



Offsite

Understanding Offsite: Project Management

A Guide for trainers



Introduction to this Course

Introduction to the Offsite Skills Project

The Improving Skills in Offsite Construction Project was developed by the Supply Chain Sustainability School, in partnership with the Manufacturing Technology Centre (MTC) and National Open Colleges Network (NOCN) and with funding from the Construction Industry Training Board (CITB). The project is divided into six courses: Design; Procurement; Quantity Surveyors and Cost Consultancy; Logistics; Project Management and Site Management. All the courses provide the fundamental content required to help professionals better understand what they need to do differently when adopting offsite construction techniques.

Course Aims

Purpose: To educate participants on the requirements needed for successful project management within offsite construction.

On completion of this course, participants will have a greater understanding of:

- How to identify risk and opportunities
- How to coordinate onsite and manufacturing programmes
- Industry capacity
- The requirements needed to guide the client pre-contract, including:
 - Forms of Contract
 - Finance
 - Validation of design decisions
 - Objective advice: design and delivery; adaptability
 - Digital capabilities
 - Cost and value
 - Circular Economy
 - Environmental Considerations

The participants need to come away feeling more knowledgeable about project management for offsite construction and importantly what skills and knowledge they can implement on a project.



Course Learning Outcomes

The course is split into eight sections, each with their own learning outcomes.

1. Introduction

By the end of this module the participants should be able to:

- Understand the benefits and business case of offsite construction;
- Understand the Construction 2025 targets;
- Have an appreciation of offsite residential designs;
- Have an appreciation of offsite non-residential designs;
- Have an appreciation of offsite infrastructure designs.

2. MMC Definition Framework

By the end of this module the participants should be able to:

- Understand the importance of using the Modern Methods of Construction (MMC) Definition Framework to speak a 'common language';
- Know the MMC Spectrum and that the framework consists of categories 1-7;
- Have an appreciation of how different MMC systems are categorised.

3. Construction Industrialisation

By the end of this module the participants should be able to:

- Understand that construction industrialisation is the underlying process behind Design for Manufacturing and Assembly (DfMA) and MMC;
- Understand the five core activities of construction industrialisation, from design through to 'in use'.

4. Key Considerations of Offsite

By the end of this module the participants should be able to:

- Know when it is appropriate to use offsite solutions;
- Have an appreciation of the physical limitations of offsite;
- Have an appreciation of the design limitations of offsite;
- Have an appreciation of the supply chain limitations of offsite.

5. Value of Standardisation

By the end of this module the participants should be able to:



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- Understand the value of standardisation;
- Understand that standardisation does not necessarily constrain designs.

6. Project Management Basics

By the end of this module the participants should be able to:

- Understand the roles and responsibilities of an offsite project manager;
- Have an appreciation of the external factors that influence project management;
- Know what good practice project planning looks like;
- Understand how to best structure an offsite project;
- Understand the procurement and contracts available;
- Understand the different types of risk and how to mitigate them.

7. Overview of the RIBA Plan of Work

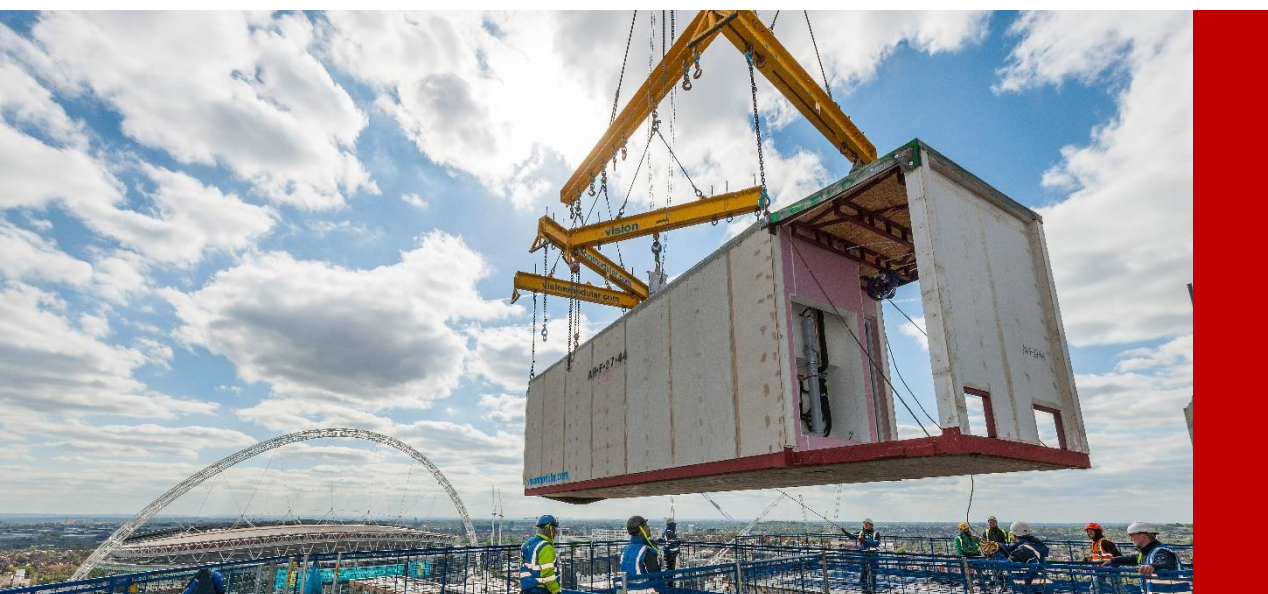
By the end of this module the participants should be able to:

- Understand what the RIBA Plan of Work is;
- Understand what a project manager needs to consider at each stage of the RIBA Plan of Work.

8. The Role of the MMC Project Manager

By the end of this module the participants should be able to:

- Explain what the role of the MMC Project Manager is;
- Understand the roles of the project manager at each construction industrialisation stage.





The Trainer's Role

- The facilitator needs to enable a course environment for hands-on discussion and learning, such that the delegates leave understanding how they can use offsite construction in their day-to-day work.
- During the full-day session, the facilitator will remind the learners of the key components of offsite construction and will guide them through the process of applying project management successfully to offsite construction.
- The facilitator needs to ensure that by the end of the course the participants have a solid understanding of the key learning outcomes:
 1. There is an offsite and MMC hierarchy;
 2. Differences in clients, project types and site constraints will drive different offsite solutions;
 3. The Project Manager must ensure the team collaborates as early as possible;
 4. The Project Manager has different roles to complete at each construction industrialisation stage and each RIBA Plan of Work stage;
 5. The Project Manager must identify and mitigate risk and opportunities;
 6. The Project Manager must know the requirements needed to guide the client pre-contract;
 7. The Project Manager must coordinate onsite and manufacturing programmes.



Preparation for a successful workshop

Before the workshop, the **facilitator** should:

- Using the course presentation, familiarise themselves with each slide and any speaker notes attached to it.
- Complete the **Offsite: Project Management e-learning module**.
- Familiarise themselves with the **offsite topic on the Supply Chain Sustainability School's website**, as well as **offsite related resources**.
- As the participants are recommended to complete an **offsite self-assessment**, the facilitator should also complete an offsite self-assessment so that they understand what the participants have been asked to complete.
- Edit the slide deck to include their own name and contact details.
- Edit the relevant slide to show the venue's wi-fi log-in details.
- Familiarise themselves with the location of the venue's facilities and the emergency procedures in the event of a fire; these should be communicated to the participants near the start of the session.
- Ensure that they have a copy of the '**Intro Loop**' PowerPoint file, which can be left running before the session starts and during any breaks.

Before the workshop, the **participant** should:

- Familiarise themselves with the **offsite topic on the Supply Chain Sustainability School's website**, as well as **offsite related resources**.
- Complete an **offsite self-assessment** to understand where their current gaps in knowledge are regarding offsite and to receive a tailored action plan of learning resources.

Who should attend?

This course is aimed at those involved in project management, with little to no experience of offsite construction. We recommend that workshops of 15-20 people will enable good interactions, discussions and ideas on how offsite techniques can be used and integrated into day-to-day work.



Materials needed to run the Course

As the workshop requires a lot of hands-on discussion, the facilitator should prepare the following should they wish to take notes and thoughts from delegates throughout the day:

- White board space or flip chart paper
- Post-it notes

The trainer will also need enough hard copies of the following documents for each participant:

- Attendance sheet
- Feedback form
- Handout - RIBA Plan of Work Stages
- Handout - Tasks at RIBA Stages
- Exercise 3 - Strategy- Client Drivers
- Exercise 3 - Strategy – Project Drivers
- Exercise 3 - Strategy – Project Scenarios



Course Programme: 6 hours

The following programme describes the activities the facilitator should lead the group of delegates on.

Encourage the delegates to provide their experience of offsite project management and what skills and knowledge they can take forward into their future work – this will lead to more fruitful discussion and a sense of collaboration.

Number	Activity	Guidance notes for the trainer
Note: Timings are suggestions only		
1	Welcome and Introductions	<p><i>10 minutes</i></p> <p>Get the delegates to introduce themselves to each other, stating their role, experience and knowledge of offsite construction.</p> <p>Explain the aim and purpose of the day's course.</p> <p>Ensure each delegate signs the attendance sheet and is provided with a feedback sheet.</p>
2	Introduction to offsite	<p><i>40 minutes</i></p> <p>This section provides an overview of the benefits and business case of offsite. Whilst these are already proven, it is important to get the participants to think about why they are proven and how it can improve their work.</p> <p>The sector case studies are to provide an overview of the types of buildings that can be constructed using offsite methods.</p> <p>Exercise 1: What are the benefits of an offsite approach? This short 15-minute exercise requires the group to split into smaller groups, discuss the benefits and their experience. Consider using post-it notes so that each group can list the benefits, and then report back their findings to the overall group.</p>
3	MMC Definition Framework	<p><i>40 minutes</i></p> <p>This is an important section that gives participants the fundamental knowledge they need to discuss offsite project management in greater detail. The section provides detail on</p>



		<p>the MMC spectrum and information on each of the categories 1-7.</p> <p>Category 7 video: https://youtu.be/6s17IAj-XpU</p>
4	Break	<i>20 minutes</i>
5	Construction Industrialisation	<p><i>20 minutes</i></p> <p>This section aims to help participants to understand where project management fits within the whole construction industrialisation process.</p> <p>The interactive ‘Where are you now?’ question aims to get the participants to think about where their organisation is now and where they could be after attending this course. It is important to note that not all projects are appropriate to offsite and MMC, and the facilitator should explain that this is not a ‘more offsite is better’ question.</p>
6	Key Considerations of Offsite	<p><i>15 minutes</i></p> <p>This section provides the participants with an overview with some of the key considerations of offsite, and how that may affect the project manager’s role at all stages. The aim is to address the problems that a project manager may meet, without using negative language. Encourage discussion by asking the delegates what they think the key considerations are, and if there are any additional key considerations.</p>
7	Value of Standardisation	<p><i>45 minutes</i></p> <p>This section encourages participants to think for themselves how they can incorporate standardisation into a project, and the benefits this will provide. Project Seismic is used as a case study. Encourage the participants to share their own stories of collaboration and standardisation.</p>
8	Lunch	<i>45 minutes</i>
9	Project Management Basics	<p><i>60 minutes</i></p> <p>This section ensures participants understand the basics of offsite project management. Encourage discussion throughout, based on participants’ opinions and experience.</p>



Exercise 2: Define different Project Manager's roles and responsibilities

The aim of this short 20-minute exercise is to establish any overlap and differentiation between the roles of the different types of project manager. Split the participants into three groups, each focusing on one of the three types of project managers: client representative, construction management and manufacturing and supply. The groups should discuss the different roles of that specific project manager, the responsibilities they would have to focus on and the issues they might face. Give the groups 10 minutes to come up with their ideas, then feed back and discuss. You could use post-it notes to establish roles in the groups, and then during the feedback session, analyse and discuss the post-it notes, looking at similarities and differences in the post-it notes created.

10	Break	<i>20 minutes</i>
11	Project Management Basics Continued	<i>60 minutes</i> This fundamental section on the project management basics is continued.

Exercise 3: Optioneering – Offsite Client and Project Drivers

The aim of this 30-minute exercise is for participants to explore the difference in full volumetric, component and traditional build approaches.

You must provide the worksheets: *Exercise 3 - Strategy- Client Drivers*, *Exercise 3 - Strategy – Project Drivers* and *Exercise 3 - Strategy – Project Scenarios*.

Groups split into small groups, with some focusing on **client drivers** and some focusing on **project drivers**, with each using a **different project scenario**, from the project scenario exercise sheet. They should work in groups for 15 minutes, identifying on the radar diagram where on a scale of 1-10 the client/project drivers sit. They should then create a ring, linking the lines and forming a complete radar diagram (see slide 115 for an example of a completed radar diagram). Groups should do this first to show how a traditional construction might fulfil these drivers, then a second ring on the same worksheet to show how an offsite/MMC build would compare.



For the next 15 minutes, groups should report back their findings and discuss their reasoning.

Exercise 4: Risk Assessment – What are the risks to the client of adopting an offsite/MMC approach?

The aim of this 20-minute exercise is to determine the risks of full volumetric, component approach and traditional build through fruitful discussion. Participants should split into small groups, pick a category per group from the following slide, discuss for 10 minutes and report back for 10 minutes.

12	RIBA Plan of Work	<p><i>30 minutes</i></p> <p>This section provides the participants with an understanding of what a project manager needs to do at each stage of the RIBA Plan of Work.</p> <p>Provide the handouts: <i>RIBA Plan of Work Stages and Tasks at RIBA Stages.</i></p> <p>Ask the participants what a project manager should do at each stage of the RIBA Plan of Work, and get them to discuss their thoughts and suggestions, before moving on to the slide that reveals the answers. This section of the course should be used for discussion,. The delegates can either fill in their handouts individually or in groups. You should choose whether to print the <i>Tasks at RIBA Stages</i> in A4 format for individual use, or A1 format for group use.</p>
13	The Role of the MMC Project Manager	<p><i>30 minutes</i></p> <p>This section should be used to remind participants of the key roles and responsibilities a project manager must undertake at each construction industrialisation stage. Encourage the participants to provide their own opinions on what the roles are for each stage, before revealing the answers. Ensure discussion is maintained throughout, based on participants knowledge and experience.</p>
14	Summary and close	<p><i>15 minutes</i></p> <p>Summarise and answer any questions. Remember to point the participants in the direction of further learning. Ensure the participants fill in a feedback form and have signed the attendance sheet.</p>



Related Workshops

The other courses in this Offsite Skills Project include:

- Understanding Offsite: Procurement
- Understanding Offsite: Quantity Surveying and Cost Consultancy
- Understanding Offsite: Design
- Understanding Offsite: Logistics
- Understanding Offsite: Site Management

