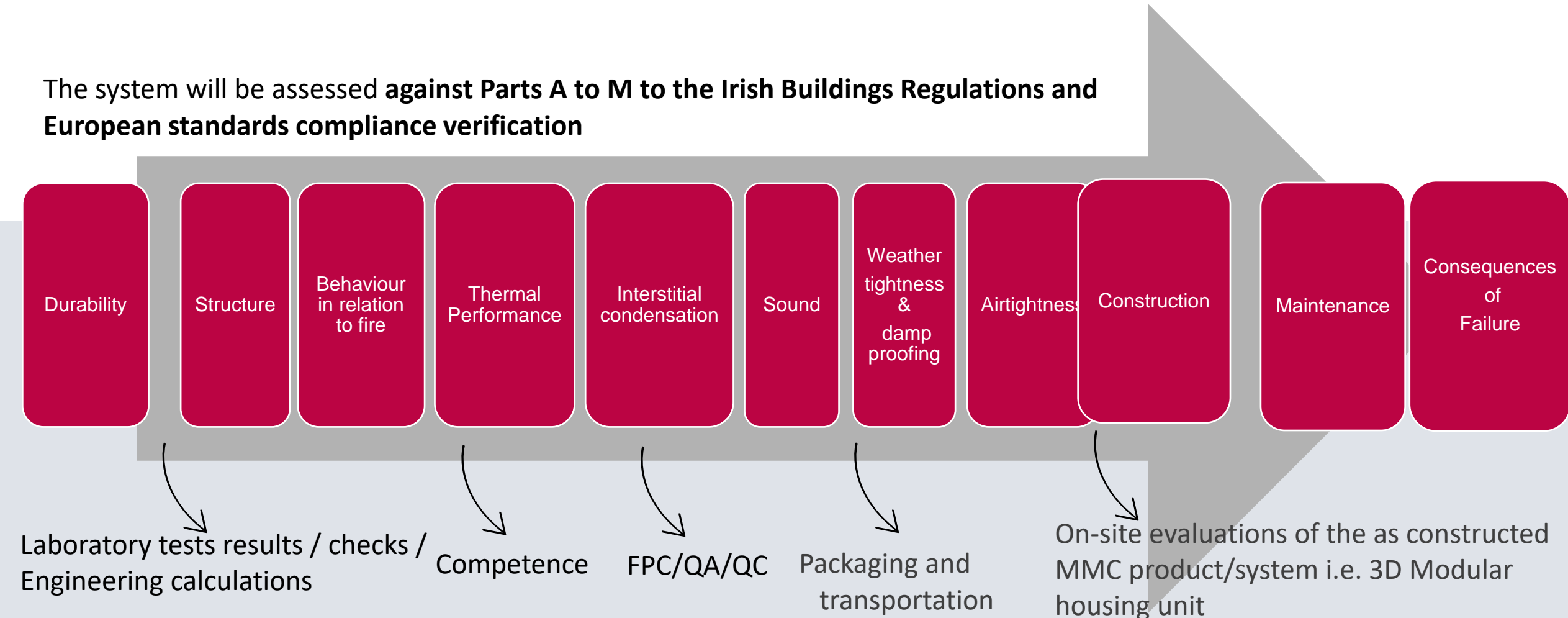
MMC Documentation issues



MMC Agrément service

The Technical Assessment Specification (TAS) overview

The system will be assessed **against Parts A to M to the Irish Buildings Regulations and European standards compliance verification**

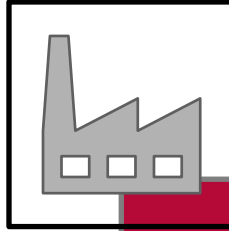


Document issues



Documentation

- DoP's
- Specifications
- Drawings
- Data sheets
- Manufacturers' instructions
- Technical literature
- ETA's
- Standard Operating Procedures (SOP's)



Factory Production Control

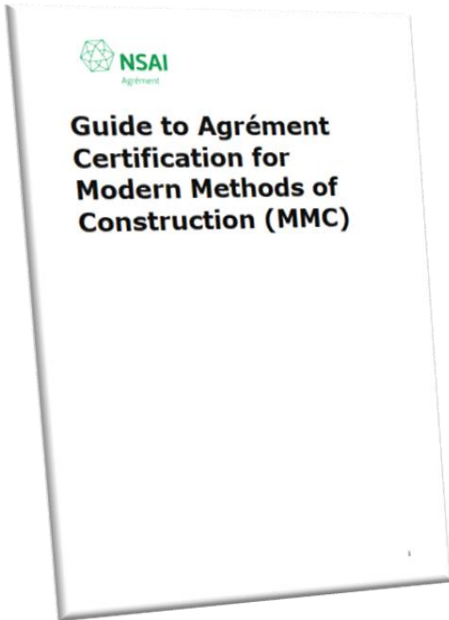
- Materials
- Methods
- Manpower
- Machinery
- Measurement
- Mother Nature
- Continual Improvement



Onsite QC

- Co-ordination
- Workmanship
- Weathering
- Lifting / Rigging
- Interfaces i.e.
 - ⇒ Points of connection
 - ⇒ MEP system
 - ⇒ Connection details

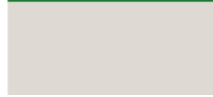




MMC Certification 'Toolkit'

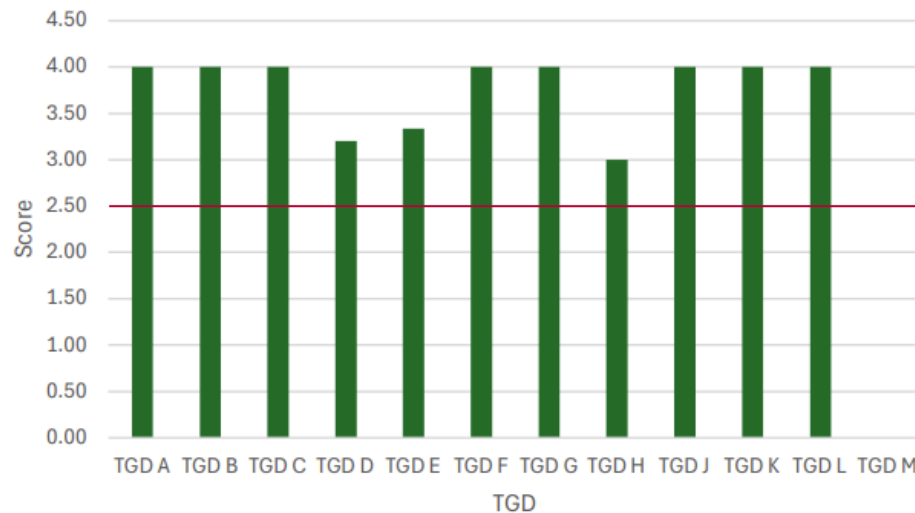
A **NSAI MMC Readiness scorecard** developed for MMC Certification evaluation assessment, plus Infographic supports.

Your 'TGD' readiness score:

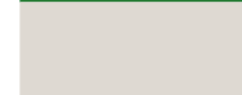


Likely High

TGD Scores

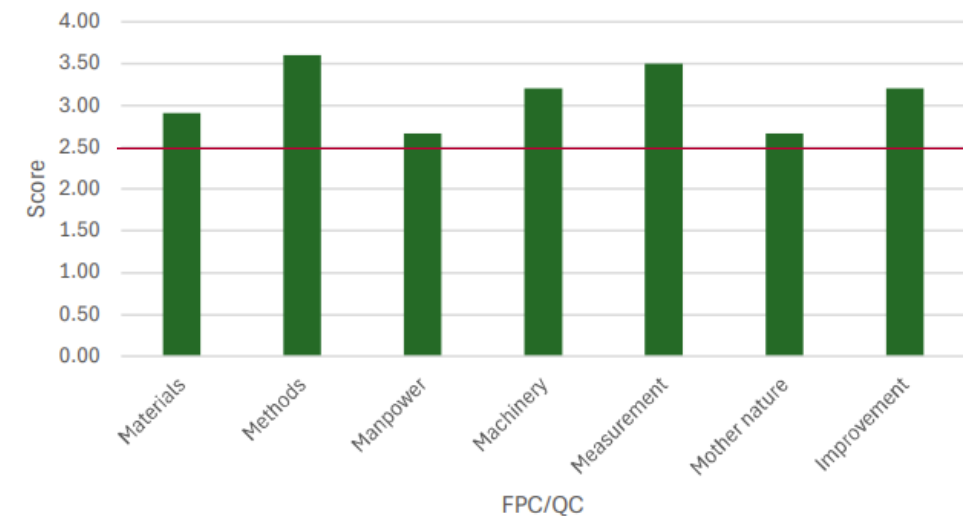


Your 'FPC' readiness score:



Likely Intermediate

FPC Scores



MMC Quality Control

(recent images)



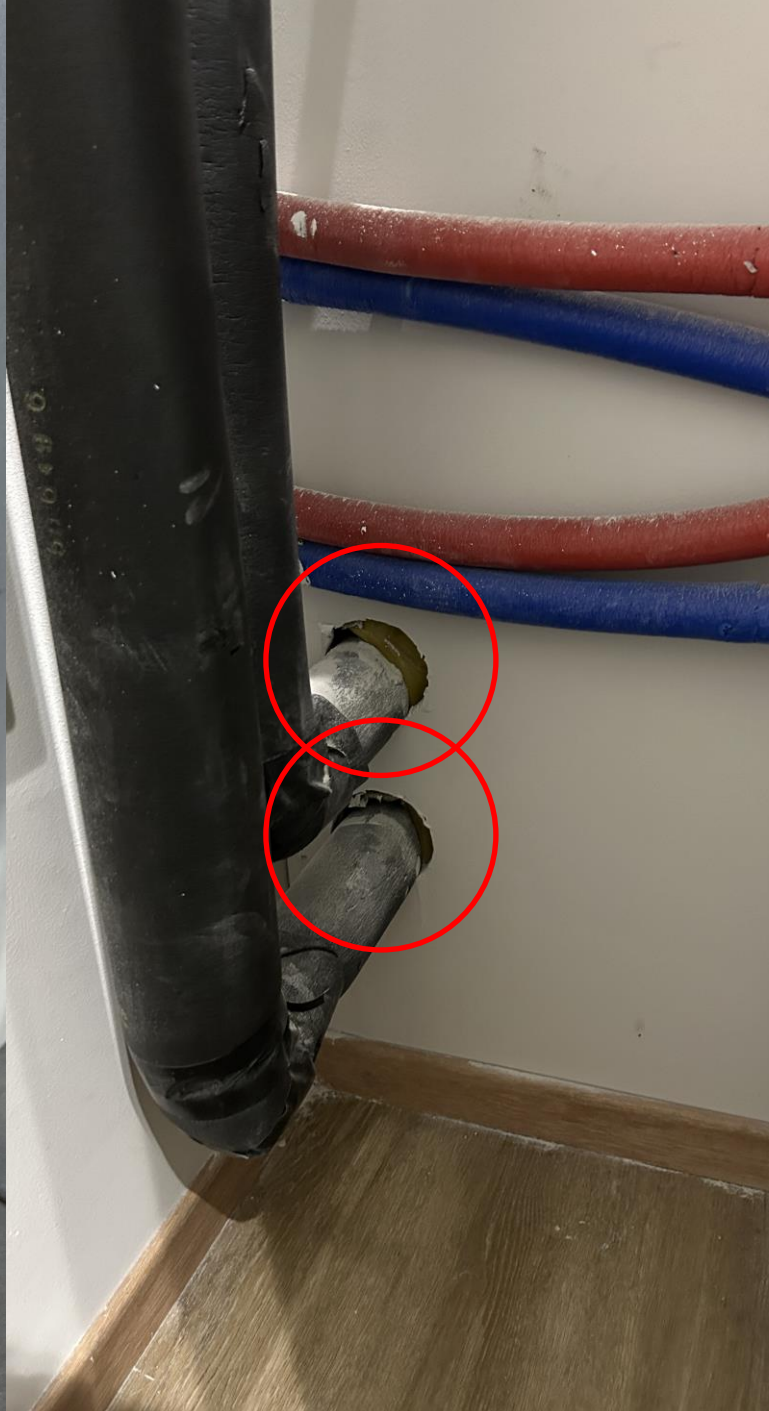






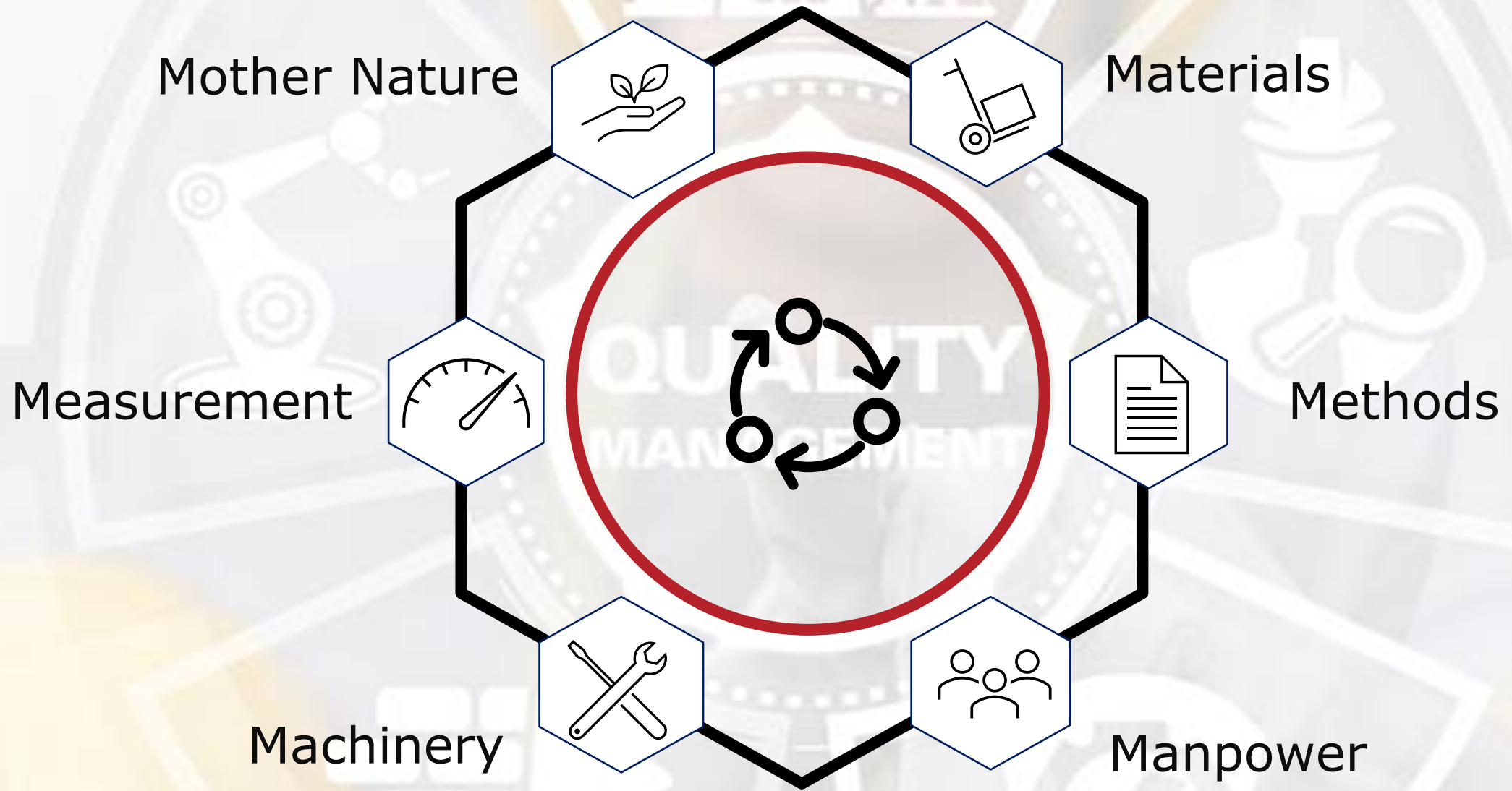






Image courtesy of VBC Limited

MMC Quality delivery



Thank you.

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