



:

Offsite: DfMA Overlay to RIBA PofW

WU5 QA W A : MA U
££y Mj A15 A15 AL kyk Mj : : y
: M : LU



£A

DfMA Overlay to the 2020 RIBA Plan of Work





Definition Framework





4 4 MM

#

CATEGORY DEFINITION

1



Pre-manufacturing
(3D primary structural systems)

2



Pre-manufacturing
(2D primary structural systems)

3



Pre-manufacturing components (non-systemised primary structure)



MMC SPECTRUM

4



Additive manufacturing
(structural and non-structural)

5



Pre-manufacturing
(non structural assemblies & sub-assemblies)

6



Traditional building product
led site labour reduction /
productivity improvements

7



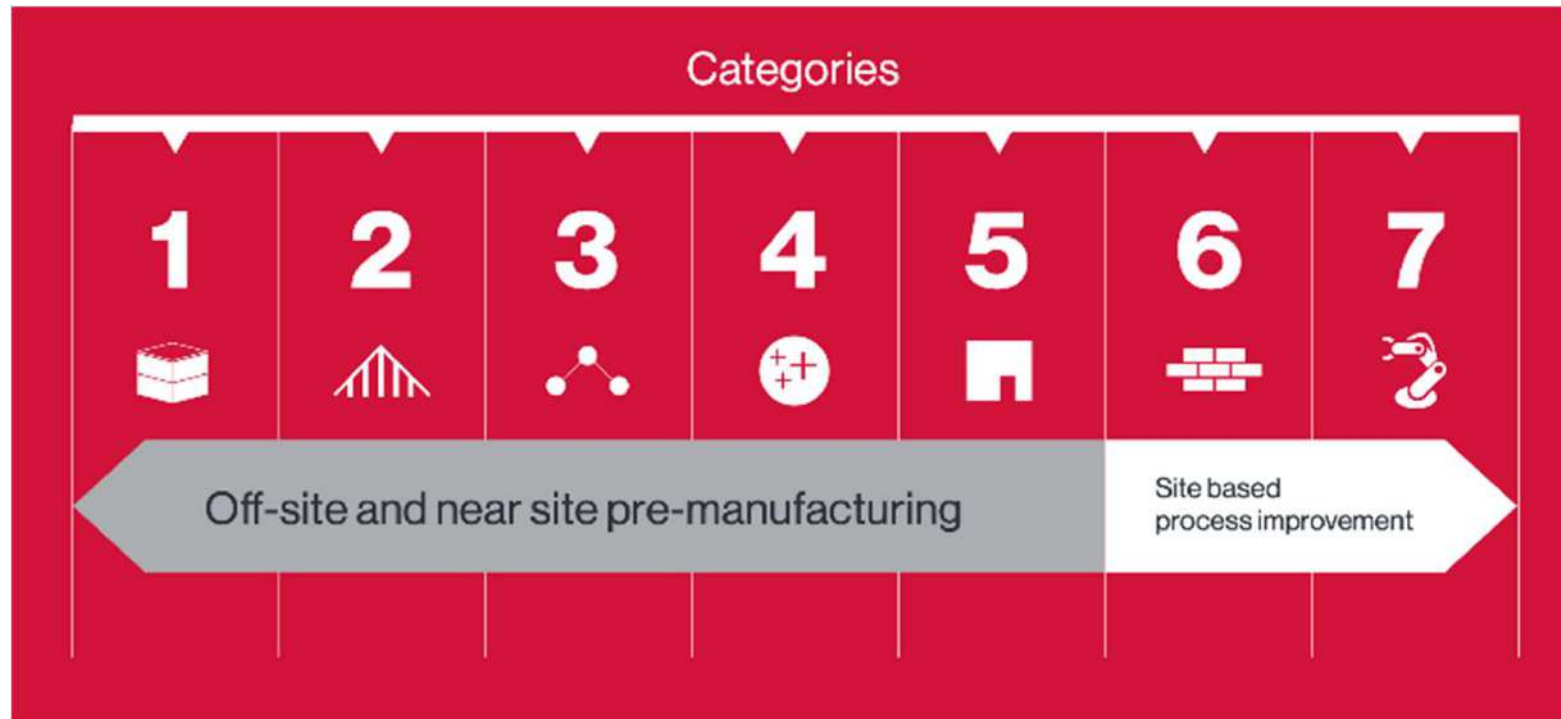
Site process led site labour
reduction / productivity /
assurance improvements



PMV ANALYSIS

4 4 M

4 4 M

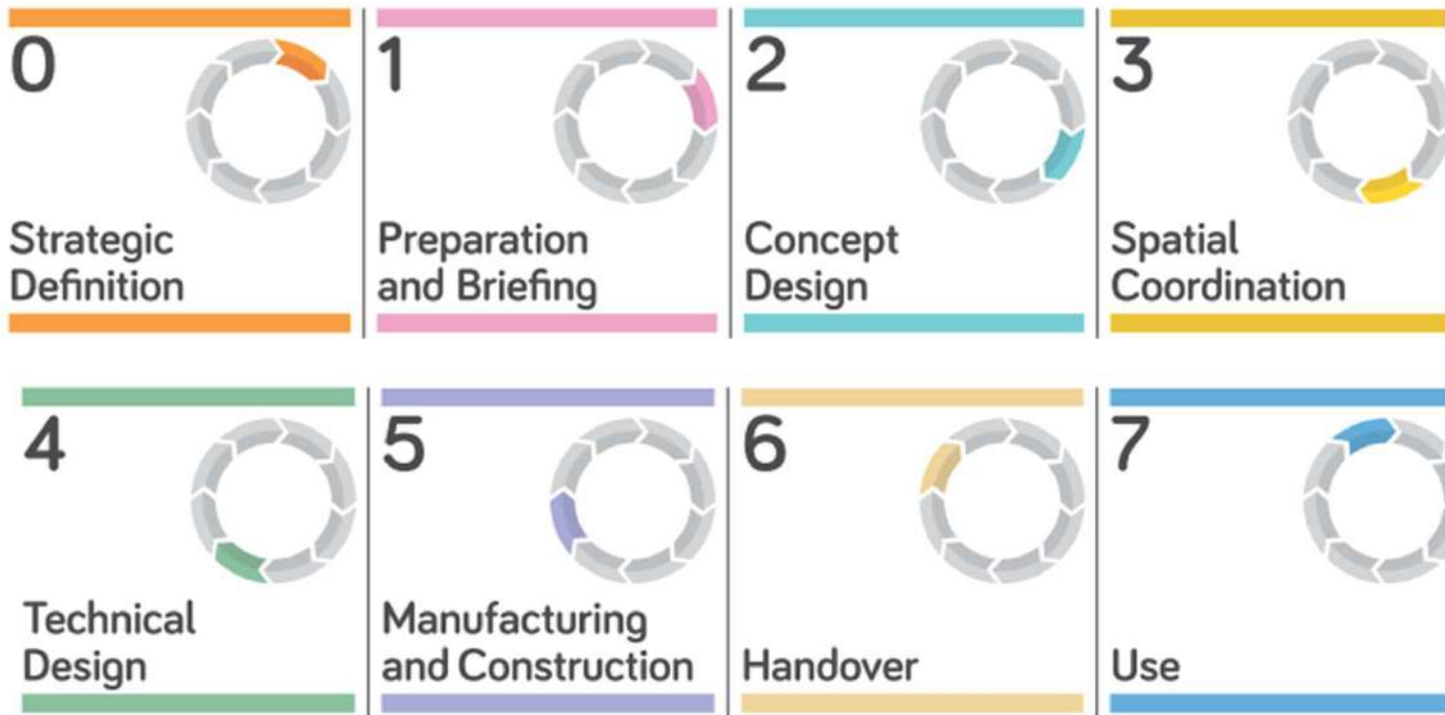


A



RIBA Plan of Work 2020

What is different for DfMA?





Before Stage 1?

- A
L M
Q M A L M
L A

- Q 4 A A

Q Q 4 A
M :
4 M M
- f £ 4 4 MM
- £ U
- £ k

- : L 4 A



0



Strategic
Definition

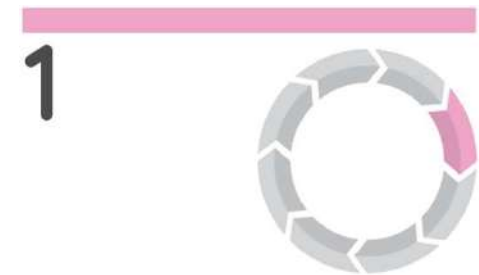


Stage 1 – Preparation & Brief

- A
M Q :
Lk £ Q Q
A Q Q U Q W
f k A £ :
Q M

- Q 4 A A
– L :
– M @ L
– M A 4
– £ £

- : A y



Preparation and Briefing



Stage 2 – Concept Design

- A
k M M
M
M £
A M A
- Q 4 A A
– 4 4 M:
– M A M
– M A
– j y
– M M M
– M f
- : 4 L M A



2



Concept Design



Stage 3 – Spatial Coordination

- A
 - Q Q M
 - :
 - y U k
 - M M U
 - U £ A
- Q 4 A A
 - M Q k k w
 - LK : Q 4
 - 4 Q
 - Q 4 4 MM
 - U Q f 4 4 MM
- : 4 Q M M



3



Spatial
Coordination

Stage 4 – Technical Design

- M
 - M Q £ £ U £
 - 4
 - Q
 - Q £
 - k 4 M
 - U U Q k
- Q 4 A A
 - Q Q
 - k 4 A
 - M A
- : Q k M

Q



4

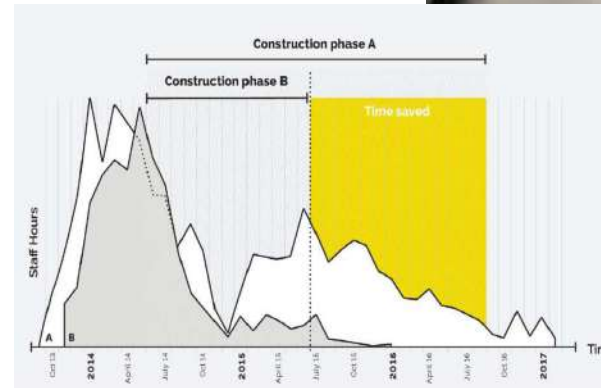


Technical Design

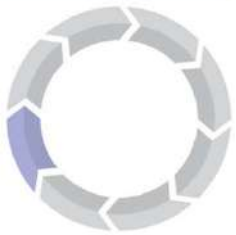


Stage 5 – Manufacturing & Construction

- M
- k 5 Q
- M @
- k
- M @ M
- Q
- Q 4 A A
- 4 4 y
- 4 @
- L Q £
- f @ k
- 4 : M
- : M M M



5



Manufacturing and Construction



Stage 6 – Handover

- M
 - Q A y k
 - Q : 4 M
 - £ : U
 - Q M f
 - f

- Q 4 A A
 - f y k
 - U £ U
 - Q f 4

- : A k Q



6

Handover



Stage 7 – Use

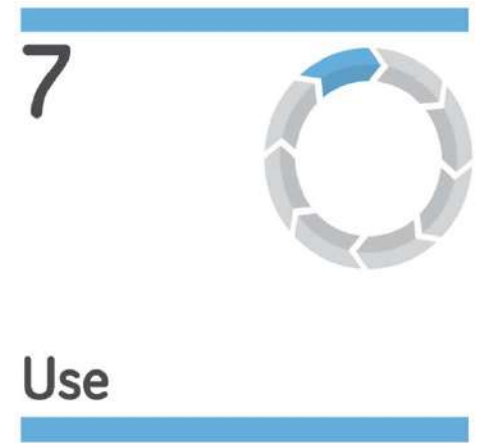
- M
 - £ U :
 - A 4
 - Q 4
 - Q
 - g k



- Q 4 A A
 - f
 - Q M

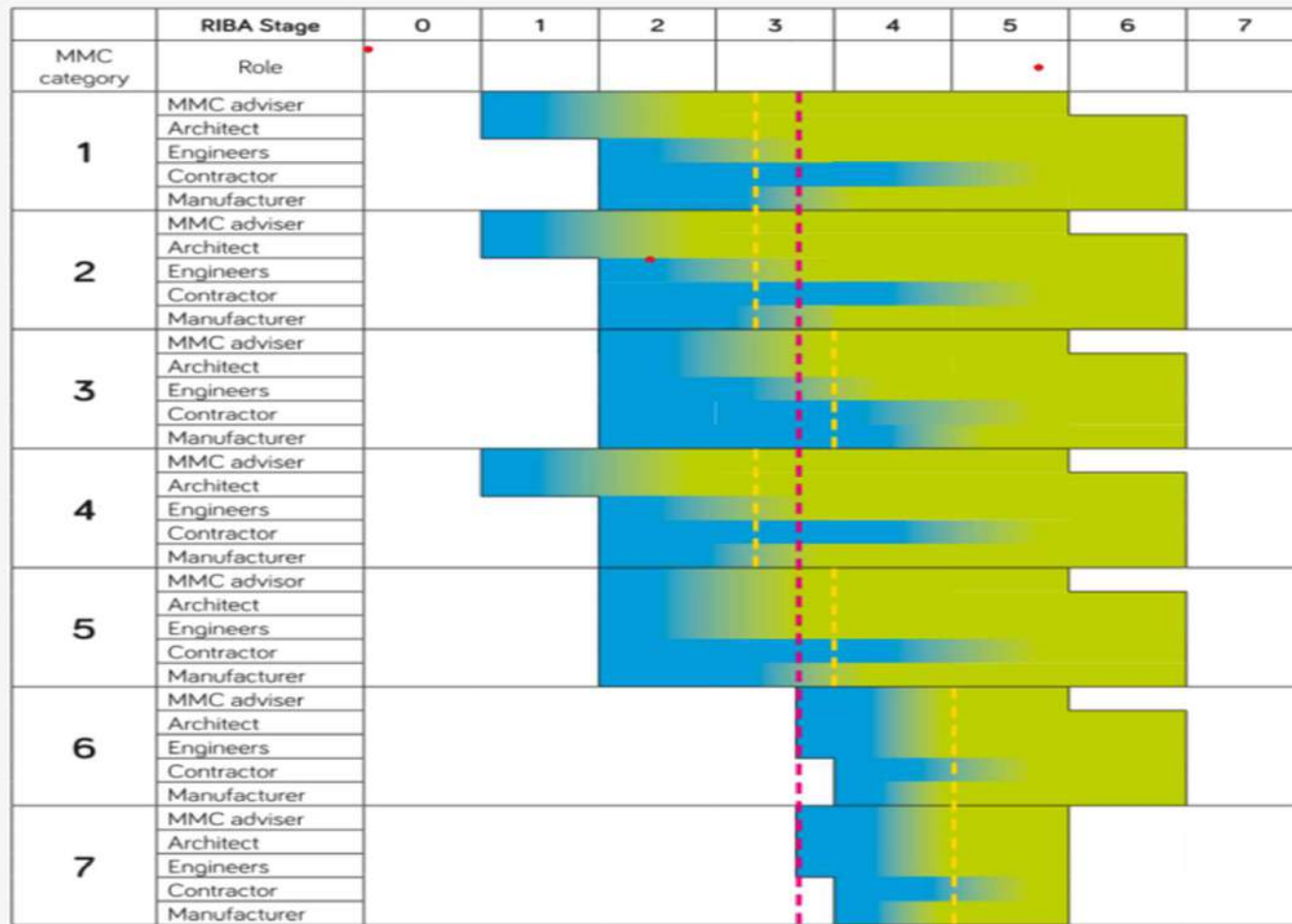


- : : 4 k





Design Freeze



L

g

4 4 MM

£A

DfMA in Practice





y Q

j Q k

f

e



f y
4
j A
4
f uMA M M





£ M
U j A
5 j
£ w M
f £MU
f





f y L
5 £
j g A A £
k
: £



j A
f



y k
j A
f y :



M 4 £

f

f

k

£ L j j £ £

f Q Lj M j £





f @ M
k
£



f 4 u u
j U
£ k
M
L



f g 4
5 k
: £ f
f

£A

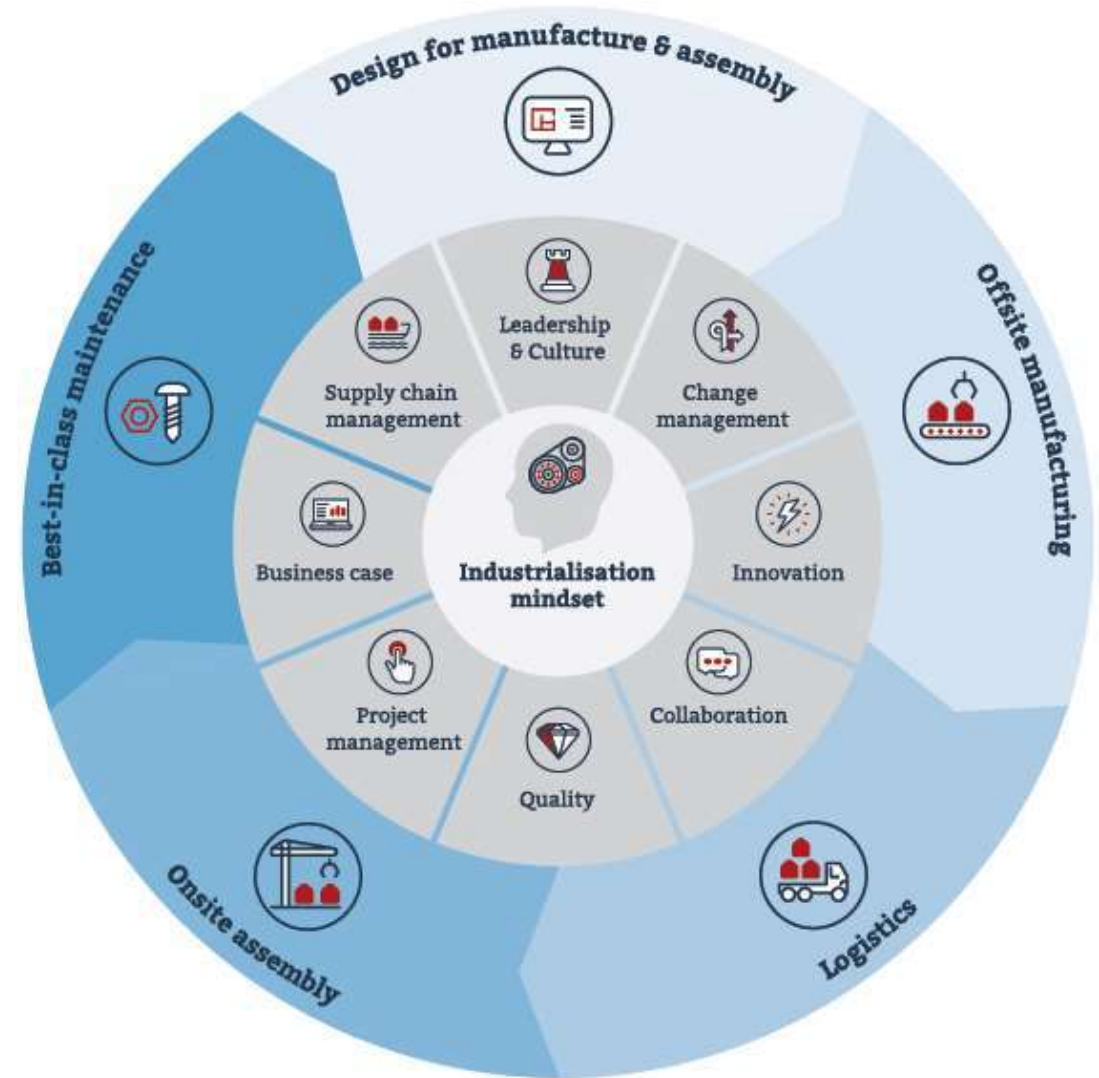
Lean Construction



M



- Q Q 4 A
-
- 4
- Q y
- A k
- 4 4
-



M

k



“The relentless drive to discover how a process is optimally done then doing it exactly the same way every time.

*Industrialisation drives out waste, automates and standardises **where possible.**”*