Assembling a Collaborative Project Team
Practical Tools including Multidisciplinary Schedules of Services

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When the RIBA Plan of Work was first created in 1963, it set out the tasks to be undertaken by the design team at each project stage and subsequent versions have continued in this vein. The RIBA Plan of Work has evolved over time to reflect changes in project team organisation and construction delivery models.

The RIBA Plan of Work 2013 takes this evolution a step further by addressing changes in procurement and making an important shift in emphasis from the design team to the project team as a whole, reflecting the new professional and information landscape and acknowledging the cultural and contractual changes that have taken place in recent years.

**Assembling a Collaborative Project Team** keeps the momentum of the new RIBA Plan of Work driving forward by offering cutting-edge guidance on how project teams are procured and assembled as well as analysing the entities that comprise the project team: the client, the design team and the contractor. It builds on the processes set out in the *Guide to Using the RIBA Plan of Work 2013* and provides further tools and techniques to assist in the team-building process. It also clarifies the importance of the first two stages of the RIBA Plan of Work 2013, explaining their role in giving a project the best possible start.

By facilitating the formation of collaborative project teams, the RIBA will act as a catalyst for innovative solutions and exemplar designs that can respond to the diverse objectives of our clients.

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President, RIBA
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Prior to this, he developed the *BIM Overlay to the RIBA Outline Plan of Work 2007*.

These projects have involved close collaboration with industry. Dale is also a member of the CIC BIM group and is on the management board of BuildingSMART UK.
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Introduction
Assembling a Collaborative Project Team has been developed in conjunction with the RIBA Plan of Work 2013, the Overview publication (both available to download at www.ribaplanofwork.com) and the Guide to Using the RIBA Plan of Work 2013. It aligns with and supports these two landmark documents, providing more detailed guidance, specific activities and the focused tools that are essential for those responsible for and involved in assembling a project team. In particular, it considers how to create a truly collaborative project team and how achieving this during Stage 1 will make a project easier to run during the design, construction and operational stages. The guidance and tools can be referenced by any party involved at any stage of a project, but they are of greatest interest to the project lead and the lead designer. The RIBA Plan of Work 2013 can be used in isolation and the steps and tools outlined in this publication are not obligatory. However, even on simpler projects, the processes that are set out in the Plan can provide an invaluable resource for explaining to a client the proposed structure of the project team and a means of properly engaging each party in the project team. In the long run, their use will lead to clearer, more successful methods of working.

On paper, assembling a collaborative project team should be straightforward. In reality it is complicated due to:

- the number of parties that have to be appointed
- the various options for appointing each party
- variations in the timing of contractor involvement
- the different ways in which roles can be combined
- apportioning contractor and subcontractor design
- cultural issues associated with working together for the first time
- the parties’ varying levels of experience gained on previous projects
- the lack of standard Schedules of Services for members of the project team, and
- the absence of common protocols and standards.

The steps and tools detailed in this publication reconcile these complexities by setting out a process that incrementally builds the collaborative project team, concluding with a number of documents that can work independently or as appendices to professional services contracts and the Building Contract.

It is essential for any collaborative project team to be constructed during Stage 0 (Strategic Definition) and Stage 1 (Preparation and Brief). The reasoning behind this requirement and the importance of these initial stages is considered in Chapter 1. By properly establishing the project team early in the project:
• design work can be undertaken without any ambiguities regarding responsibility
• clients can be certain that they have made sufficient allowances for fees and the
design team members can be confident that their fees relate to detailed Schedules
of Services
• clients can proceed, confident that the means of engaging the design team and
the contractor have been fully considered, and
• every party is clear about their responsibilities and the information that they will
deliver at each stage.

The RIBA Plan of Work 2013 considers the tasks undertaken by the project team rather
than just those that are the responsibility of the design team. To fully understand the
implications of this shift it is essential to consider the generic types of project team
and to also understand how the different entities within project teams (the client, the
design team and the contractor) have changed over the years. Chapter 2 considers
the implications of these changes and looks at the evolution of the project team,
likely changes in the future and how these impact on assembling a project team.

'Kick-starting' a project has its own complexities and unique considerations and
these are set out in Chapter 3.

Having considered the importance of the early stages, the impact of the project
team, rather than the design team, and how to begin the process, Chapter 4
examines how to strategically assemble a collaborative project team and the benefits
that this brings. Where a project team regularly works together, the processes set
out have additional benefits. They can be utilised to generate a clear and robust set
of documents that can be used and continually improved from one project bid to the
next, demonstrating stringent design management techniques.

Before looking at specific tools for assembling the project team, Chapter 5 considers
the importance of the project brief and how it influences the process of assembling a
project team.

Chapters 6, 7, 8 and 9 set out the detailed tools required to assemble the
collaborative project team. The processes set out in these chapters:
• have been developed for use on projects where the client may be undertaking their
first, and only, building project or for use by clients who regularly carry out projects
• consider the stage at which the contractor becomes involved in the process,
ensuring that the project team is constructed accordingly
• work for both large and small projects
• ensure that the supporting documents required as appendices for professional
services contracts or Building Contracts are properly conceived, and
• facilitate the preparation of the processes and protocols required by a collaborative
project team using BIM.

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Chapter 10 looks at the most frequently used forms of professional services contracts and Building Contracts required to bind the project team together and to provide the legal mechanisms to deal with any issues that may arise.

Finally, the appendix presents Multidisciplinary Schedules of Services, derived from the tasks set out in the RIBA Plan of Work 2013. Each task has been allocated to particular project roles but can be adjusted if necessary. The multidisciplinary format reduces the possibility of gaps or overlaps in the services provided and ensures that every member of the project team is aware of the tasks to be undertaken by each party.

You can access all of the practical tools for assembling a project team described in this book online at www.ribaplanofwork.com/toolbox.

In this book, the stages of the RIBA Plan of Work 2013 are set in bold (e.g. Stage 0 Strategic Definition) and terms which are defined in the RIBA Plan of Work 2013 Glossary are set with initial capitals (e.g. Building Contract).
Chapter

The importance of Stages 0 and 1

What is the aim of Stages 0 and 1?

Why a robust Initial Project Brief is crucial

What are the benefits of assembling the collaborative project team prior to Stage 2?

What is the relationship between the brief and the collaborative project team?
Chapter overview

Stage 2 is the most crucial stage of any project: the Concept Design is prepared, presented and signed off by the client. Robust Stage 2 outputs are an essential requirement of any project because any changes after Stage 2 can be difficult and costly to implement (as illustrated in Figure 1.1 below). Ensuring that Stage 2, and in particular the assembly of the project team, is undertaken as productively and effectively as possible is therefore a core project requirement. This chapter considers how the successful implementation of Stages 0 and 1 is central to achieving this aim.

Some would advocate the commencement of Stage 2 immediately. Why wait? What purpose do the earlier stages serve? Let’s design! Let’s get on site as soon as possible! With this in mind, this chapter dwells on the importance of Stages 0 and 1 and the crucial purpose that they serve. The Guide to Using the RIBA Plan of Work 2013 also sets out how the requirements of Stages 6 and 7 can influence the earlier stages and these stages must also be considered before design work can commence.

If the best possible start to Stage 2 is to be achieved, some of the initial hurdles to assembling the collaborative project team need to be thought through. These are considered in Chapter 4. This chapter focuses on the importance and aims of Stages 0 and 1 and how their efficient use can facilitate a more effective and productive Stage 2.

The implication of change

Beyond Stage 2, the amount of information produced increases exponentially. The more information that is produced, the greater the amount of information that has to be amended in the event of a change. Significant changes proposed at Stage 3 might require the work of all of the design team to be altered and further reviews and coordination exercises to be undertaken, making these changes costly and difficult to implement.

At Stage 4 further, and significant, design team costs will be incurred, as will the costs of design work carried out by the contractor’s specialist subcontractors. When a project reaches site, at Stage 5, the cost of change ramps up even further as change impacts on the ordering of materials, off-site fabrication costs and, in the most onerous of scenarios, the need to alter work already constructed on site.

Figure 1.1 The cost of change
The impact of change: an example

By way of example, the following considers the implication of introducing an additional escalator into the ground floor of a shopping centre at different RIBA stages.

**Stage 2 – Concept Design**

The architect's information needs to be amended to include the escalator and the Cost Information has to be adjusted accordingly.

**Stage 3 – Developed Design**

The change is instructed via the project Change Control Procedures after a number of studies have been undertaken and the architect’s information is amended followed by the structural and building services engineers’ information. The Cost Information is also adjusted accordingly.

**Stage 4 – Technical Design**

Process as Stage 3; however, the architect must also alter the ground floor finishes and ceiling information and the balustrading setting out for level 1. The structural engineer must amend the substructure information as well as the detailed steelwork and slab information for level 1, and the building services engineer has to alter the electrical schematics and light fitting layout information on receipt of amended ceiling information from the architect. Depending on the timing, the specialist subcontractor providing the escalators would have to amend their information to show the additional escalator, the steelwork contractor would have to alter the secondary steelwork information and the contractor would have to consider any logistics issues arising from the changes. The lead designer would also be required to undertake additional coordination and integration exercises.

**Stage 5 – Construction**

Process as Stage 4; however, work already undertaken on site must be considered. Adjustment of the cast ground floor slab is required, secondary steelwork has not yet been delivered to site but requires modification and the ground floor tiling works have to be reprogrammed and the critical path reviewed.

**Summary**

This example demonstrates the additional work triggered by change and underlines the increased complexity at each stage. The cost of change will directly relate to the amount of activity undertaken, significantly increasing when fabricated or completed works on site have to be altered.
What is the aim of Stages 0 and 1?

In the extract from the RIBA Plan of Work 2013 in Figure 1.2 below, the Core Objectives and Suggested Key Support Tasks of Stages 0 and 1 are set out. The rationale behind having two stages prior to the commencement of the Concept Design stage is straightforward: Stage 0 considers strategic issues and Stage 1 adds ‘flesh’ to these strategic bones. The outputs at the end of a successful Stage 1 would be:

• a robust Initial Project Brief, and
• a collaborative project team.

These two outputs and the connection between them are considered in detail below.

![Figure 1.2 Extract from the RIBA Plan of Work 2013](www.ribaplanofwork.com)
Why a robust Initial Project Brief is crucial

Without a robust brief, the Concept Design stage cannot begin productively and, more crucially, may be taken in a direction that is not suited or aligned to a client’s goals and objectives. It is fair to say that the brief needs to be developed in tandem with the developing Concept Design before it is finalised at the end of Stage 2, along with the Concept Design, but it is also essential to acknowledge that the brief and any associated Feasibility Studies should be sufficiently developed during Stage 1 to facilitate an effective start to Stage 2.

Stage 0
At Stage 0, the aim of the brief is to consider the client’s Business Case and the strategic aspects of the project:

- Is the project, as anticipated by the client, taking the right strategic approach?
- What are the desired Project Outcomes?
- Is there a better way of achieving the desired outcomes?
- Is the site appropriate?
- Would refurbishment or an extension of an existing building be a more appropriate solution?

By stringently testing the client’s Business Case and their initial thoughts on their requirements, all parties can proceed to Stage 1 confident that the Project Strategy is robust. This gives the client the comfort of knowing that the strategic aspects are correct and ensures that the project team is less likely to go down a ‘blind alley’ at Stage 1.

Stage 1
The goals of the briefing aspects at Stage 1 are to progress the client’s detailed briefing requirements and to test them against the specific issues associated with the site as well as considering matters such as Project Outcomes, Sustainability Aspirations and the Project Budget. It is recognised that there is a fine line between briefing and feasibility aspects and the development of the Concept Design; however, a skilled ‘briefmaker’ will avoid making the leap to a design solution or drawing firm conclusions at this stage. In the Guide to Using the RIBA Plan of Work 2013, the increasing use of BIM ‘briefing’ models linked to an area schedule is noted as an example of how new briefing techniques and tools are facilitating more effective briefing processes.

The three briefing stages in the RIBA Plan of Work 2013 and their importance are considered further in Chapter 5.
What are the benefits of assembling the collaborative project team prior to Stage 2?

After strategically defining the project team at Stage 0, the assembly of the project team continues during Stage 1 until the majority of the team members, and certainly those undertaking the core project roles, have been appointed prior to Stage 2 commencing.

Figure 1.3 illustrates an example of which project roles might be required at each stage of a project, showing how the required roles vary from stage to stage with the number of project roles ramping up during the design stages and tapering back down following project handover at the end of Stage 6. If the additional project roles were to be considered, this tapering would be even more pronounced. This diagram underlines the need to properly conceive WHO will be in the project team at an early stage (as set out in Chapter 6). If this core strategic task is not carried out, the detailed tasks to be undertaken by each role (WHAT) cannot be prepared or adequate fee allowances made within the Cost Information.

There are a number of other important reasons for ensuring that the project team is properly assembled before Stage 2 commences:

- The shift from a design team to a project team results in the involvement of a greater number of parties, with a corresponding increase in the number of relationships that have to be managed and the creation, in turn, of a greater number of contractual relationships. Determining the interrelationships between all the members of the project team is therefore an important first step.

- The core project roles can be undertaken by different parties (see page 58). It is important to consider this aspect before assembling the project team.
• The additional project roles must be carefully considered to ensure that there are no overlaps or gaps in the work being undertaken by the core project team members and, more importantly, that the need and justification for the additional roles are clear to the client.

• The relationship between the project lead and the lead designer is crucial. The chemistry between these parties has to be perfect if the design stages are to be productive and respond positively to the client’s goals and desired outcomes.

• The decision-making process has to be clarified. With the large number of project team members it is vital to be clear about who decides what and when?

• The timing of the contractor’s involvement can vary. Determining this timing and how the contractor’s role dovetails with those of the project lead and design lead is therefore of paramount importance and fundamentally dictates the procurement route.

• Specialist subcontractors can provide invaluable input and value engineering contributions to the design process and the timing and extent of their involvement is a crucial part of determining when the contractor comes on board. This input may be informal at Stage 3 or facilitated by overlapping Stage 3 and Stage 4 activities.

• Digital design technologies allow more complex design solutions to be developed quickly. Determining the nature of the project team early in the process ensures that each member of the team is not only aware of their design responsibilities and the level of detail to be produced at each stage but is also well versed in the protocols, procedures and other processes that are essential to the creation of an effective collaborative team.

Many clients who undertake multiple projects will have predefined ways of assembling their project teams and, of course, developing a team for a smaller project should be more straightforward. However, while both of these scenarios are more likely to be applicable to the practice approach described in Chapter 3, the tools set out later in this book can still provide an invaluable means of producing the documents used to appoint project teams time and time again.
What is the relationship between the brief and the collaborative project team?

A further complication deriving from the RIBA Plan of Work 2013 is that certain briefing issues require particular tasks to be included in Schedules of Services, and potentially the Building Contract, if they are to be successfully addressed. The following points should be considered:

• Setting Project Outcomes is part of the briefing process; however, if these outcomes are to be meaningful they will have to be measured post occupancy. New skills will be required to properly set the outcomes and to obtain accurate measurements. This will require the necessary Schedule of Services and contractual requirements to be included in the professional services agreements and the Building Contract.

• The preparation of design information traditionally ends with construction. With completed construction information now being used for the operation of buildings, it is necessary to consider at the early stages what information will be required post occupancy in order to operate the building. The information requirements must be included in the brief and the requisite contracts.

• While Stages 6 and 7 are geared to post-occupancy and in-use tasks, it is crucial to remember that information harvested during these stages will be used to inform future projects. It is important, therefore, to remember that Stages 6 and 7 will increasingly influence how a building is appraised, with feedback and benchmarking informing a new project brief as the circle is completed and a new Stage 0 commences.

From the above points it can be seen that briefing and project team issues benefit from being considered in parallel, allowing the best possible project team for delivering the client’s aspirations to be assembled for the commencement of Stage 2. There are further issues associated with the initial appointments which are considered in Chapter 3.

Summary

Many aspects have to be considered strategically at Stage 0 and in detail at Stage 1. Failure to properly consider these items may not impact directly on the design process but, if it does, it is likely that the impact will be significant. Conversely, if Stages 0 and 1 are properly harnessed, design can be efficiently carried out by the collaborative project team during Stage 2 and the chances of the Stage 2 outputs meeting or exceeding the client’s expectations are greatly increased. Furthermore, by considering the brief and the project team in tandem, the right team will be created with the assembled collaborative project team more likely to deliver the client’s objectives.