



# Offsite: Fundamentals

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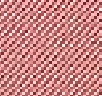


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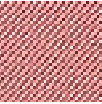


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## Running Order

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# The case is well and truly proven





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Where are you personally in the use of MMC?

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L i 2 2 M

M i 2 2 M

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U U" Mi%U 8 3 U

Where is your employer/company in the use of MMC?

A 2 2 M

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# Construction Industrialisation





*“The challenge the report sets us is to do things differently – to reduce the reliance on building in the same way that we have for decades if not centuries, with its heavy demand for on-site labour.*

*We will not have the labour force to deliver what the country needs by working in those ways.”*

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*“Modernise or die”*

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*“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.**”*

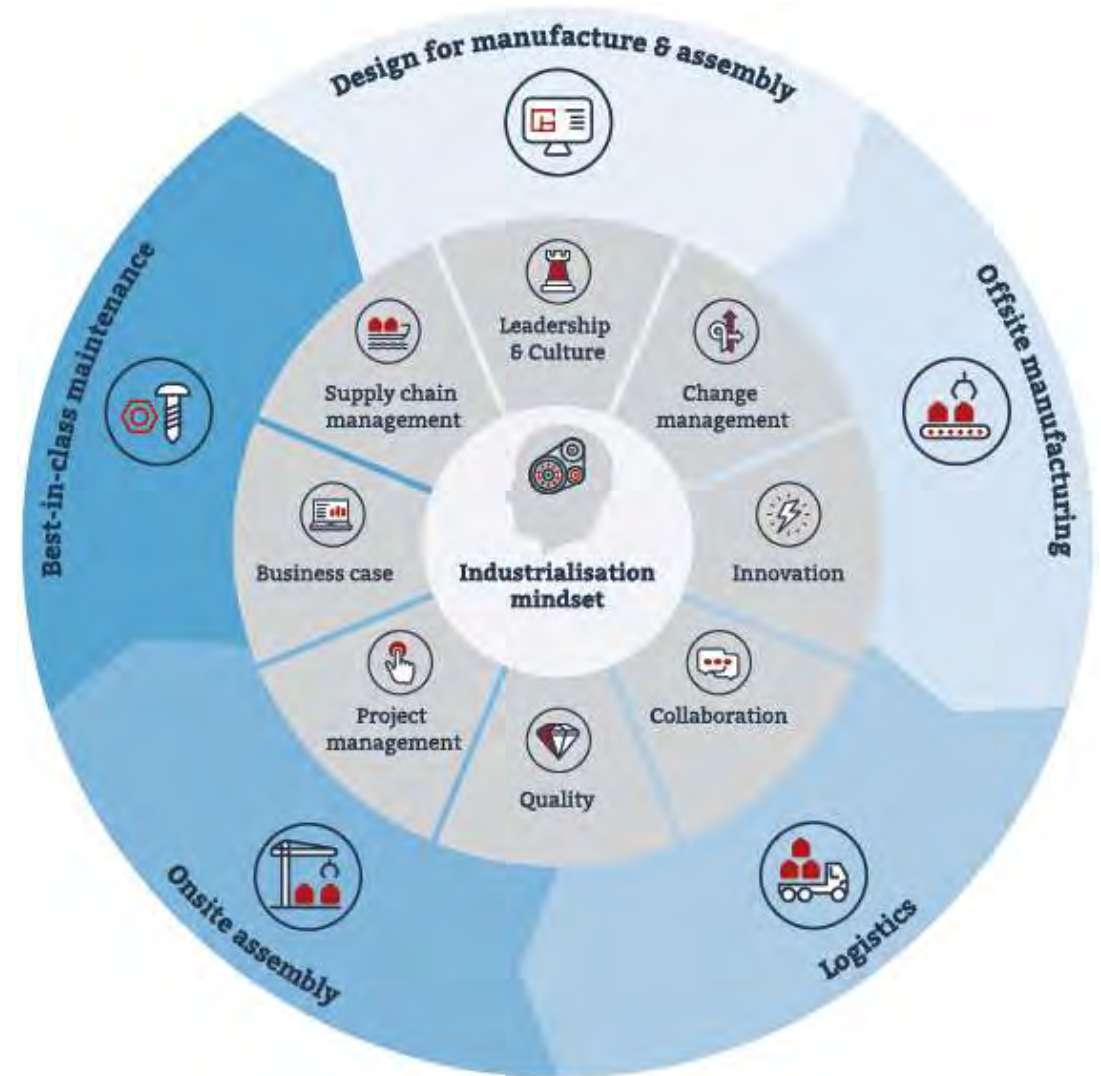


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# Industrialisation Mindset

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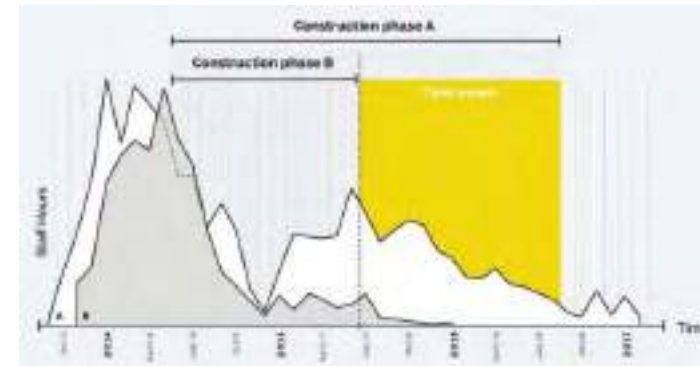
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# Offsite Manufacture

- Timescales
- Product Availability / Market Capacity
- Materials Procurement
- Lead-in Periods (Pre-cast)
- Information Format
- Buildability
- Stock Piling Capacity



W



# Logistics

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## Onsite Assembly

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# Maintenance and Operation

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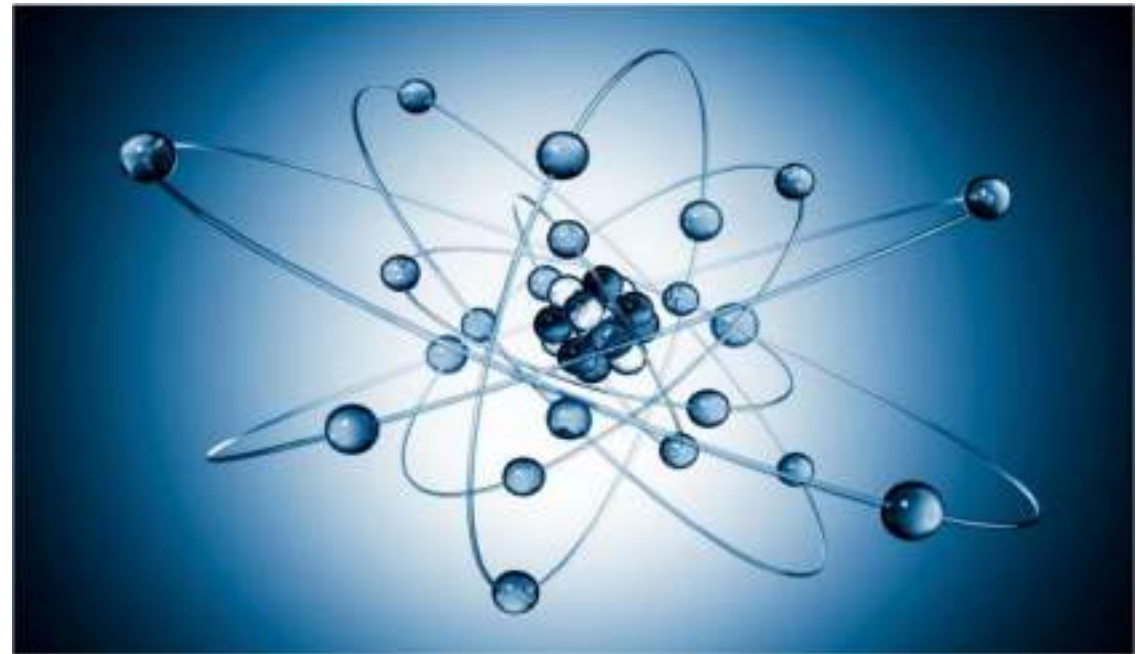


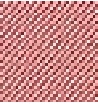




## Other Considerations

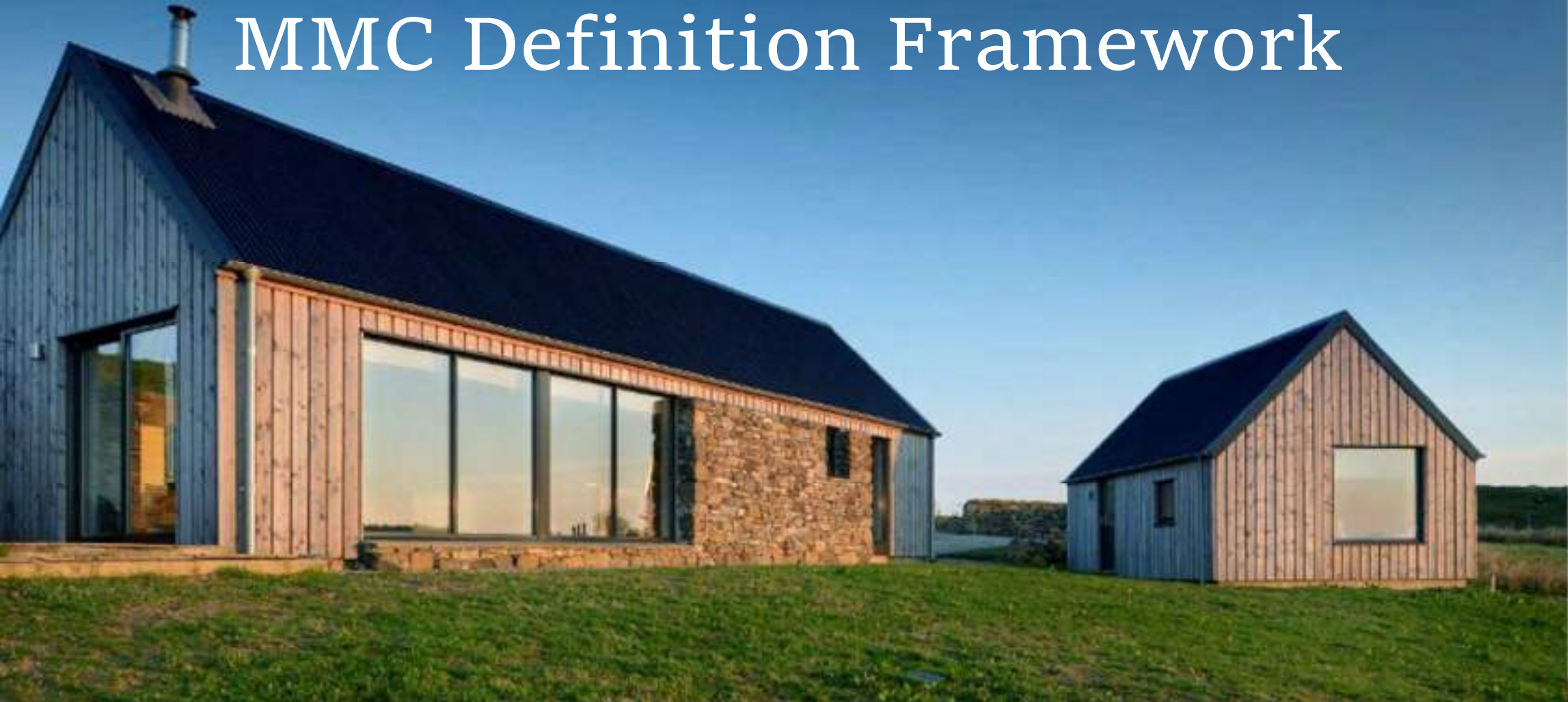
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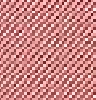
# MMC Definition Framework





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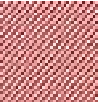
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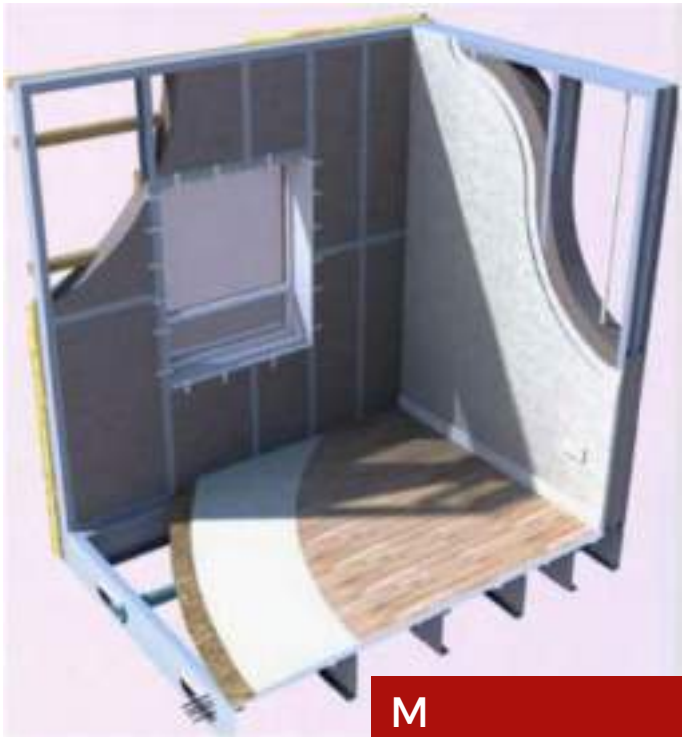
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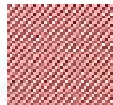
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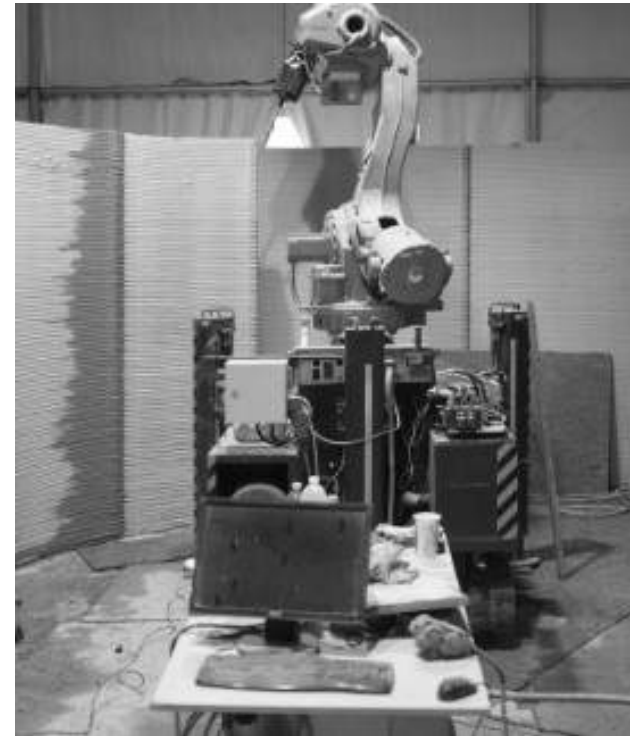
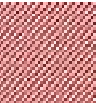


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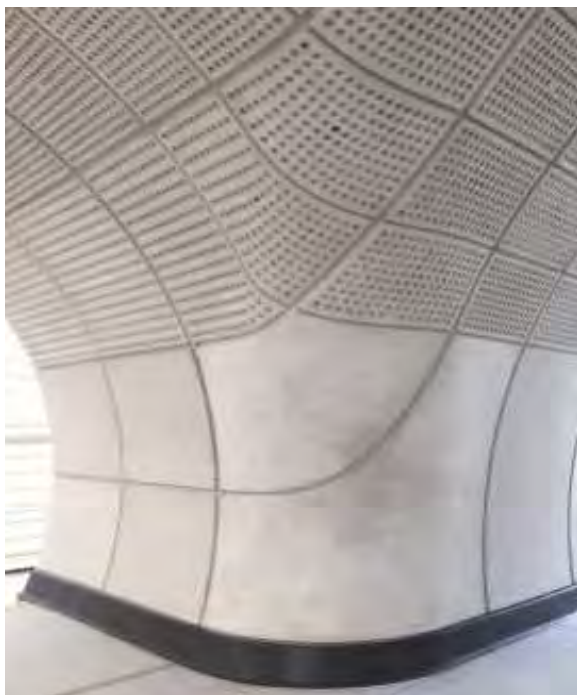
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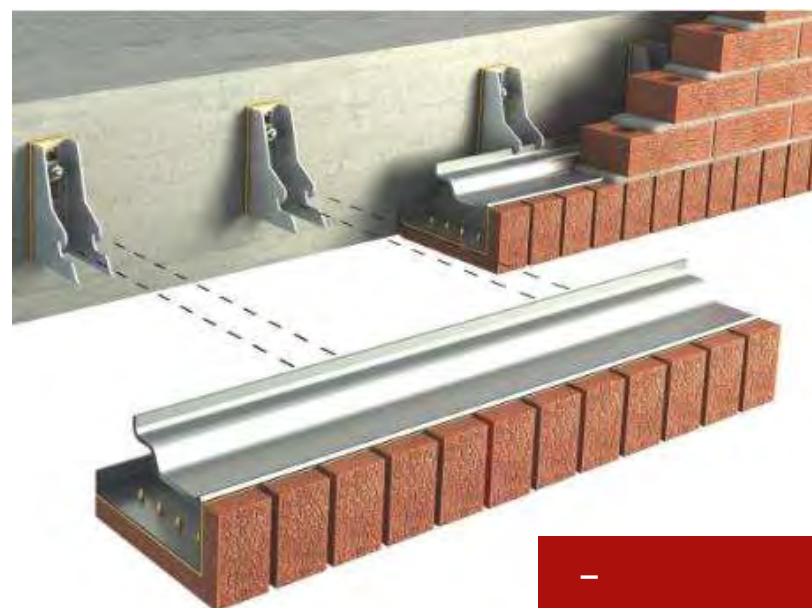
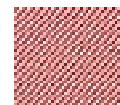
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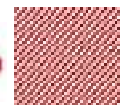
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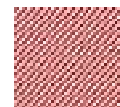


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# Which MMC Category - By Definition

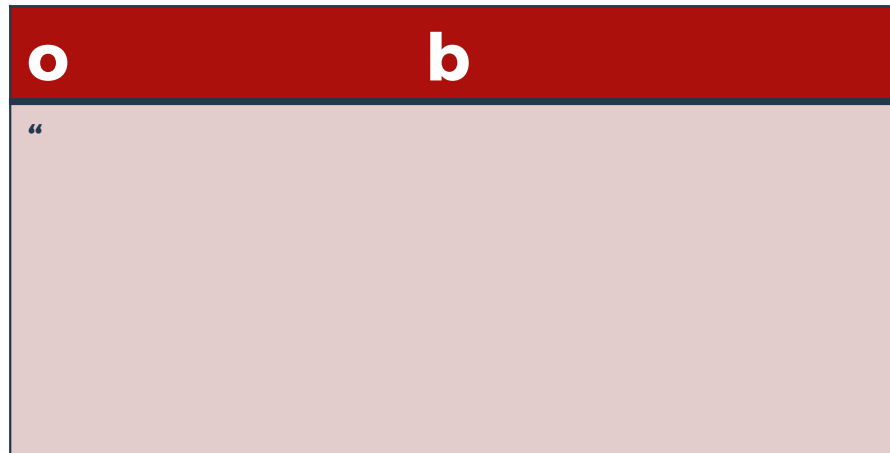




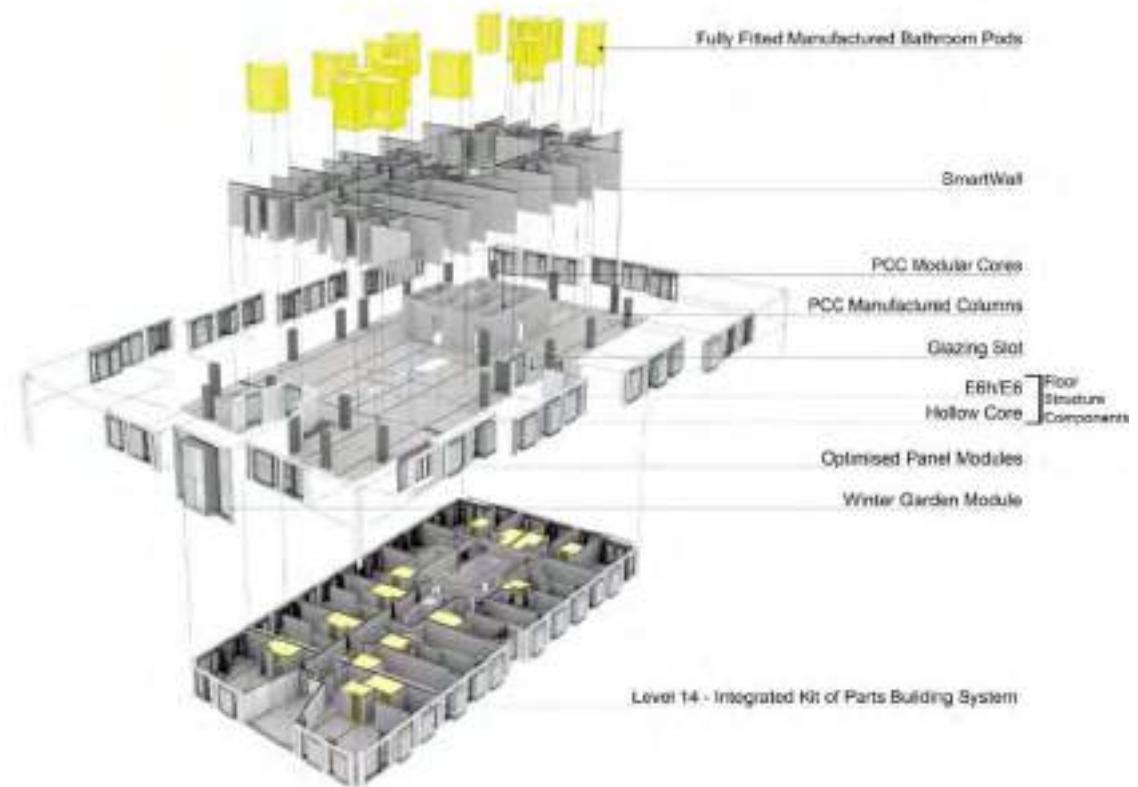
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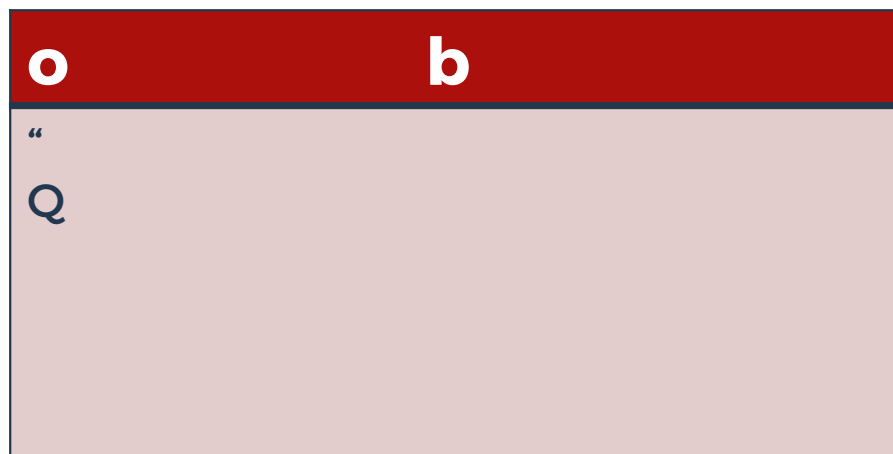
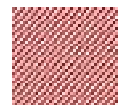


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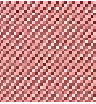


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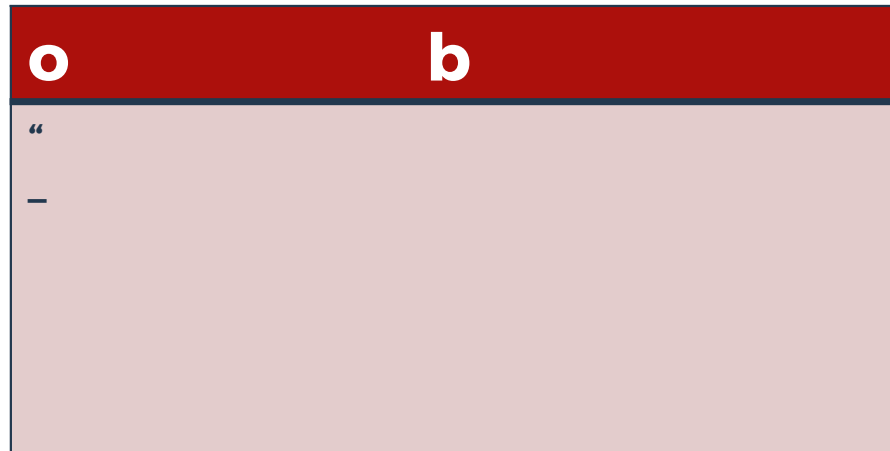
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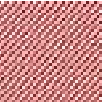
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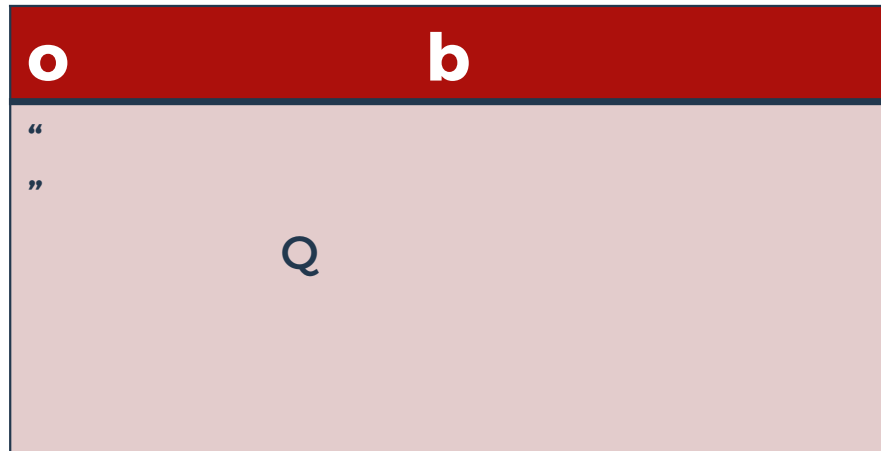
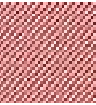
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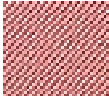


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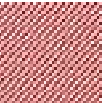
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# MMC Systems & Components

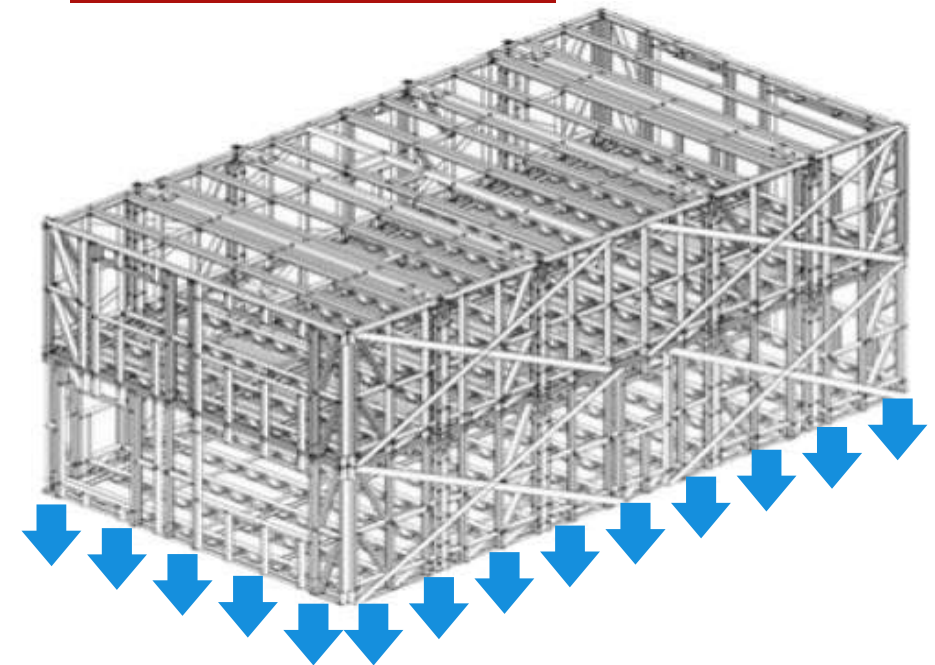
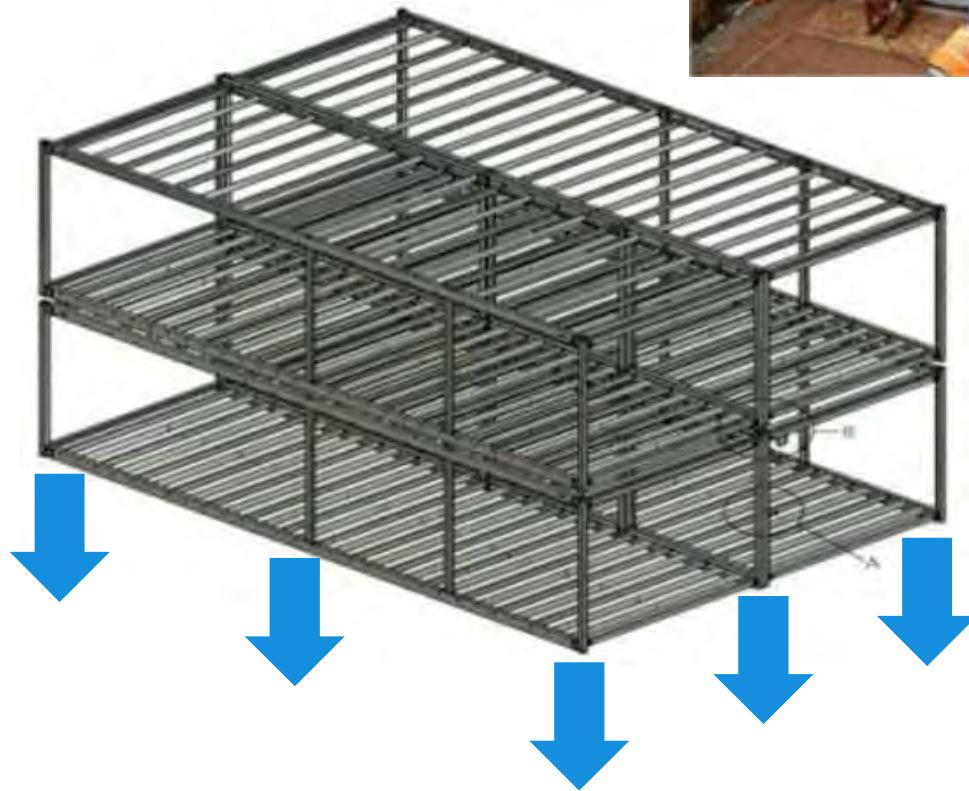




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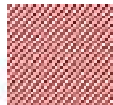
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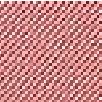
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Description		Floor cycle	Total man days	Men/week	Total days	d 8 %				
DfMA/MMC Solution	40 floors	6 days	5,280	22	240	T A 8 A 2 " M u - 2 U-				
Insitu Solution	40 floors	9 days	13,320	37	360					
Variance			8,040	15	120					
Reduction/saving			60%	41%	33%					

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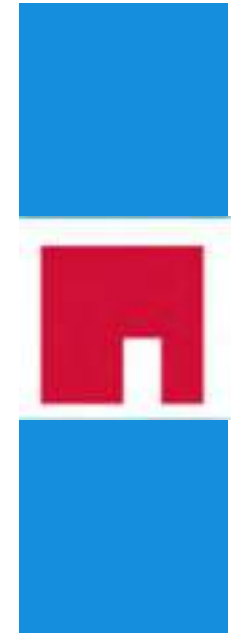


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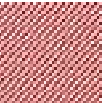
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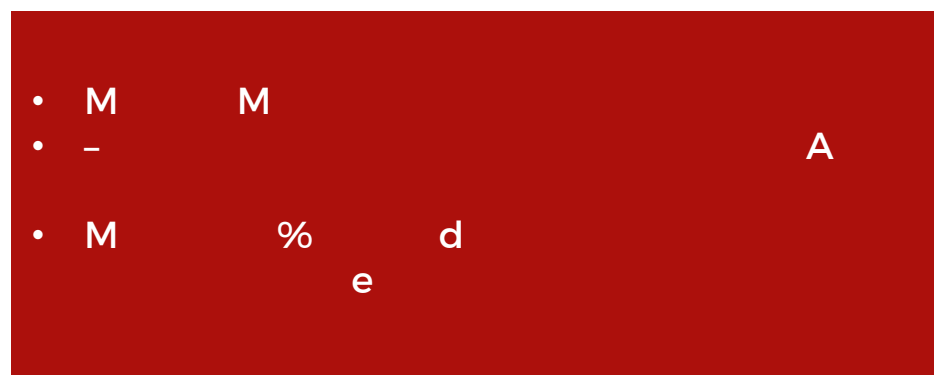
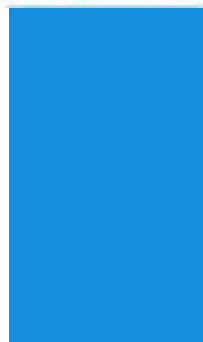
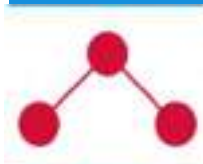
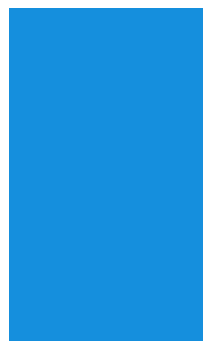
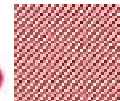


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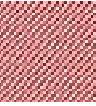
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# Which MMC Category - By Description



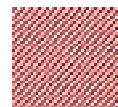
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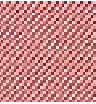
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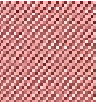
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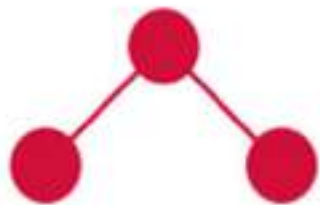
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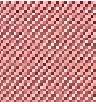


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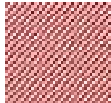
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Tea/Coffee break - 15 minutes





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# Offsite & MMC in Practice







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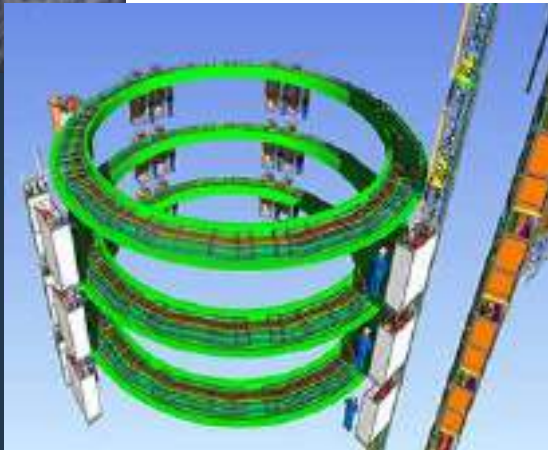
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# Offsite & MMC for Highways

## - Good Practice & Potential



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# GROUP DISCUSSION – EXAMPLES & POTENTIAL

Current Examples

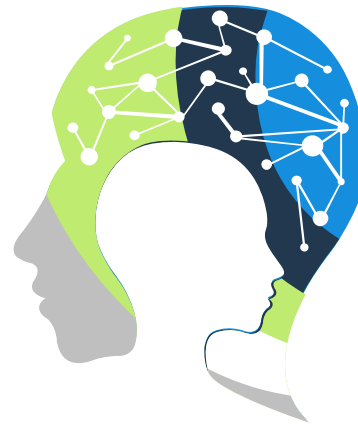
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# Offsite & MMC Benefits & Barriers





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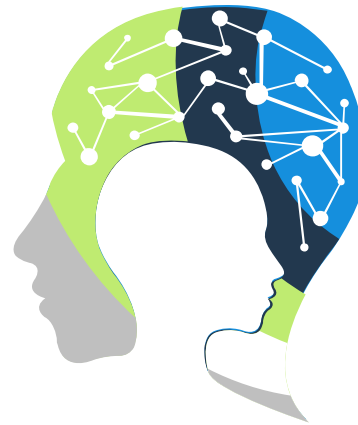
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# GROUP DISCUSSION – BENEFITS & BARRIERS

**Business Case**

**Barriers / Blockers**



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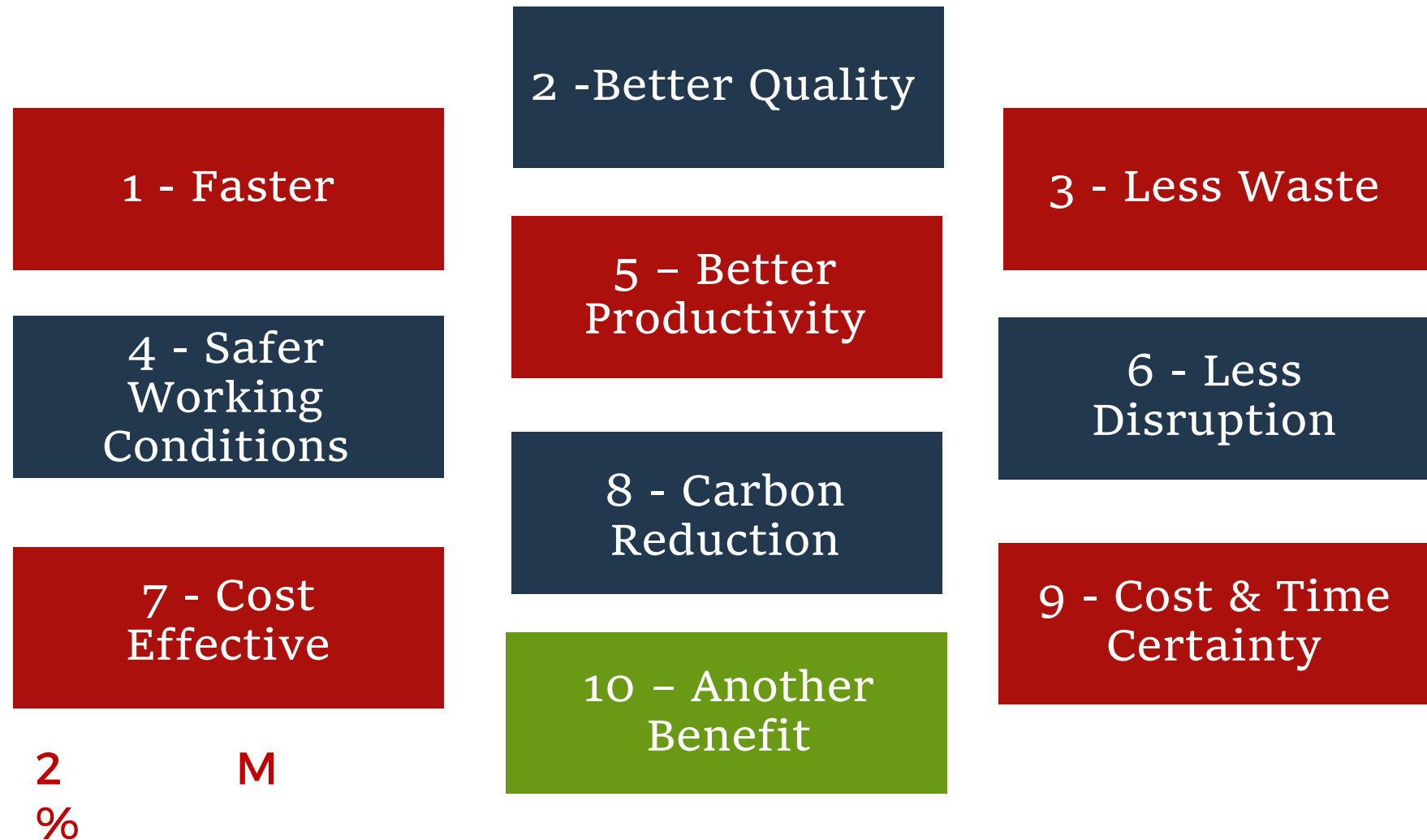
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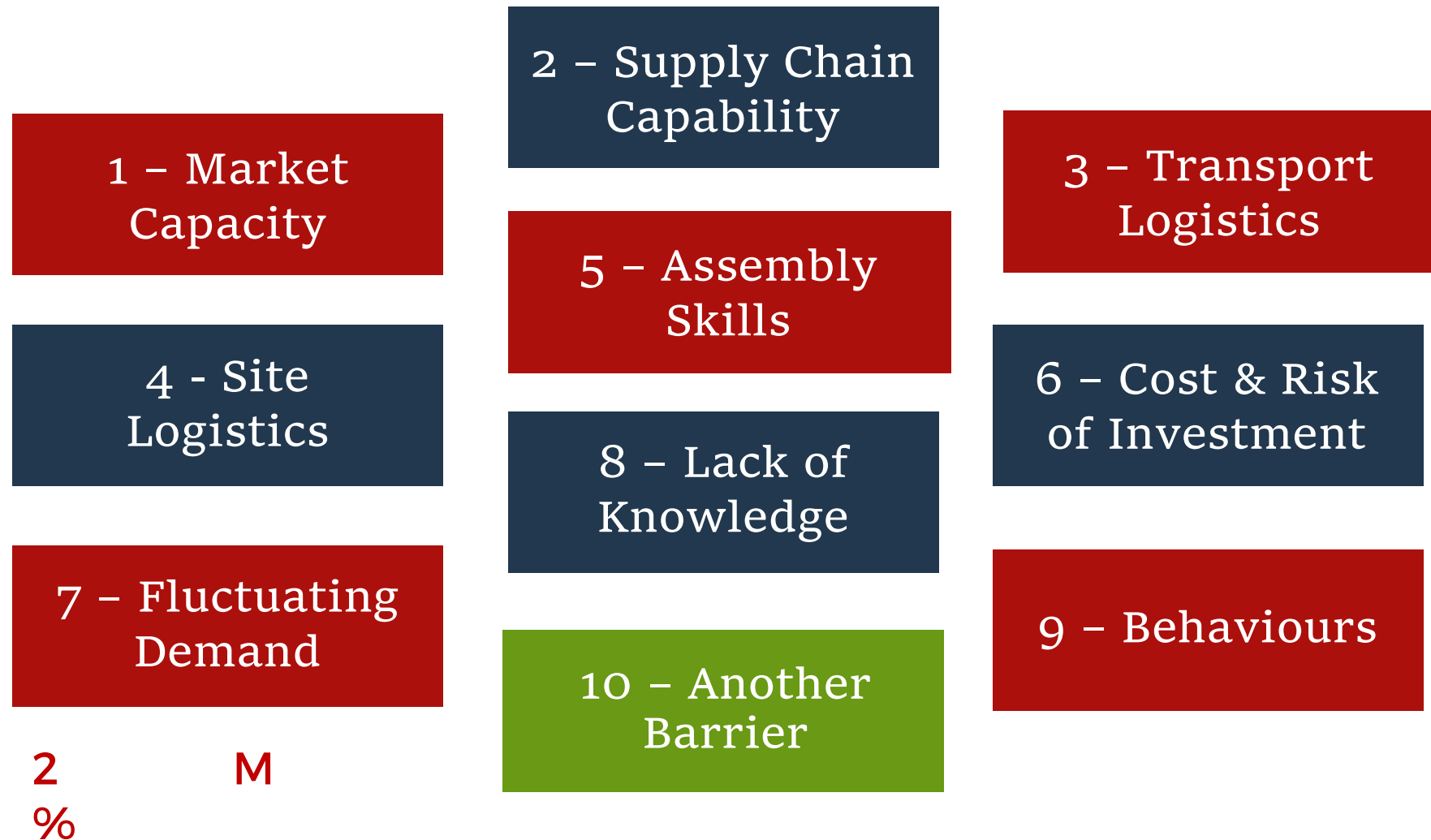
# Benefits of Offsite & MMC

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# Barriers to Offsite & MMC

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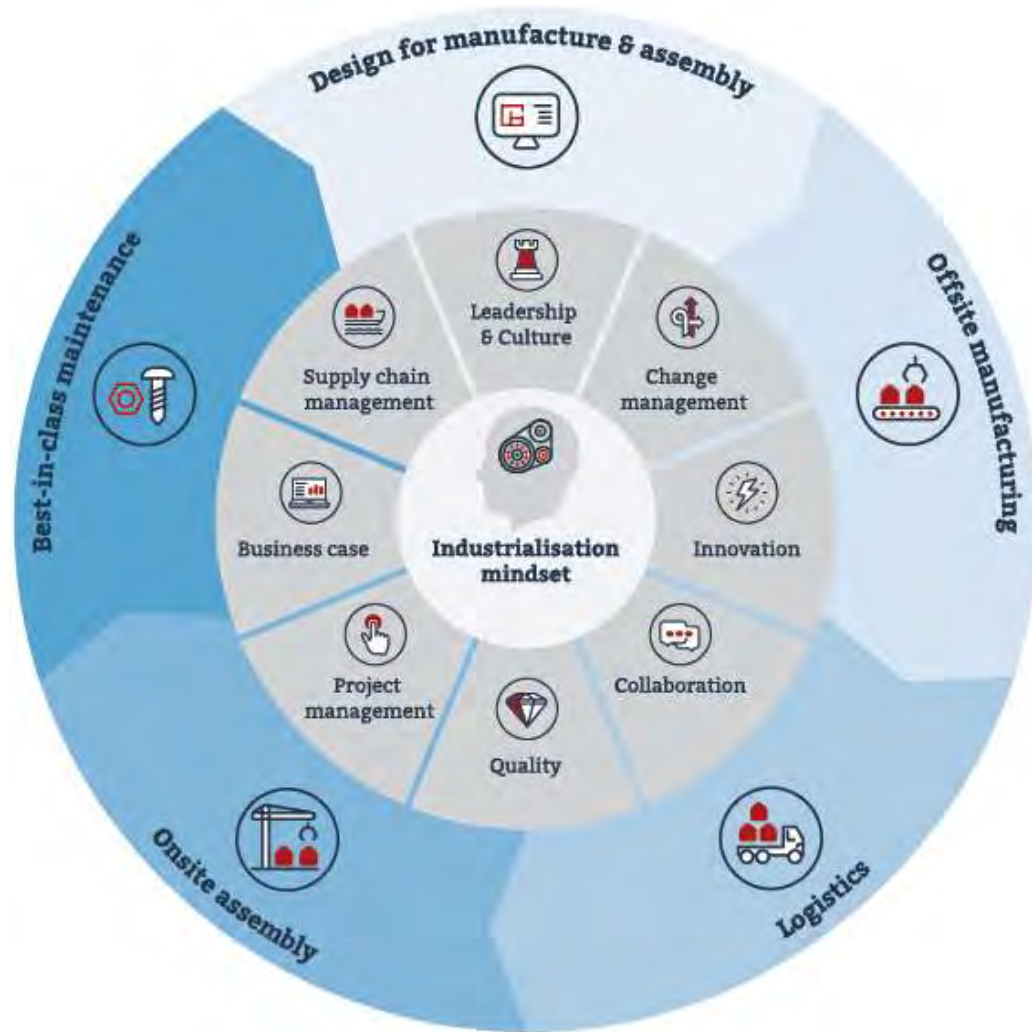
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# Offsite & MMC - Net Zero

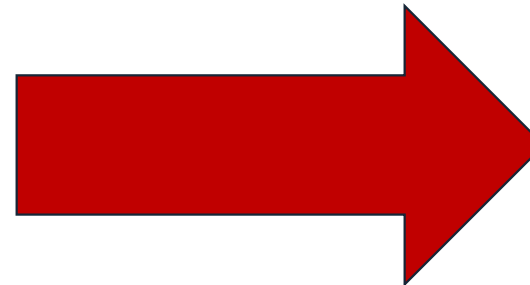


# Construction Industrialisation

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Human Activity



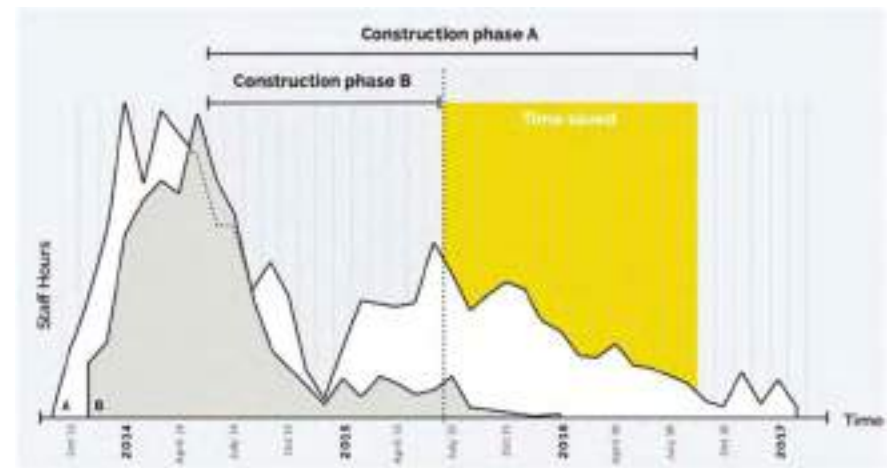
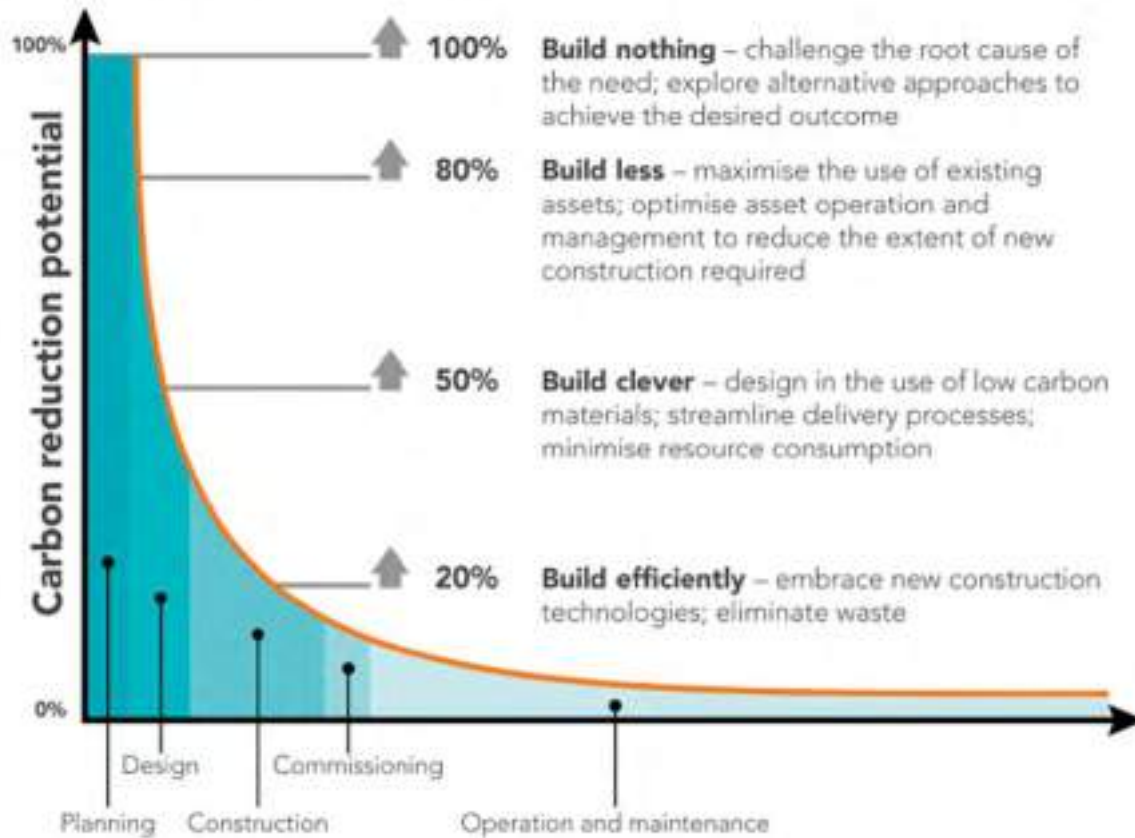
Materials  
Consumption &  
Processes



# MMC Potential

## Embodied carbon reduction potential at different stages of a building project

© HM Treasury; Green Construction Board





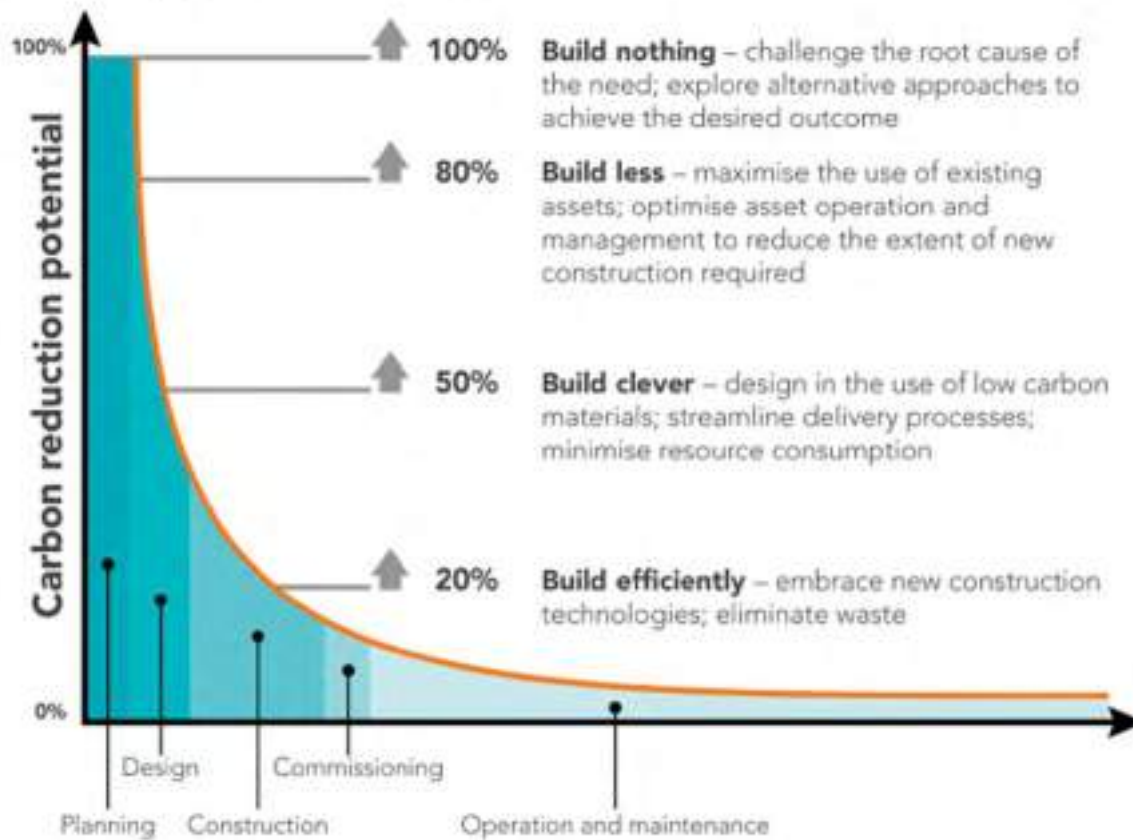
# MMC Potential

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## Embodied carbon reduction potential at different stages of a building project

© HM Treasury; Green Construction Board



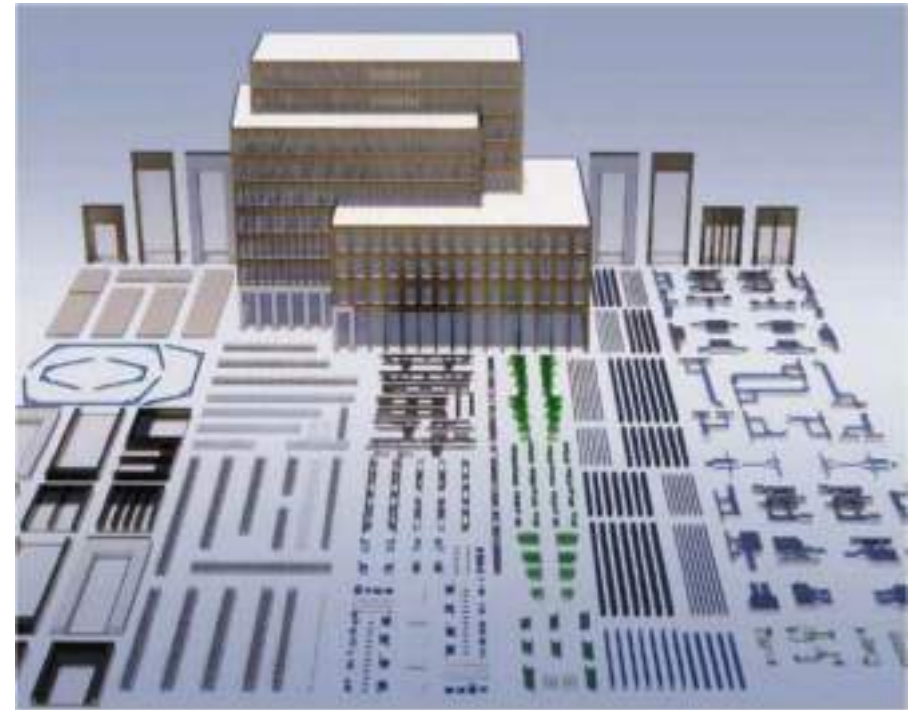
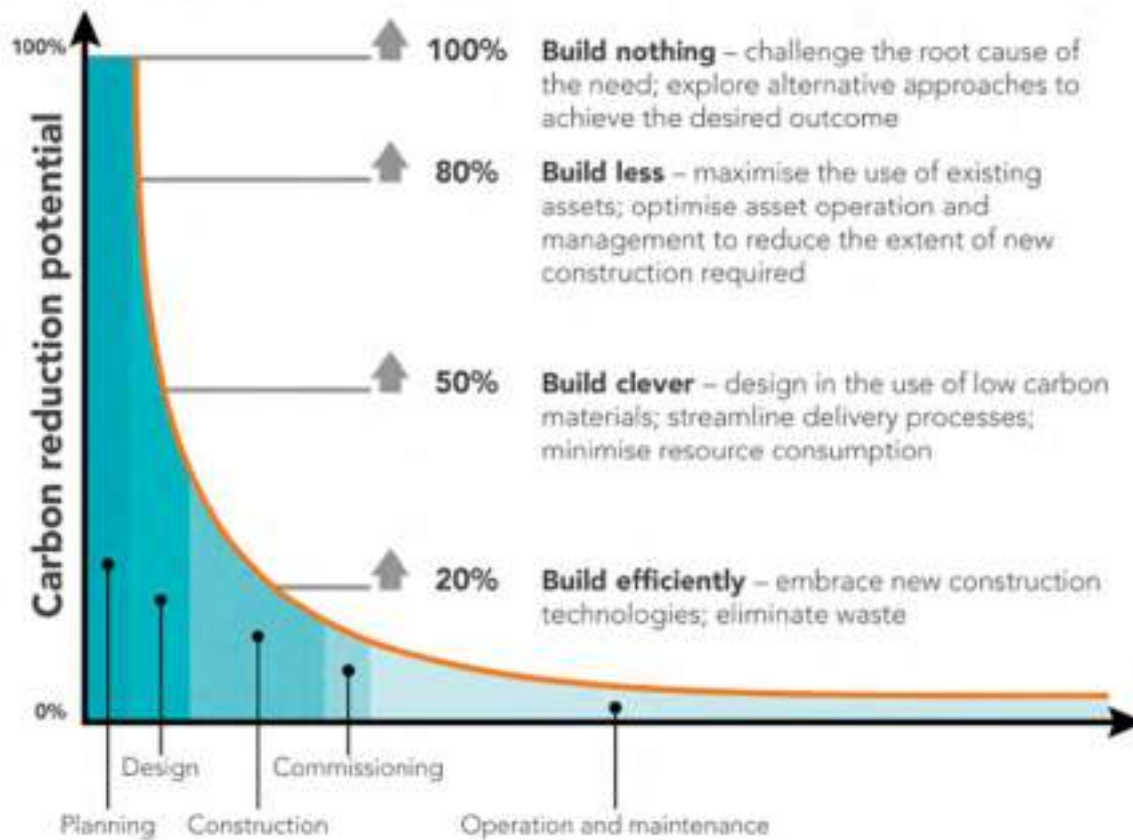
# MMC Potential

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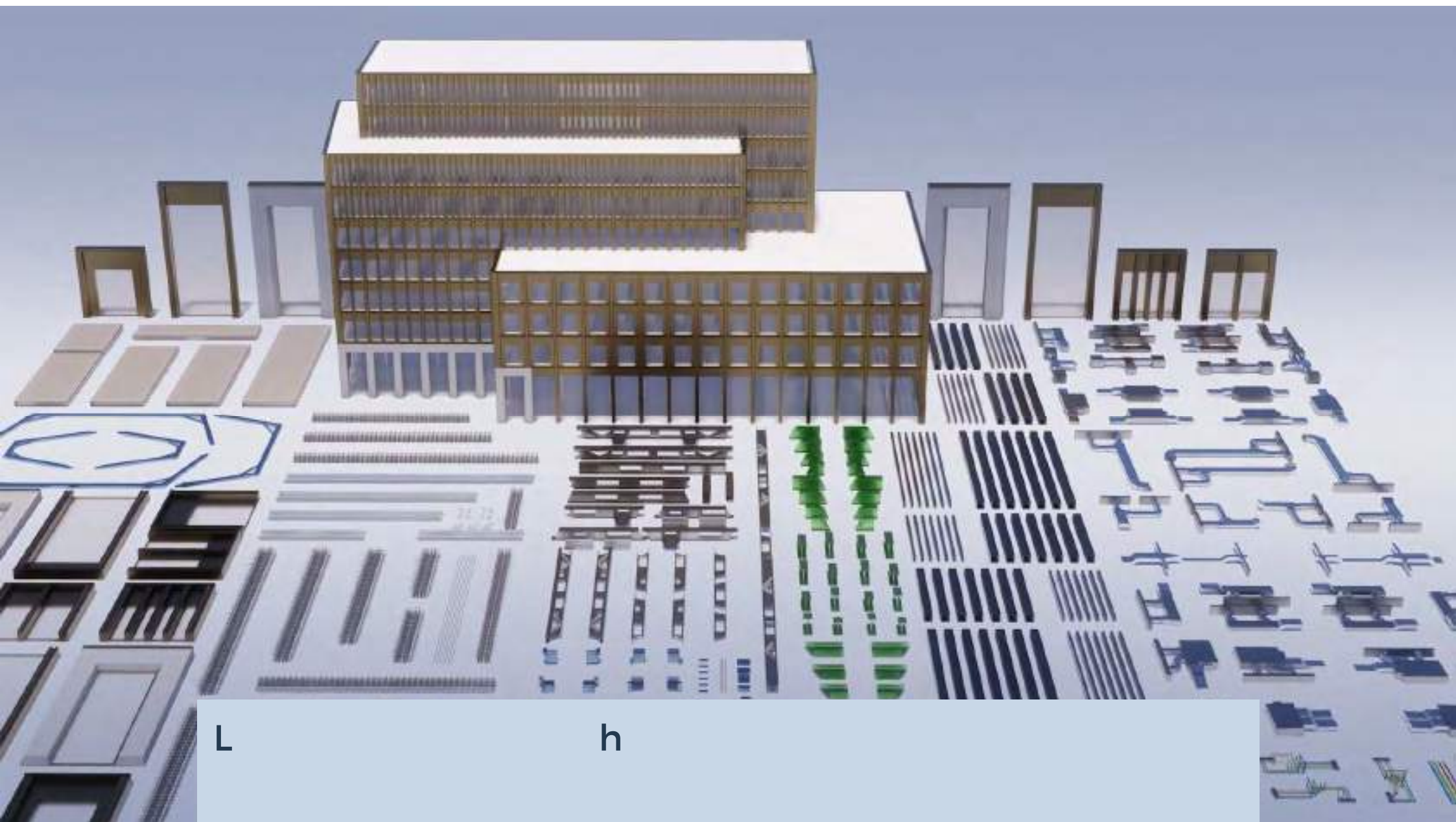


## Embodied carbon reduction potential at different stages of a building project

© HM Treasury; Green Construction Board







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# MMC & Offsite – More information

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