2.1 STAGE 1 – PROJECT PROCUREMENT STRATEGY

In this stage, the project definition is developed so that decisions can be made on what parts of the project to develop or make internally and what parts to source externally i.e. Make vs. Buy. At the end of this stage, the scope of each package should have been largely decided upon. For the packages that are to be sourced externally, the nature of the relationship required should have been decided, giving an indication of the likely contracting strategy e.g. cost plus, risk sharing or fixed price etc.; and how the supplier will be selected in terms of process and criteria e.g. single source negotiation, lowest price, combination of cost and qualitative factors etc..

Consequently, in this stage for a project of any complexity, there should be input from personnel who both:

- understand procurement issues e.g. contracting strategies and, particularly if subject to EU Procurement legislation, selection processes; and
- have knowledge of the industry sectors and technology relevant to the project.

Before we proceed, it is worth revisiting the hierarchy of project definition, as explained outlined in section 1.3 and illustrated in the Figure 2.1a below. This has been developed from the definitions in the APM Book of Knowledge, so for the precise definitions, see the Glossary at the back of this Guide.
Figure 2.1a. A hierarchy of detail for the Project Breakdown Structure.

The reason for exploring this now, rather than on a piecemeal basis as and when in the remainder of this chapter and guide are:

- So that the reader has an overview of the different levels and is clear about what is being discussed, rather than it being introduced piecemeal.
- So that a conscious decision is made at the project procurement strategy stage, the contract strategy stage and drafting of contractual requirements stage, what level in the hierarchy to specify to. A later stage would normally be specified at the same or lower level, but not a higher level.

At the lowest level are goods and services. Ultimately, combining goods and services in a particular way according to a plan makes up any project. For clarity, in this Guide:

- Goods are tangible items designed and manufactured to deliver a purpose and are fairly commoditised i.e. they can be manufactured or bought ‘off the shelf’ either competitively or on a call-off contract with little tailoring for the project. For instance, concrete or standard software.
- Services are resources bought in to undertake an activity that will produce an output e.g. labour or help desks.

Works, at the lowest level of delivery, are a combination of goods and services, are often let under contract as a ‘works package’ and produce something relatively unique i.e. a sub-project.
For instance, by combining steel, concrete and labour to a plan, you produce a distinct structure in a unique location e.g. a bridge. By combining software and a help desk, a customer relationship management function is created.

However, that does not mean that they have to be specified at this level in the contract. If, as is often the case, the Provider has more specialised knowledge and experience than the Employer in providing things of the type required, then it may well be more appropriate to specify at the capability level and allow the Provider to break his package down to the goods and services level in order to deliver the specified capability. Depending on which sector you are in, these new or enhanced capabilities may be known as performance specifications, if measurable, or functional specifications if less measurable and defined more descriptively.

Going up a level, the Provider may contract on the basis of measures closely related to business outcomes or benefits which are within their control or significant influence i.e. measurable success criteria. For instance, a marketing campaign for a product or service where the Provider is paid on the basis of increase in enquiries to the Employer; a Public Finance Initiative road project on the number of journeys along it, average road speed and lane availability. Notice that these are measurable outcomes and are

In this Project Procurement stage, we consider how the project is divided into work packages – be they expressed as outcomes, success criteria, new or enhanced capabilities, unique physical works or standard goods and services. For external packages, we consider the nature of how that contract package will be bought in terms of contracting strategy and selection criteria and method.

Once this has been done for all packages, the outputs are combined or summarised to give a Project Procurement Strategy document.

The sub-process for this Stage is illustrated overleaf in Figure 2.1b.
Figure 2.1a – Process diagram for Stage 2: Developing the Project Procurement Strategy.

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2.1 Inputs

In order to undertake a sourcing analysis, the outputs from the previous stage, as included in Full Business Case, are required.

- The Scope Statement is critical in order to further develop it down to an appropriate level of detail i.e. the Project Breakdown Structure. From this, package can be assembled to give a Package Breakdown Structure.
- The refined Strategic Business Case (SBC) and Project Brief will give clues to the sourcing and delivery options for the project and the individual packages within it. It is the starting point for developing criteria by which contracting strategies are developed and suppliers are selected.

There are two sources of packages. The first is from within the organisation that is making the investment. A project manager needs to understand what the Internal Capacity is in terms of skills, functions and capability. For instance, if there is an under-utilised internal capability, it may well be in the best interests of the Employer organisation to utilise these resources to deliver elements of the Project Breakdown Structure. Those that cannot be delivered from within are sourced from the market place and those that could come from either will need to be the subject of other tests. In order to assess what can be delivered externally from providers under contract, the External Potential to provide needs to be understood. It is critical to know what the market is capable of delivering and how external providers could contribute to the project, before the project is divided up into contractual packages which external providers may or may not be able and / or willing to supply.

3.1 Activities

There are five key activities or steps in determining what packages should be sourced from where and in what manner. An activity which is on-going is consultation with the market, whether that market is internal or external to the sponsoring organisation. However, if and when this happens and the extent to which it happens will depend on the nature of the project in terms of size, uniqueness, risk etc, and existing knowledge of the market place within the customer organisation.

3.1.1 Activity 2.1 : Develop a Project Breakdown Structure (ProBS).

It is critical to identify the components of the project to a level of detail that ensures that everything required for the project is identified. In doing this, it is suggested that you progressively work down the hierarchies as per Figure 2.1a (much as you would when
developing a Value Tree as used by the Value Management profession). The important point is that at all levels, everything in that level is identified. For instance, before working down to the Deliverables level, ensure that all the desired Capabilities have been identified and accurately expressed.

Even at the Goods and Services level, there is a hierarchy. For instance, you may well know that you will need computers in your project, but have not yet determined the components needed in the computer.

Taking a whole life view of the project, requirements for project closure, support and maintenance need to be included in the breakdown.

To re-iterate, the important point is that, at any level, the list is fully inclusive given the projects current definition. If it is in there, it can be developed or broken down further.

A Project Breakdown Structure (ProBS) and a Work Breakdown Structure (WBS)?
A ProBS progressively, as it is developed, incorporates:
• the higher elements of Outcome / Benefits;
• Success Criteria (which may approximate to the project’s ‘hard’ objectives);
• the new or enhanced Capabilities (which in engineering may be expressed as a performance specification); and
• then goods and services needed.
It is only at this lowest level that it takes on the form or indeed becomes like a Work Breakdown Structure i.e. where physical or tangible deliverables are defined.

Activity 2.2: Understanding of Provider Possibilities for the Project.
Understanding of the Provider Possibilities is necessary as it informs the ‘Make or Buy’ criteria and Package Breakdown Structure. It also forms the starting point for intelligent conversations should more detailed consultation be necessary with the market. This understanding comes from combining knowledge of Internal Capacity of the Employer organisation with the External Potential of the market to supply. The Project Manager and the procurement professional may already have this knowledge or may need to investigate the internal and external supply base. While this may initially be based on experience and desktop study, for complex, technologically advanced or unique projects it may be necessary to consult the market.
For government procurers, it is OK to do this at this stage of the procurement process, providing you are consulting “the market” as opposed to giving one or a few suppliers a competitive advantage.

**Activity 2.3. Identify ‘Make or Buy’ Criteria.**

Analysis of the Business Case and Project Brief, as well as understanding the Supply Possibilities will help identify the criteria by which ‘Make or Buy’ decision can be made. The sorts of criteria that might be used are set out in the table overleaf. There may be others pertinent to the nature of the project, the industry in which the project is being conducted, or the Employer’s own circumstances.

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1 An alternative term often used in IT is ‘Buy or Build’.

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<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>TEST</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria 1: Business Circumstances</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial circumstances</td>
<td>Does buying organisation have to invest in capital to create the product or service?</td>
<td>It may be more cost effective to hire in piece of earth moving equipment rather than by a new capital item.</td>
</tr>
<tr>
<td>Legislative circumstances</td>
<td>Are their complex standards, practices and procedures that have to be adhered to?</td>
<td>Exacting health and safety procedures may carry risk that cannot be managed.</td>
</tr>
<tr>
<td>Criteria 2: Develop and Sustain Knowledge of the Business Operation and Environment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge of the Wider Organisation</td>
<td>Do we need specialist internal knowledge to be successful?</td>
<td>Understanding the organisation in depth and knowing how the organisation is structure may be a critical factor in providing services.</td>
</tr>
<tr>
<td>Culture</td>
<td>Will understanding the culture of the organisation be a critical factor in delivering the products and service?</td>
<td>It may be necessary for the provision of products and services to exhibit particular cultural characteristics e.g. speaking the local language.</td>
</tr>
<tr>
<td>Criteria 3: Service Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Services</td>
<td>Has our organisation done this before or will we have to invest in building a capability?</td>
<td>Projects often involve delivering something new. The solution is something the organisation has no experience in then it would be difficult to demonstrate capability e.g. the use of a new software package or language.</td>
</tr>
<tr>
<td>Services Difficult to Manage or Out of Control</td>
<td>Are we experts or are others better at delivering what we require?</td>
<td>Requiring an existing capability to deliver service to an exacting service level when there is a track record of not being able to deliver or cannot monitor performance may put a project at risk.</td>
</tr>
<tr>
<td>Service Level Management</td>
<td>Can we deliver to the standards expected?</td>
<td>An internal capability may only be able to deliver 25 widgets a day in one delivery while the project requires 38 delivered just-in-time</td>
</tr>
<tr>
<td>Criteria 4: Effectiveness of Delivery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability and effectiveness of internal resources/capability</td>
<td>Are there internal resources to deliver this effectively?</td>
<td>The internal capability may are not fully utilised and have a reputation for excellence</td>
</tr>
<tr>
<td>Availability and effectiveness of external capacity/capability</td>
<td>Do others have the capability?</td>
<td>Maybe other suppliers can deliver the service more effectively or geographically advantaged</td>
</tr>
<tr>
<td>Synergy between product and service</td>
<td>Can a more cost effective solution be delivered if we extend an an already existing capability</td>
<td>It might be possible to bring together two or more services or products into one contract or internal service level agreement thereby creating economies of scale.</td>
</tr>
<tr>
<td>Criteria 5: Application of Expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic value of technical expertise to the organisation</td>
<td>Does the business depend upon a core capability that must be retained or undertaken internally?</td>
<td>If the business undertaking the review provides a unique service or production capability or uses its Intellectual Property to generate revenue, if so it is appropriate to retain the capability in-house</td>
</tr>
<tr>
<td>Technology futures</td>
<td>Is there a technology in the</td>
<td>Maybe an organisation is looking to access</td>
</tr>
</tbody>
</table>
### CRITERIA TEST EXAMPLE

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>TEST</th>
<th>EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>market place that is not available internally?</td>
<td>new technology or to deploy another’s capability to its business advantage where there is no internal expertise.</td>
<td></td>
</tr>
</tbody>
</table>

Criteria 6: Ability to Manage Risk

| Contracting Risk | Does contracting the package increase or reduce risk? If the risk is increased is it justified? | Contacting a work package always adds the risks associated with contracting (e.g. contractor solvency) but these may be outweighed by the contractor’s technical experience/competency. |
| Risk Identification | Have the risks associated with the package been identified? Does this need expert input? | When contracting for technical reasons expert advice may be needed to understand the contracted technical risks. |
| Risk Ownership | Has the ownership of all individual risks been defined? Will contracted organisations accept risk ownership? | Once risks are identified the ownership needs to be explicitly defined and acknowledged. This may affect the risk budget allocated (beware of risk double-counting and “assumed” ownership). |

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**Figure 2.1 – Example ‘Make’ or ‘Buy’ Criteria.**

**Activity 2.4: Packaging to give the Package Breakdown Structure (PaBS)**

Having identified what is required in the Project Breakdown Structure, the items need to be **packaged** into complimentary elements. In doing this, it is possible to identify which packages might be sourced internally, department by department, or externally in different ways, e.g. through several different external procurements or through existing contractual arrangements.

This packaging could be by:

- bringing similar elements together to gain economies of scale and / or make the package sufficiently attractive to the market. For example, putting supply of all standard electrical components into one package; bringing together all fabrication requirements into one package; or by combining project management and accounting services.
- combining goods and services into works packages, thus giving single point responsibility to a potential supplier (whether internal or external) for the combination of goods and services delivering the required performance, function or capability. E.g. in construction, the traditional route is that design and construction are carried out by separate organisations. This left the client organisation having to pick up the bill for any interface problems e.g. the design

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2 **Note**: We have not referred to this as the Contract Breakdown Structure as some of the packages may well be procured internally. I.e. there is no contract.

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could not be constructed. Over the last decade, there has been a trend for these services and goods to be combined into one ‘Design & Build’ contract package giving single point responsibility.

The concept of packaging is illustrated below.

![Diagram of Package Breakdown Structure (PaBS)](image)

*Figure 2.1a – Example Package Breakdown Structure (PaBS) showing entities that could be sourced separately, but are grouped together into single packages.*

In may be that the Package Breakdown Structure might well end up looking very similar to the Project Breakdown Structure except with extra text identifying the names of the packages. Alternatively, elements of the Project Breakdown Structure are circled together into packages.

For more complex projects which are likely to consist of numerous different packages, it is suggested that for each potential package, an initial list identifies what could be in it. This is then developed into what almost certainly will be in a package; what might be in the package; and what is not in the package. Having gone through a number of iterations with all potential packages, the end result is that every item in the Project Breakdown Structure is in one of the packages, but one package only e.g. in terms of goods and services, there is a ‘hard’ boundary with no duplication or overlap between packages. Equally, there is no omission in the Package Breakdown Structure when compared with the Project Breakdown Structure.

An important factor to bear in mind is that projects happen over a period of time. Consequently, in packaging elements of the project together, the interactions and
interdependencies during the implementation phase need to also be considered. As a result, you may decide to package two otherwise separate, but interdependent elements together, so that one provider is motivated to manage the interface, rather than take advantage of it at the Employer and the overall projects expense. Taking the ‘Design & Build’ example from construction again, another benefit of it is time saving as design and build can overlap if they are in the same package. This compares with the traditional route where design should be finished before the build package is tendered and let.

If it is the Employer organisation that will managing these boundaries, then it is suggested that for each package, these interdependencies and interactions are identified, along with the management steps to ensure smooth delivery.

![Diagram showing package boundaries and interdependencies](image)

*Figure 3.6 - The nature of the sourcing arrangements showing ‘hard’ boundaries for goods and services and ‘soft’ boundaries that require definition and management*

Later, having put together an initial Package Breakdown Structure, they may well be a need to consult in greater detail with the market to gain their thoughts on the packaging of the project as it relates to what they can and are willing to supply. In doing this, the project management team may well gain new ideas and perspectives, understand potential providers’ capabilities more and have a greater appreciation of their products and services. This may result in some activities being revisited and a better or more realistic approach being taken. For instance, the cost of creating a geographical...
presence might cause a project manager to reconsider whether something is undertaken internally or externally or packaged differently.

**Activity 2.5: Recommendation on the ‘Nature of Relationship’ for contract package.**
The type of relationship required to deliver each individual package is the final question considered during this stage and feeds directly into the type of contracting strategy to be employed and supplier selection criteria and process.

![Nature of Relationship Diagram](image)

**Figure 2.1d: Diagram correlating Nature of Relationship with Type of Project.**

The diagram above helps the thinking process:
- If at one extreme, you are buying a one-off commodity for which there are multiple suppliers, then your procurement strategy for that package might well be to select on cheapest price using a transactional contract.
- If it is a commodity in limited supply and for which there is a repeat demand, then you may wish to have a call off contract with some minimum conditions to ensure constancy of supply. Such a contract may already be in place for your organisation.
- If you letting a one-off works package i.e. a sub-project, then you are in the quadrant for project based relationships. The exact nature of the selection criteria...
and the contract will vary upon the complexity, risk and relative power of providers in that sector.

- It may be that this project is part of a programme of projects which have similar characteristics and key elements. In order to avoid repeating procurement costs, to encourage continuous improvement from project to project or just to secure a scarce resource, you may decide that a long term relationship needs to be in place, such as a framework or call-off contract.

Although the Employer will be the ultimate arbiter and risk owner for the overall endeavour, the more complex and risky a project is the more important it is to gain input from potential providers to fully understand the risks and complexity. The Employer will define the preferred contracting strategy and hence the extent of risk to be borne by each party. Providers have the choice of whether to accept the risk and complexity level or no-bid. In the case of strategic relationships, which will be longer term, the consultation between the parties is able to be more intensive but the Employer will still need to clearly define the delivery and risk ownership clearly.

Before proceeding to subsequent stages, for the more significant packages of work, it makes sense for the project manager to have some indication from the sponsor and other key stakeholders on:

- the acceptability of different contracting strategies in terms of special purpose vehicles (SPVs), joint ventures, consortium, public private partnerships, design build operate contacts, types of alliance, capital or leased services etc. and
- how the contractor for each package will be selected in terms of process and criteria.

While this should be only indicative at this stage, it is recommended so as not to go down a path which is unacceptable to the stakeholders and hence results in abortive work and wasted time.

Outputs

For each significant package of work, there should be:

- A fully inclusive statement identifying the Package Scope in terms of what is currently intended to be in that package. If you like a project breakdown structure for that package. If there are any unusual, but deliberate inclusions or omissions from this scope, they should be stated together with the reasons why.
• Statements of how the Package interfaces and interdependencies with other packages and how it is proposed that these ‘soft’ boundaries will be managed.
• For packages that will be let externally under contract, a statement indicating the what sort of contracting strategy and selection arrangements are acceptable (or unacceptable) to the Project Sponsor or Steering Group / Project Board. This is directly derived from an analysis of Nature of Relationship sought.

It is suggested that the less significant packages are categorised together by type and general statements which cover each category are made. E.g. All goods in a category will be managed in a similar way under similar selection and contracting strategies.

The Project Procurement Strategy Document outlines the overall approach taken, and summarises, for each major package of work and category of packages: the scope, significant interfaces and interdependencies and responses and nature of the relationship sought. It should be signed off by the Project Sponsor and, if appointed, the Steering Group / Project Board before proceeding to the next stage.