CONSTRUCTION INNOVATION HUB

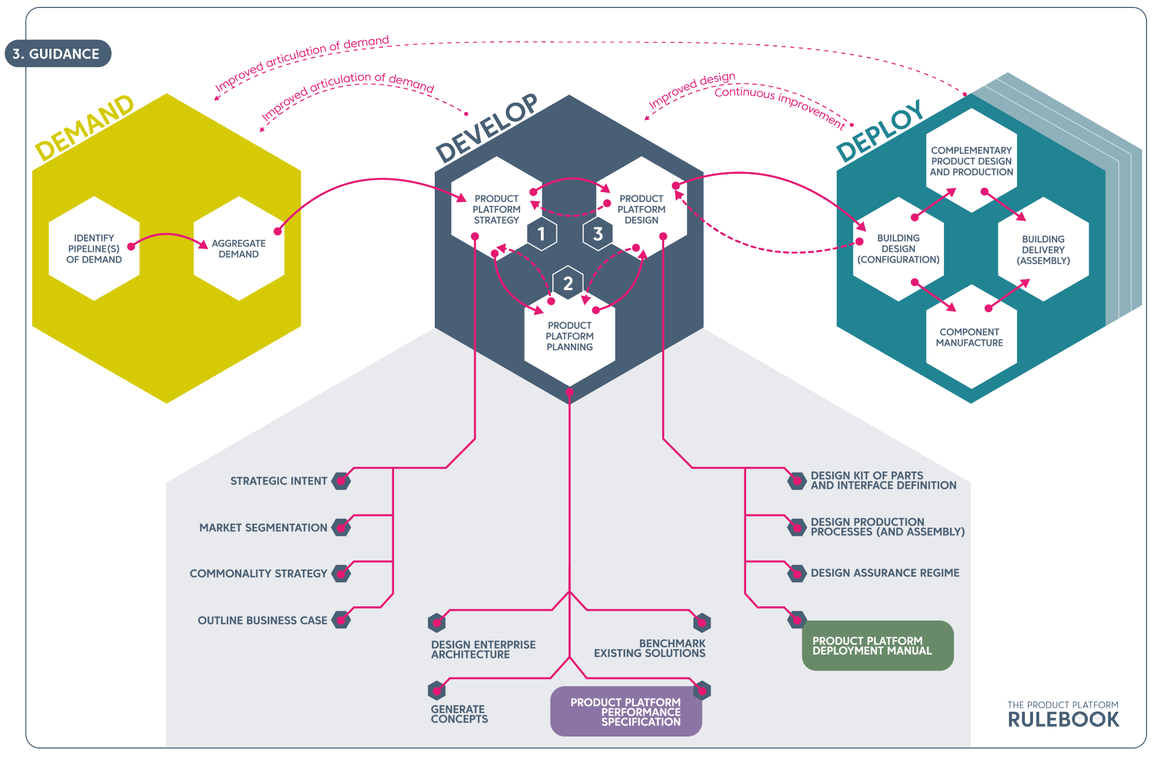
THE PRODUCT PLATFORM RULEBOOK

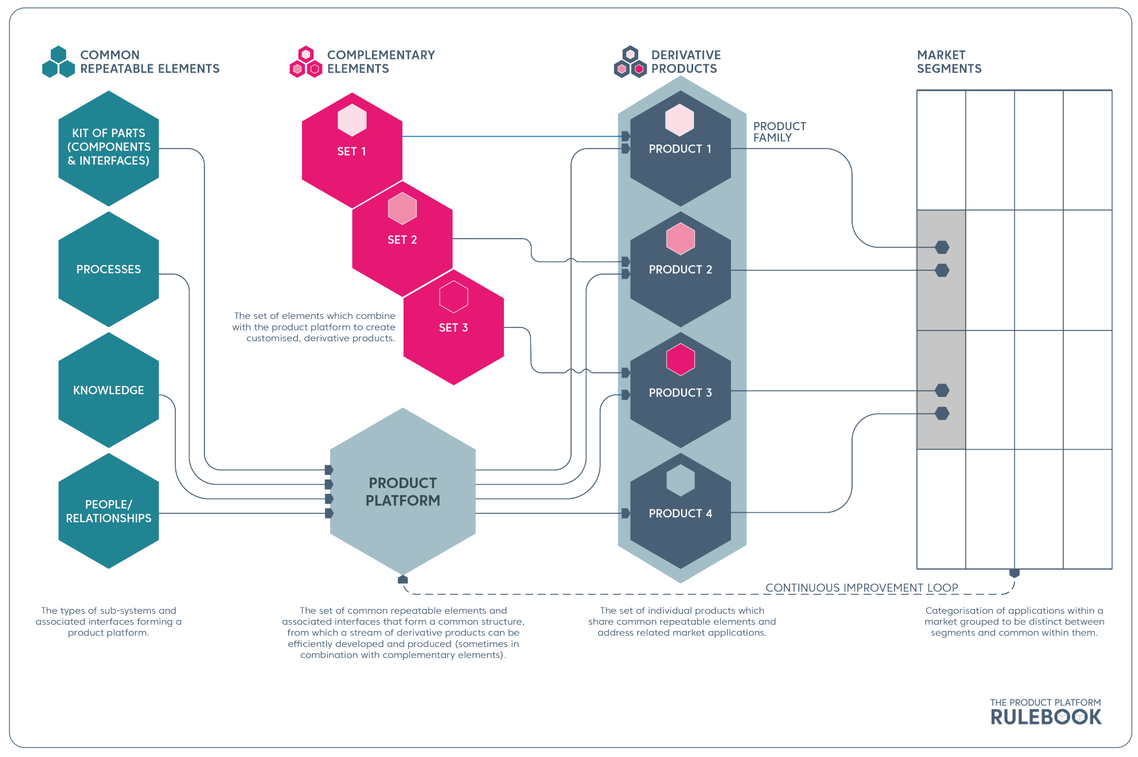
THE RULES

1. DEPLOYABLE
2. CONFIGURABLE
3. COMMON REPEATABLE ELEMENTS
4. INTERFACES
5. OPEN

THE PRINCIPLES

6. QUALITY
7. STRUCTURED INFORMATION
8. CIRCULAR





PRODUCT PLATFORMS ARE A BALANCING act

Repetition of **components**, **processes. people**. and/or **knowledge.**

REPEATABILITY

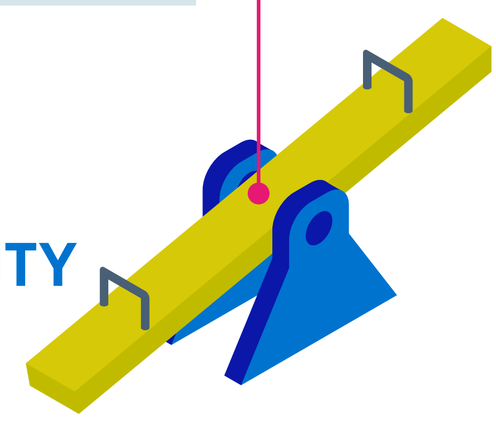
PRODUCT

In this context, a Product is an item that is specified, designed and made for a single or multiple customers.

Using **bespoke** design & build were needed to deliver value for the client

Using **Standard Interfaces** to enable different configurations of products

VARIABILITY



MANUFACTURED SOLUTIONS

"Manufactured solutions" are produced products in large quantities in **factories.**

"Repeatability" enables **manufactured solutions.** Using **DfMA** increases the **Productivity** of the solution.

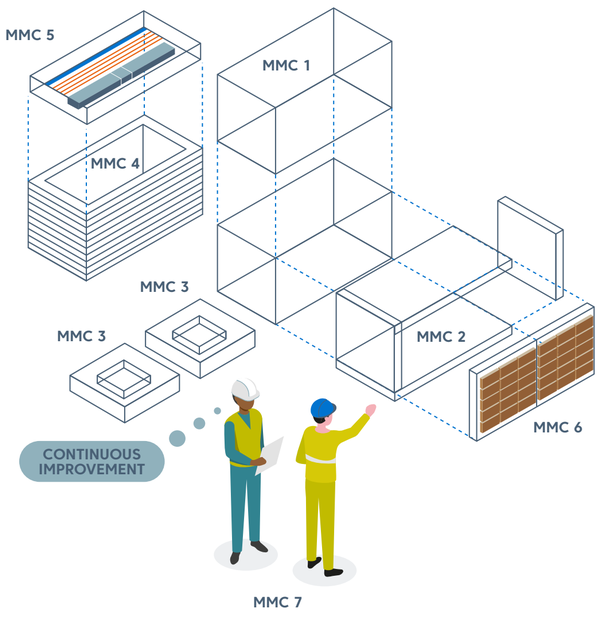
(DOING MORE WITH LESS)

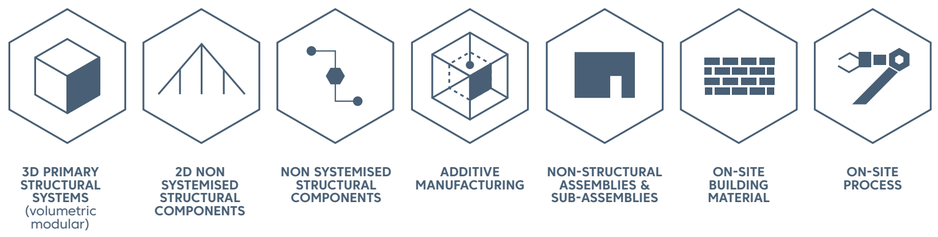
DESIGN FOR MANUFACTURE AND ASSEMBLY (DfMA)

Utilising manufacturing and assembly knowledge in the design phase to minimise defects. This also means learning from repeatability to **continuously improve** the solution

In the construction industry, manufacturing products for the built environment in a factory are classified by **Modern Methods of Construction** categories **(MMC)**. Categories include onsite and offsite construction solutions.

MMC CATEGORIES





DEFINITIONS

PRODUCT PLATFORM
A kit of parts, associated production processes, and the knowledge, people and relationships required to deliver all or part of construction projects using a platform approach. A product platform provides a stable core which is configured and combined with complimentary components (via defined interfaces) to suit a particular project. A product platform also includes the processes, tools and equipment required for assembly.

DESIGN FOR MANUFACTURING AND ASSEMBLY (DfMA) is a design approach that focuses on ease of manufacture and efficiency of assembly. By optimising the design of a product it is possible to manufacture and assemble it more efficiently, more quickly, more safely and at a lower cost.

THE DEFINITION FRAMEWORK IDENTIFIES THE FOLLOWING 7 MMC CATEGORIES:
Category 1 – Pre-Manufacturing - 3D primary structural systems
Category 2 – Pre-Manufacturing - 2D primary structural systems
Category 3 – Pre-Manufacturing - Non systemised structural components
Category 4 – Pre-Manufacturing - Additive Manufacturing
Category 5 – Pre-Manufacturing - Non-structural assemblies and sub-assemblies
Category 6 – Traditional building product led site labour reduction/productivity improvements
Category 7 – Site process led labour reduction/productivity improvements

DfMA PRINCIPLES