
**Construction procurement —
Guidance on strategy and tactics**

*Marchés de construction — Recommandations en matière de
stratégie et de tactique*





COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Options for engaging the market for new or refurbished construction works	2
4.1 Concept.....	2
4.2 Financing of the project.....	4
4.3 Design responsibilities.....	5
4.4 Interface management responsibilities.....	5
5 Framework for developing a procurement strategy	6
5.1 General.....	6
5.2 Strategic considerations.....	7
5.3 Procurement objectives.....	8
5.4 Spend, organizational, market and stakeholder analysis.....	9
5.4.1 General considerations.....	9
5.4.2 Spend analysis.....	9
5.4.3 Organizational analysis.....	10
5.4.4 Market analysis.....	10
5.4.5 Stakeholder analysis.....	10
5.5 Packaging strategy.....	11
5.5.1 Concept.....	11
5.5.2 Framework or non-framework agreements.....	11
5.5.3 Identifying work packages.....	11
5.6 Contracting strategy.....	13
5.6.1 Concept.....	13
5.6.2 Standard forms of contract.....	13
5.6.3 Selecting a suitable standard form of contract and pricing options.....	13
5.7 Targeting strategy.....	15
5.7.1 Concept.....	15
5.7.2 Key performance indicators.....	16
5.8 Selection methods.....	18
5.9 Documenting a procurement strategy.....	19
6 Tactics	20
6.1 Concept.....	20
6.2 Publicity.....	20
6.3 Procurement planning and sequencing.....	20
6.4 Setting up of procurement documents.....	21
6.4.1 General.....	21
6.4.2 Tactical variables associated with the process of offer and acceptance.....	21
6.4.3 Identification of a suitable standard form of contract.....	21
6.4.4 Specific conditions of contract.....	23
6.4.5 Approaches to achieve quality.....	24
6.4.6 Cost-effective procurement.....	24
Annex A (informative) Delivery management concepts and practices	27
Bibliography	32

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 59, *Buildings and civil engineering works*, Subcommittee SC 18, *Construction procurement*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Procurement is defined in the ISO 10845 series as "the process which creates, manages and fulfils contracts". Procurement accordingly commences once a need for goods and services or any combination thereof has been identified and it ends when the goods are received, the services and construction works are completed, and contracts are closed out. It embraces the concepts of (see ISO 21502):

- planning for procurement when procurement strategies are developed, procurement criteria are identified and contract specifications are developed;
- the evaluation and selection of a contractor in accordance with selected criteria;
- administering contracts involving the monitoring of contract performance, managing contract changes and corrections, dealing with claims and ending contracts and closing contracts;
- closing contracts when the contract obligations of the parties have been met or the contract is closed early in accordance with the termination clauses.

Delivery management is the critical leadership role played by a knowledgeable client to plan, specify, procure and oversee the delivery of construction works projects resulting in project outcomes. Procurement yields the necessary resources to deliver projects while delivery management provides the necessary leadership and oversight management and forms part of the governance or quality oversight arrangements for construction-related projects.

ISO 10845-1 describes generic procurement processes and establishes generic methods and procedures for procurements enabling a procurement system to be established within an organization. ISO 10845-4 contains standard conditions for the calling for expressions of interest enabling respondents to be prequalified to be admitted to a database or be invited to submit tender offers. ISO 10845-3 contains standard conditions of tender enabling the process of offer and acceptance to be conducted. ISO 10845-2 establishes a uniform format for the compilation of calls for expressions of interest, tender and contract documents, and the general principles for compiling procurement documents for supply, services and construction contracts, at both main and subcontract levels.

ISO 10845-1 describes a number of techniques and mechanisms associated with targeted procurement procedures, all of which are designed to promote the participation of targeted enterprises and targeted labour in contracts. Key performance indicators (KPIs) relating to the engagement of enterprises, joint venture partners, local resources and local labour in contracts are needed to implement many of these procedures. ISO 10845-5 to ISO 10845-8 establish KPIs to measure the outcomes of a contract in relation to the engagement of target groups, and to establish a target level or performance for a contractor to achieve or exceed in the performance of a contract.

The ISO 10845 series only addresses parts of the procurement and delivery management system required for the delivery of construction works projects. It focuses on the characteristics of procurement processes, methods and procedures and the detail relating thereto, concentrating on the acquisition phase of procurement i.e. the areas which are commonly of greatest interest to regulators. The ISO 10845 series introduces the concept of procurement strategy for a particular procurement, provides a range of methods to solicit tender offers, but falls short of providing definitive guidance on the development of a procurement strategy and procurement tactics and ignores the funding options that are available.

There are a number of options relating to how construction works are funded and how design and interface responsibilities are allocated. There are also options relating to the different types of contracts that may be entered into during the life cycle of a project, how contractors are to be remunerated, how secondary objectives are to be promoted through a contract and how the market is to be approached to solicit tender offers. Such choices impact upon procurement and project outcomes.

This document provides guidance on the development of procurement strategy and the procurement tactics which are necessary to effectively implement a procurement strategy.

[Annex A](#) describes basic delivery management principles and practices which can inform decisions made regarding the options for engaging the market for new or refurbished construction works.

Construction procurement — Guidance on strategy and tactics

1 Scope

This document provides guidance on:

- a) options for engaging the market in satisfying a client's need for new or refurbished construction works;
- b) the development of procurement strategies for one or more projects involving the acquisition of goods, services or any combination thereof, irrespective of complexity, size, duration or life cycle stage;
- c) the formulation of procurement tactics which enable identified procurement strategies to be effectively implemented.

This document is applicable to the private sector, public sector or community organizations.

Note A client can be a project owner or an entity within a supply chain which contracts for goods and services.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

construction works

everything that is constructed or results from construction operations

[SOURCE: ISO 6707-1:2020, 3.1.1.1, modified — The US preferred term and notes to entry have been removed.]

3.2

framework agreement

agreement between a client and a contractor, the purpose of which is to establish the terms governing *orders* (3.3) to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged

[SOURCE: ISO 10845-1:2020, 3.17, modified — "employer" has been replaced by "client".]

**3.3
order**

instruction to supply goods, carry out *construction works* (3.1) and/or provide services under a *framework agreement* (3.2)

[SOURCE: ISO 10845-1:2020, 3.20]

**3.4
secondary procurement policy**

procurement policy that promotes objectives additional to those associated with the immediate objective of the procurement itself

[SOURCE: ISO 10845-1:2020, 3.30]

**3.5
stakeholder**

person, group or organization that has interests in, or can affect, be affected by, or perceive itself to be affected by, any aspect of the project

[SOURCE: ISO 21500:2021, 3.18, modified — "programme or portfolio" at the end of the definition has been removed.]

**3.6
value for money**

optimal use of resources to achieve intended project outcomes

Note 1 to entry: Optimal use of resources results in the most desirable possible outcomes given expressed or implied restrictions or constraints.

[SOURCE: ISO 10845-1:2020, 3.40]

4 Options for engaging the market for new or refurbished construction works

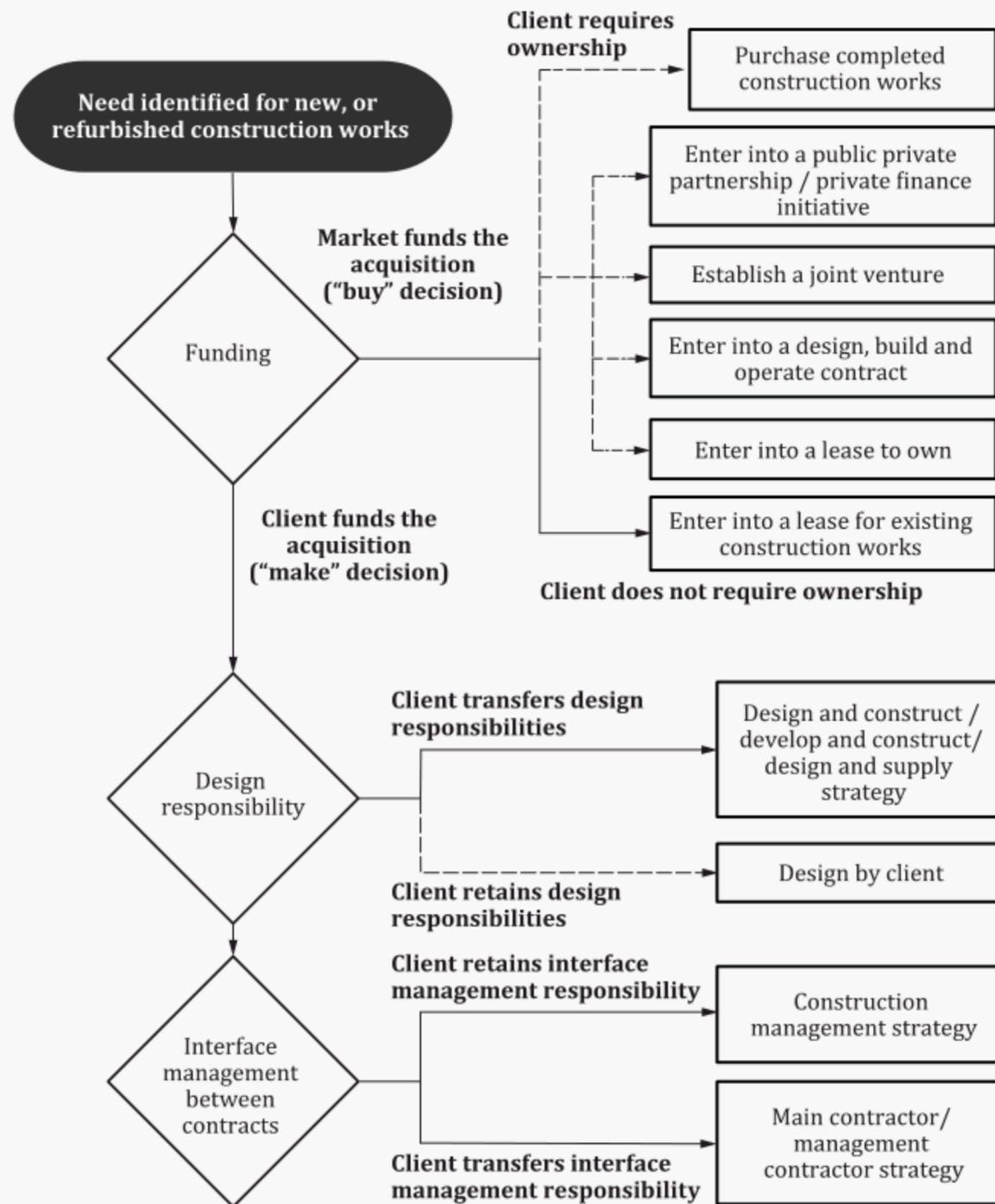
4.1 Concept

A client, where new or refurbished construction works is required, needs to answer basic questions relating to (see [Figure 1](#)):

- the financing of the project on a "buy" or "make" basis (see [4.2](#)), and
- if the decision is to "make", whether or not design responsibilities (see [4.3](#)) and / or responsibilities for the management of interfaces between direct contracts (see [4.4](#)) are to be retained or transferred.

This is an important decision as the choice of "buy" or "make" determines the number of contracts that need to be procured and directly overseen as well as the capacity and capabilities of the client delivery management team which needs to be put in place to oversee the delivery of the required construction works (see [Annex A](#)). It also informs the procurement strategies that are adopted (see [Clause 5](#)).

It may be necessary to perform certain feasibility studies and financial exercises including commercial, economic and fiscal feasibility prior to a contract being concluded. Strategies such as early contractor involvement, or where the other party to the contract is likely to subcontract most of the works, early supply chain involvement, may need to be pursued. It may also be important to engage in strategic collaboration to embed economic, social and environmental value and align expectations regarding practices such as those relating to health and safety and employment.



NOTE Clients appoint their own personnel or contract professional service providers to perform their allocated design and interface management responsibilities in the delivery process.

Figure 1 — Common options for engaging the market for new or refurbished construction works (“buy” or “make” decisions)

NOTE A structured approach has been developed in this document to deal with decisions and descriptions of procurement approaches. Rather than focusing on contracting methods, the distinguishing features of each have been identified in a way that leads to the answering of the six underlying questions relating to the following which explain how any specific project is being procured:

- source of funding e.g. owner-financed, public sector-financed, developer-financed, PFI, PPP;
- selection method e.g. negotiation, partnering, frameworks, selective competition, open competition;
- responsibility for design e.g. architect, engineer, contractor, in-house design teams, supplier;
- responsibility for co-ordination e.g. client, lead designer, principal contractor, joint venture, construction manager;
- price basis e.g. work and materials defined by bills of quantity, cost reimbursement, whole building, a fully-maintained facility, performance;
- supply chain integration e.g. single-source, integrated, fragmented, competitive, collaborative.

These questions derive from the differences between historical contracting methods and provide a basis for a systematic approach to the procurement strategy for future projects that will remain contextual despite new terms for different approaches being coined.

4.2 Financing of the project

It is possible that the source of funding is not an option as it can be a matter of policy or regulation for any given client.

The financing of the project on a “buy” basis requires the market to pay for the acquisition incrementally as the client pays only for completed work. Under this financing mechanism, the developer typically carries the cost of providing the required construction works and commonly receives payment either in the form of a lump sum, a monthly amount for the term of the contract or a percentage of the income stream following the completion of the project. The options commonly available to the client where the market funds the acquisition are indicated in [Table 1](#).

Table 1 — Options where the client requires the market to fund the acquisition

Client requirements	Options available to the client
Client requires ownership	Purchase completed construction works
	Enter into a public private partnership or a private finance initiative agreement
	Establish a joint venture
	Enter into a lease to own agreement
Client does not require ownership	Contract on a design, build and operate basis
	Enter into a lease for construction works

The parties to the contract can agree to share skills, technology and responsibility and transfer risks. Partnership arrangements can take on different forms to address issues such as spreading the cost of investment over the lifetime of the construction projects, greater predictability over cost and time, lowering of procurement costs, flexibility of programme delivery, performance incentives, potential to be off-balance sheet, ability of public sector to retain influence over strategic decisions, potential for continuous improvement through successive phases of work and early commercial input from private sector parties. Public sector partnering arrangements vary with the level of involvement and risk that the private entity holds in the arrangement with the public entity and how projects are financed. Partnership arrangements can range from simple collaboration to mitigate risks to the transfer of risks to the private party to the extent that this party puts its own capital at risk by funding its investment in the project with debt and shareholder equity. Partnership arrangements may also include the setting up of joint ventures to deliver specific projects, payment based on successful delivery, transferring of institutional function to the private party and permitting the private party to make use of public property.

The client’s involvement in the delivery management of a project where the market funds the project is generally limited (see [Annex A](#)). In procurements of this kind, a client may need to appoint a transaction advisor as the other party to the contract oversees or has already overseen the delivery of the project. A client nevertheless needs to undertake a procurement process or negotiate a contract to acquire the outcomes associated with the selected project delivery route. Furthermore, clients need to source some professional capacity to ensure that due diligence is undertaken at an appropriate level to confirm that the requirements of the contract are delivered in accordance with the terms of the contract.

The financing of the project on a “make” basis, on the other hand, requires the client to directly pay all contractors for the goods and services associated with the delivery of the project incrementally as the works proceeds. It also requires that the client play an active role in the delivery of the project as indicated in [Annex A](#) and to make decisions regarding the allocation of design and interface management responsibilities between the parties to a construction contract. A client needs to appoint professional service providers to undertake design and interface management responsibilities which it has retained,

where it lacks in-house professional expertise to assume these responsibilities. Accordingly, decisions made regarding responsibilities for design and interface management determine the nature and number of professional service agreements that are entered into.

Strategies and tactics appropriate to the selected option to engage the market need to be adopted to attain desired outcomes.

4.3 Design responsibilities

A client can retain design responsibility, in which case the contractor undertakes construction on the basis of production information issued by the client (design-by-client strategy). Alternatively, the client can assign design responsibility to the contractor in which case the contractor:

- designs the works based on requirements established by the client and constructs it (design-and-construct strategy) or provides a solution to the client's requirements and manufactures and installs the required works or component thereof (design-and-supply strategy); or
- completes the production information based on a scheme design provided by the client and constructs it (develop-and-construct strategy).

In the design-and-construct and develop-and-construct strategy, a client needs to have a capability to procure the necessary professional resources to develop the end-of-stage deliverables which form the basis of the scope of work for a contractor who is assigned design responsibilities. This is also necessary for the reviewing of the outputs of the contractor for general conformity with the scope of work and what has been agreed at each stage following the appointment of a contractor. A client may, to obtain continuity in aspects of the design, novate professional service providers to a contractor as a condition of contract e.g. mechanical design. (Novation is the substitution of a new contract in place of an old one or the substitution of one party for another party in a contract.)

[Table 2](#) indicates the appropriate usage of strategies involving different allocations of design responsibilities. The client is at risk for delays in production information where the client retains design responsibilities. The attractiveness of the assigning of design responsibilities to contractors is that there is single point responsibility for design and construction which overcomes fragmentation in design through integration. However, early contractor involvement (the practice of appointing a contractor before the design is complete) linked to a design-by-client strategy, possibly through a framework agreement, also enables construction knowledge, experience and inputs to be obtained earlier than normal to reduce costs, before the price for detailed design and construction is agreed. There are accordingly several options to achieve design integration and minimize waste through collaboration between designers and constructors.

4.4 Interface management responsibilities

A client can retain responsibility for managing interfaces between direct contracts in which case the client is responsible for the planning and managing of all post contract activities for work packages which have dependencies due to interfaces (construction management strategy). Alternatively, a client can assign interface responsibilities to a contractor who subcontracts parts of the work (main contractor strategy) or most of, if not all, the work to others (management contractor strategy).

Table 2 — Appropriate use of strategies involving design responsibilities

Strategy	Appropriate usage
Design by client	Where one or more of the following applies <ul style="list-style-type: none"> — the client wishes to make significant technical inputs into the design process and design details, — the client requires flexibility in the development of the design, — reasonable certainty in cost and time is required before a commitment to proceed to construction is made, — independent design advice is required, or — the flow of outstanding production information after the formation of the contract can be tightly managed.
Develop and construct	Where <ul style="list-style-type: none"> — the client requires integrated detailed design and construction, based on the client’s design development report, and single point responsibility, — standard designs exist which need to be made site specific, or — the works need to be priced and commence before the production information has been completed.
Design and construct	Where the client requires <ul style="list-style-type: none"> — integrated design and construction and single point responsibility, — that design risks lie with the contractor in return for price certainty, or — that the cost and completion date be agreed when a decision to proceed with the project is made.

5 Framework for developing a procurement strategy

5.1 General

A procurement strategy can be developed for a single project, a programme of projects or a portfolio of projects where the client funds the acquisition. It identifies the best way of achieving objectives and value for money for a single contract or a group of contracts linked to a project, while taking into account risks and constraints. Decisions regarding specific procurement strategies should only be made after the option to engage the market has been identified.

Different options in a procurement strategy carry different level of risk for the client. No one option is right for every project. For each situation, there are advantages and disadvantages in the use of any specific method. The client needs to carefully assess its project requirements, objectives and potential challenges and find the method that offers the best opportunity for success and achieving its value proposition (promise of value to be delivered) for the project.

The framework as set out in [Figure 2](#) enables choices to be made and aligned with procurement objectives in the development of a procurement strategy. The application of the framework can rationalize the delivery of projects within a programme or portfolio of projects and minimize the contractual relationships which are entered into. This can be used to address capacity constraints in spending public sector budgets as it reduces the number of contracts that need to be procured and managed and tap into the resources of the private sector without compromising objectives.

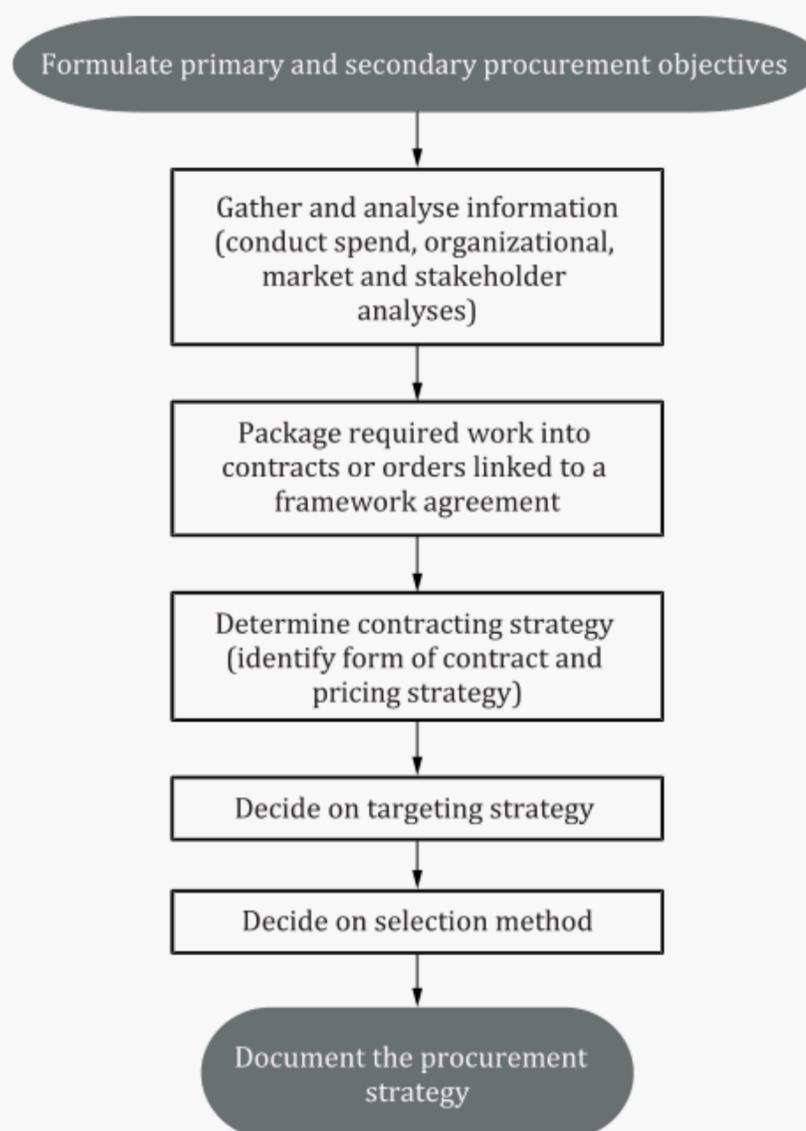


Figure 2 — Framework for the development of a procurement strategy

The application of the framework can also be applied in support of the delivery culture which the client wishes to pursue in delivering the project e.g. long-term collaborative relationship.

5.2 Strategic considerations

Procurement strategy is formulated around procurement objectives which may relate to either the delivery of the product (primary objectives) and what can be promoted through the delivery of the product (secondary objectives) i.e. broader societal objectives. Procurement strategy is also informed by spend, organizational, market and stakeholder analyses.

The option to engage the market needs to be decided upon where projects involve the provision, alteration, refurbishment or rehabilitation of construction works before procurement strategy can be formulated. Clients need to make decisions which include who funds the acquisition, who owns the construction works, which party to the contract assumes responsibility for the design of the works and interface management between contracts (see [Clause 4](#)) and how the parties will collaborate to manage the project.

The components of a procurement strategy for a particular procurement commonly includes the development of:

- a packaging strategy which focuses on the organization of work into contracts or orders issued in terms of a framework agreement;
- a contracting strategy which focuses on the selection of a suitable form of contract including the basis for remunerating contractors, which, if relevant, is informed by decisions made when selecting the option to engage the market;
- a targeting strategy which identifies the procedures for promoting secondary procurement objectives;

- a selection method which identifies the methodology by which tenderers are solicited from the market.

Procurement tactics on the other hand commonly relate to what needs to be done to successfully implement procurement strategies (see [Clause 6](#)).

5.3 Procurement objectives

Procurement strategy is formulated around procurement objectives which can relate to what needs to be delivered (primary objectives) or promoted in response to broader societal or organizational aspirations (secondary objectives) through the performance of a contract. Procurement objectives are informed by the client's values and value proposition for the project i.e. the promise of measurable benefits resulting from the project. During the development of a procurement strategy, primary objectives and secondary procurement objectives focus on what is aimed or strived for in the performance of a contract and informs choices made.

Primary procurement objectives relating to the delivery of goods or services or any combination thereof include:

- tangible objectives including:
 - budget (cost of the project), schedule (time for completion), quality, and performance characteristics required from the completed projects (see [Figure 3](#));
 - minimizing of disruption to existing users of construction works or the operation of facilities;
 - rate of delivery (how quickly portions of the works or a series of projects can be delivered or funds can be expended);
 - environmental, health and safety and maintenance and operational constraints;
- intangible objectives including those relating to:
 - buildability (the ease with which the designed works is constructed);
 - relationships (e.g. long-term relationships to be developed over repeat projects, early contractor involvement, integration of design and construction);
 - client involvement in the project;
 - end user satisfaction.

Secondary procurement objectives commonly relate to the promotion of sustainable development objectives such as:

- the alleviation and reduction of poverty through the provision of work opportunities to the vulnerable;
- improving the sustainability of small or local businesses;
- local economic development;
- the establishment and strengthening of indigenous building materials and methods;
- the promotion of construction technologies that increase employment;
- the transfer or development of skills;
- the minimization of the harmful effects of development on the local environment;
- the promotion of increased use of environmentally sound goods, building materials and construction technologies;

- the reduction of embodied and operational carbon.

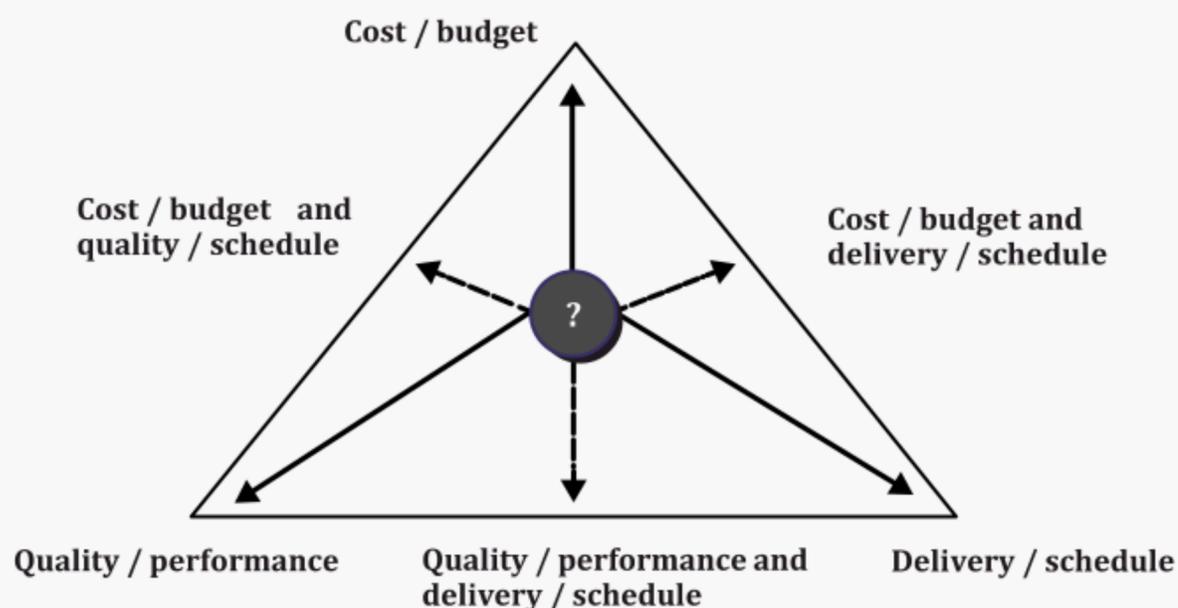


Figure 3 — Delivery / schedule, cost / budget and quality / performance triangle

Secondary procurement objectives can also relate to the redefining of business ownership patterns, the composition of the workforce, the distribution of employment opportunities and work opportunities for small and medium enterprises (see ISO 10845-1).

Secondary or developmental procurement objectives are additional to those associated with the immediate objective of the procurement itself. Secondary procurement policy objectives influence procurement strategies both directly and indirectly.

Primary objectives commonly relate to delivering the product whereas secondary procurement objectives commonly relate to the delivery process. Competing primary and secondary priorities need to be balanced. Trade-offs between priorities may be required.

NOTE Procurement objectives relate to that which is aspired to or promoted through the performance of the contract. Procurement objectives are different to requirements. For example, compliance with legislation is not an objective but a requirement which can be probed during the evaluation of tenders and confirmed during the performance of the contract. Legislation establishes minimum requirements for the construction works which are not necessarily sufficient for the client. Encouraging performance beyond levels of performance prescribed in law can be an objective.

5.4 Spend, organizational, market and stakeholder analysis

5.4.1 General considerations

A spend, organizational, market and stakeholder analysis provides a backdrop against which all decisions are made. Accordingly, such analysis should be in sufficient detail to enable informed decisions to be made, based on identified strengths and weaknesses and the client's appetite for transferring or accepting risks. Such an analysis should identify what internal skills, capabilities and resources are available or can be committed by the organization to deliver the project. Use of external expertise may be required.

5.4.2 Spend analysis

A spend analysis should be based on an infrastructure management plan, which for one or more projects identifies and prioritizes projects and packages against a forecasted budget and schedule, preferably over a period of at least three years. This involves, as relevant:

- the clustering of needs in terms of types of output e.g. construct an office block, refurbish a school, rehabilitate a waste water treatment plant;

- the categorizing of clusters of projects in terms of commonality in relation to the attributes such as:
 - nature of work e.g. the construction, rehabilitation, refurbishment, alteration or maintenance of buildings and or engineering works;
 - type of service e.g. construction only, design, construct and operate, construct and maintain;
 - unit value e.g. high, medium and low;
 - potential for standardization e.g. high, medium and low;
 - one-of-a-kind project or repetitive projects;
 - time schedule urgency e.g. high, medium, low;
 - organizational and managerial complexity in terms of the number of managerial interfaces or hierarchical layers either within an organization or project structure or stakeholders to be managed e.g. high, medium, low;
 - technical complexity or level of innovation, e.g. high, medium or low;
- the identifying of spatial locations of needs per clustered category;
- identifying needs which may occur simultaneously on the same site or within a region.

The outputs of the spend analysis are spatially located projects in an infrastructure management plan grouped into categories of spend with common attributes.

5.4.3 Organizational analysis

An organizational analysis involves the identification of the client's organizational capacity and capability as being limited, adequate or unlimited in respect of areas such as procurement, project management, design, construction and manufacturing.

The client's appetite needs to be tested for issues such as increasing capacity, putting new capabilities in place, assuming contractual risk, and transferring risk to other parties.

The output of the organizational analysis is a description of the client organizational characteristics and appetites.

5.4.4 Market analysis

A market analysis identifies at a macro level the available external capability and capacity as being limited, adequate or unlimited in respect of the various types of construction and professional services which may be required.

Subcontracting capabilities should also be considered and analysed.

The outputs of the market analysis are descriptions of the market characteristics.

5.4.5 Stakeholder analysis

Stakeholder expectations and interfaces should be identified as they need to be managed within the project or programme of projects by the client delivery management team (see [Annex A](#)).

A stakeholder analysis involves the identification and description of key project stakeholders.

5.5 Packaging strategy

5.5.1 Concept

Projects need to be broken down into one or more work packages, i.e. a deliverable or project work component or a group of tasks within a work breakdown structure. The work packages can then be programmed, resourced and managed, and where necessary, procured. Accordingly, a packaging strategy is the organization of work packages into contracts or orders issued in terms of a framework agreement over the term of such an agreement.

A supply chain frequently needs to be contracted and mobilized to provide the necessary professional services, manufacture and supply materials, products, components and assemblies, equipment and labour to provide the works. Accordingly, a project programme may need to be developed to an appropriate level of detail for the project's current level of maturity to ensure that anticipated project benefits are realized within the required time frames. Such a programme needs to reflect how each work package affects other work packages and to establish the logical relationships between each work package.

NOTE Framework agreements allow the client to procure work on an as-instructed (call-off) basis over a set term without necessarily committing to any amount of work. This can be achieved by issuing orders in terms of a framework agreement during the term of the contract, i.e. an instruction to provide works, goods or services within a stated period of time for an agreed price. Framework agreements do not bind a client to make use of such agreements to meet needs. The market can be approached for goods, services and works whenever better value in terms of time, cost and quality can be obtained. Framework agreements enable lessons learned in one order to be taken to the next order and enable a team to work together on an integrated approach over a period of time. They also enable performance, including that of promoting secondary objectives, to be improved upon over time.

5.5.2 Framework or non-framework agreements

Framework agreements (see ISO 10845-1) reduce the client's need to re-advertise and approach the market for work falling within the scope of the agreement over the term of the agreement and the number of relationships to be managed. They also provide client delivery management teams (see [Annex A](#)) with programming flexibility to manage expenditure relating to the delivery of projects over time and enable collaborative relationships to develop to deliver better value and project outcomes, including those relating to the promotion of secondary procurement objectives. They also provide an opportunity for contractors to improve their internal management systems, develop their supply chains and improve their performance in delivering projects including their attainment of secondary procurement goals, during the term of the contract, through continuity of work over a longer term than is the case in non-framework contracts.

Framework agreements are appropriate where the available budgets and the detailed scope of work are uncertain, the need for goods or services involves repetitive work of a similar nature over a period of time, a quick response time is required, or long-term relationships (e.g. to 5 year) are desirable to achieve efficiencies or desired project outcomes. They also are appropriate where the client wishes to foster collaborative relationships and wishes to move away from a delivery model based on a series of isolated, highly transactional relationships.

The number of packages within a project, a programme of projects or a portfolio of projects establishes the number of contractual relationships which the client delivery management team have to put in place, oversee and administer. Accordingly, the packaging strategy determines the amount of resources that a client requires to perform client delivery management team functions (see [Annex A](#)).

5.5.3 Identifying work packages

The scope and nature of the work package determines the resources that are required. This in turn determines the capabilities and capacities of companies that are contracted to deliver a work package. Accordingly, the packaging strategy has a significant impact on who is qualified to deliver the work package. Too big a work package can, for example, exclude small local companies or even national

companies from providing the goods, services or works or necessitate that companies form joint ventures to deliver the package.

Projects should only be broken down into smaller contracts (unbundled) when there is administrative capacity to administer the increased number of contracts or orders that result from the unbundling of the project, management arrangements are in place to deal with the management of interfaces between contracts, and the unbundling does not result in an inappropriate division of responsibilities, increased contractual risk, duplication of establishment charges and under-utilization of resources. An alternative approach to unbundling is to require main contractors to 'unpack' their contracts into smaller contracts using targeted procurement procedures linked to key performance indicators such as those established in terms of ISO 10845-5, ISO 10845-6 or ISO 10845-7. Such procedures require contractors to procure the services of smaller businesses to perform portions of such contracts and to administer them and, in so doing, remove this responsibility from client. This approach can be used to secure local participation in contracts (see ISO 10845-1).

Work packages may be grouped together and combined or broken down into several sub-packages when developing a packaging strategy. For example, work packages involving similar or different types of work may be grouped together and delivered through a single contract or order issued in terms of a framework contract e.g. construction and maintenance work or buildings and sport fields on a single site, design and construction services or architectural and engineering professional services.

The factors that inform the packaging of work packages into contracts and orders include:

- the options which are adopted to engage the market is decided upon;
- interfaces between packages;
- disruptions to the operation or functioning of existing facilities;
- enabling the use of different conditions of contract to suit the different elements of work;
- interdependencies between projects and programmes;
- opportunities for long-term relationships for collaboration including the need for early contractor involvement;
- interface management considerations including those associated with boundaries between or overlaps in geographic areas, facilities, responsibilities or scopes;
- avoidance of unincorporated joint ventures to perform contracts;
- discipline-specific, professional services or multidisciplinary professional services with single point responsibility;
- the need for long-lead items which can delay projects if they are not sourced early in the delivery cycle;
- organizational and managerial complexities;
- economies of scale;
- mitigating project risk including the risk of delivery;
- risk allocations and risk appetite for being at risk for budget and schedule overruns;
- programming (scheduling) requirements;
- attractiveness to markets;
- matching contractor skills and capabilities;
- commissioning requirements including the need for early hand over enabling follow-on contracts;

- client delivery management considerations e.g. capability and capacity to provide the required oversight management of projects which collectively deliver strategic objectives and realize anticipated benefits;
- client delivery management structure to provide effective leadership to projects;
- capability or capacity of client delivery management team to procure and brief delivery teams, pay contractors, account for expenditure and manage interfaces between contracts;
- secondary procurement policy objectives e.g. participation of target groups and local economic development / content.

The sequencing of projects of a similar nature and the spatial location of projects can inform decisions regarding framework agreements where continuity of work is a consideration.

5.6 Contracting strategy

5.6.1 Concept

The fundamental exchange between a client and a contractor is the delivery of work in accordance with stated requirements for a price. A contracting strategy is the strategy that governs the nature of the relationship which the client wishes to foster with the contractor, which in turn determines the risks and responsibilities between the parties to the contract and the methodology by which the contractor is to be paid.

Inherent risks can be transferred or accepted. In some instances, insurances can be taken out to cover risks e.g. as a hedge against adverse currency exchange rate fluctuations or to cover storm damage to the works. The focus in the distribution of risk is, however, on the payment and responsibility for the cost of the risk event should it materialize. The contractor tries to limit liability in contracts to a foreseeable figure. The client needs to bear in mind that increasing the risk borne by the contractor inevitably increases the price of the contract.

5.6.2 Standard forms of contract

Standard forms of contract provide fixed terms and conditions which are deemed to be agreed and are not normally subject to further negotiation or amendment following the receipt of tenders. Such forms of contract usually include the method of payment and allocate risks to the parties and how the contractor is compensated for risks for which he is not at risk should they materialize.

The use of standard forms of contract assists in reducing both tendering and contract administration costs. Bespoke or substantially amended standard forms of contract require tenderers and clients alike to seek legal or specialist advice in preparing and interpreting such documents. Such forms of contract can lead to risk pricing to cover uncertainties and increase the risk of disputes arising from unfamiliar provisions. Accordingly, they should only be used where they demonstrably provide greater value for money.

5.6.3 Selecting a suitable standard form of contract and pricing options

The selection of a standard form of contract for a construction works related project is made by the client, particularly where competitive tenders are called for. The scope and nature of the project affects the selection of the type of contract as indicated in [Table 3](#).

Some standard forms of contract are drafted around specific contracting strategies, such as design by employer with bills of quantities, and as such do not offer flexibility in the allocation of risks. Other standard forms of contract, as do families of standard contracts, cover the full range of risk allocations and pricing strategies and permit flexible allocations of risk (see [Table 4](#) and [Figure 4](#)).

The selected standard form of contract needs to support the selected contracting strategy. If not, bespoke contracts or modifications to the standard forms of contract need to be drafted to enable the selected contracting and pricing strategy to be implemented.

Early contractor involvement in construction contracts, with or without design responsibilities, can be achieved through the selection of a cost-based pricing strategy. For example, a contractor can be appointed on a target contract basis whereby the contractor can be contracted on the basis of their cost parameters and a target cost can be negotiated when there is sufficient production information available to agree a target cost. Escape clauses can be inserted into design and construct contracts to enable the client to use the designs and approach the open market in the event that agreement cannot be reached regarding the target cost.

Table 3 — The scope and nature of different types of standard contracts

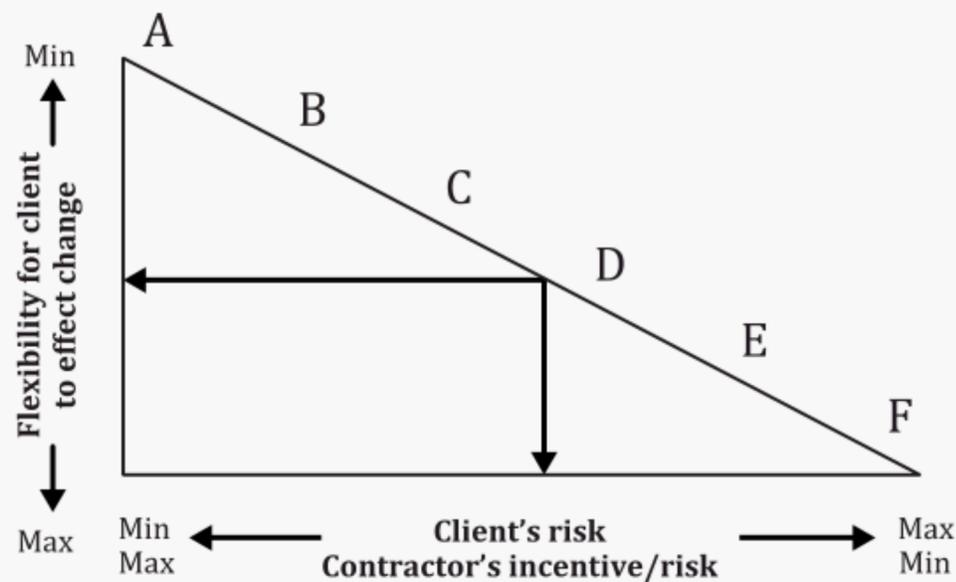
Type of contract	Scope and nature of the project
Construction contract	Construct, alter, refurbish or rehabilitate construction works on a site including any level of design responsibility. The contractor is generally responsible for loss of or damage to the works from the time that access is granted to provide the works until the works are completed and taken over by the client
Design, build and operate contract	Design, build and operate or maintain construction works over a defined period of time
Professional service contract	Provide construction works related services with the skill and care normally used by professionals providing services similar to the required services
Service contract	Manage and provide a construction works related service other than a professional service or maintain construction works and plant in an existing state, typically over a term, which may involve a modest amount of improvement through renewal and replacement
Supply contract	Supply local and international construction works related goods and provide any associated services, if any, including design

Table 4 — Common pricing options included in contracts

Pricing strategy	Description
Price-based	
Activity schedule	Contract in which the scope of work is broken down into activities, which may be required to be linked to a programme, method statements and resources, and each activity is priced as a lump sum, which is paid on completion of the activity. The total of the activity prices is the lump sum price for the contract work
Bill of quantities (construction contract only)	Contract in which a bill of quantities lists the items of work and the estimated or measured quantities and rates associated with each item to allow contractors to be paid, at regular intervals, an amount equal to the agreed rate for the work multiplied by the quantity of work actually completed (A bill of quantities is prepared in accordance with a standard system of measurement. The contractor is not at risk for increases in quantities and mistakes in compiling the bill of quantities such as omissions, departures from the rules of measurement, ambiguities and inconsistencies)
Lump sum	Contract in which a contractor is paid a lump sum to provide the works, goods or services (Interim payments which reflect the progress made towards the completion of the works, goods or service may be made)
Price list or price schedule	Contract in which a contractor is paid the price for each lump sum item in the price list or schedule that has been completed and, where a quantity is stated in the price list or schedule, an amount calculated by multiplying the quantity which the contractor has completed by the rate (Lump sum contract where the contractor is not at risk for increases where quantities are stated)

Table 4 (continued)

Pricing strategy	Description
Cost-based	
Cost reimbursable	Contract in which the contractor is paid for his allowed costs plus a fee which includes his profit, and company overheads
Cost plus	Contract in which the contractor is paid for his actual expenditure plus a percentage or other agreed sum which includes his profit and company overheads
Target cost	Cost reimbursable contract in which a target price is estimated and on completion of the works or services the difference between the target price and the actual cost is apportioned between the client and contractor on an agreed basis
Time-based	Contract in which the contractor is paid for his time expended at agreed staff rates which include overheads and profit
Percentage of cost of construction	Contract in which the contractor is paid a fee, based on a percentage of the cost of the works or a portion thereof
Performance-based	
Performance metrics	Contract in which payment is made against specific and measurable levels of operational performance as agreed



Key

- A lump sum / activity schedule / performance metric
- B bill of quantities
- C price list / price schedule
- D target cost
- E cost plus / percentage of construction cost
- F cost reimbursable / time-based

Figure 4 — Client’s risk and flexibility to effect scope changes in different pricing strategies

5.7 Targeting strategy

5.7.1 Concept

A targeting strategy is a strategy used to promote secondary procurement objectives. A targeted procurement procedure is the process used to create a demand for the services or goods of, or to secure the participation of, targeted enterprises and targeted labour in contracts in response to the objectives of a secondary procurement policy. There are a number of targeted procurement procedures which can be used to promote secondary procurement objectives as indicated in Table 5. ISO 10845-1 provides comprehensive guidance on the application of targeted procurement procedures.

Supply side measures may need to be put in place to enable targeted enterprises and targeted labour to participate in contracts. Measures to overcome barriers to competing for tenders or for participating in procurements within the supply chain can include access to bridging finance, securities, mentorship and capacitation workshops. Measures to overcome barriers to employment on projects can include skills training, the provision of child-care facilities and the provision of transport to the site.

5.7.2 Key performance indicators

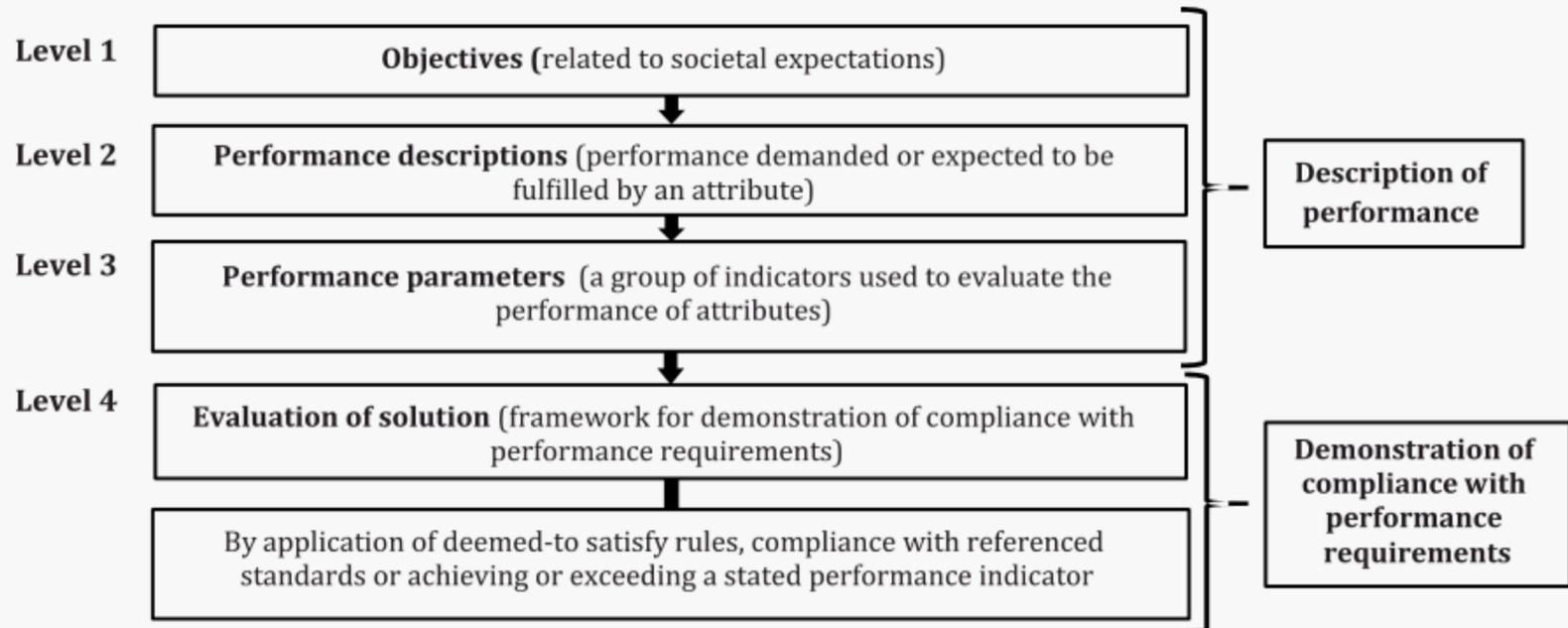
Key performance indicators (KPIs) in the form of quantitative or qualitative measures of impacts or changes that may be beneficial which relate directly to secondary procurement objectives (desired results) need to be formulated. Such indicators need to be formulated in such a manner that they are contractually enforceable. They need as such to be described in qualitative terms and to be linked to measurable and quantifiable targets and be provided with a means of verifying and auditing claims regarding performance in relation to the target. [Figure 5](#) provides a four-level model for specifying KPIs relating to secondary procurement objectives, based on the provisions of ISO 19208. A performance parameter in terms of this model may be regarded as a KPI.

[Table 6](#) illustrates the structure of a performance standard relating to the participation of target groups in contracts as provided for in some parts of the ISO 10845 series. The objective (level 1) of ISO 10845-4, ISO 10845-6, ISO 10845-7 and ISO 10845-8 focuses on different aspects of the participation of target groups in a contract ([Table 6](#)). Each of these standards establishes qualitative (level 2) and quantitative (level 3) requirements in relation to the objective (level 1) and how credits towards the contract participation goal can be obtained. They also establish the means for verifying and auditing the attainment of the contract participation goals (KPIs).

[Table 7](#) provides examples of other KPIs (performance parameters) where bespoke documents need to be drafted to enable solutions to be evaluated.

Table 5 — Targeted procurement procedure options

Targeted procurement procedure	Outline of procedure
Granting of tender-evaluation points	Tender-evaluation points for contract-specific goals are granted to tenderers who undertake to achieve a specified KPI in the performance of the contract
Accelerated rotations on electronic databases	Target groups are identified and accelerated at a faster rate than non-target groups on electronic databases linked to the nominated procurement procedure
Granting of a percentage of the total number of evaluation points used to short-list tenderers following a call for expressions of interest	A point scoring system is used to shortlist respondents following a call for expressions of interest in the qualified procedure, a percentage of the total points on offer are linked to the attainment of KPIs
Financial incentives for the attainment of key performance indicators in the performance of the contract	An incentive payment is linked to the improvement upon or attainment of a KPI in the execution of a contract
The creation of contractual obligations to engage target groups in the performance of the contract by establishing requirements for the tendering of subcontracts in terms of a specified procedure or establishing obligations to attain contract participation goals in accordance with the relevant provisions of the ISO 10845 series	Contractors can be required, as a contractual obligation, to subcontract a percentage of the work to targeted enterprises or contract goods or services from targeted enterprises. They may also be required to enter into joint ventures with targeted enterprises or engage targeted labour in the performance of a contract. This can most readily be achieved by requiring contractors to archive a minimum contract-participation goal in accordance with the requirements of ISO 10845-5, ISO 10845-6, ISO 10845-7 or ISO 10845-8 Alternatively, contractors may be required to subcontract specific portions of a contract to targeted enterprises



NOTE An attribute is a characteristic assessed in terms of whether it does or does not meet a given performance (performance is the impact on economic conditions, the environment, society or quality of life).

Figure 5 — Four level model for the specifying of key performance indicators (KPIs) relating to secondary procurement objectives

Table 6 — Performance framework for the engagement of target groups in contracts

Aspect of performance	Participation of targeted enterprises in contracts	Participation of targeted partners in joint ventures in contracts	Participation of local enterprises and labour in contracts	Participation of targeted labour in contracts
Level 1: Objective	Provide business opportunities to specified targeted enterprises	Provide joint venture partner opportunities to specified target groups	Provide business and employment opportunities to local enterprises and targeted labour	Provide employment opportunities to specified targeted labour
Level 2: Performance descriptions	Engage targeted enterprises directly or indirectly	Enter into a joint venture agreement at a main contract level with one or more targeted partners	Engage targeted labour and targeted enterprises directly	Engage targeted labour directly
Level 3: Performance parameters	The contract participation goal (value of goods, services and works for which the contractor contracts targeted enterprises expressed as a percentage of the contract amount) is not less than . . .%	The contract participation goal (sum of the participation parameters in respect of each targeted partner multiplied by the contract amount of the contract, expressed as a percentage of the contract amount) is not less than . . . %	The contract participation goal (amount equal to the sum of the wages and allowances for which the contractor contracts to engage targeted labour and the value of goods, services and works for which the contractor contracts targeted enterprises, expressed as a percentage of the contract amount) is not less than . . . %	The contract participation goal (sum of the wages and allowances expressed as a percentage of the contract amount) is not less than . . .%
Level 4: Evaluation of solution	Apply the relevant provisions of ISO 10845-5	Apply the relevant provisions of ISO 10845-6	Apply the relevant provisions of ISO 10845-7	Apply the relevant provisions of ISO 10845-8

Table 7 — Examples of KPIs and their definitions

KPI	Definition of KPI
Contract local direct employment goal	The percentage of the total number of equivalent person days worked by people employed by the contractor or a subcontractor within the site who are local people
Contract skills development goal	The number of hours of skills development opportunities that a contractor contracts to provide in relation to work directly related to the contract or order up to <ul style="list-style-type: none"> — completion in the case of a professional service contract, — the end of the service period in the case of a service contract, — completion in the case of construction contract, and — the delivery date for all the work required in terms of a supply contract
Local content goal	The portion of the tendered price which is not included in the imported content

5.8 Selection methods

A selection method is the procedure used to solicit a tender offer with a view to entering into a contract for goods or services or any combination thereof with the successful tenderer. The range of commonly encountered selection methods are indicated in [Table 8](#). ISO 10845-1:2020, Annex F provides information on their appropriate usage.

Table 8 — Options for selection methods

Procedure	Description	
Negotiation procedure	A tender offer is solicited from a single tenderer	
Competitive selection procedure (Any procurement procedure in which the contract is normally awarded to the contractor who submits the lowest financial offer or obtains the highest number of tender-evaluation points)	Nominated procedure	Tenderers that satisfy prescribed criteria are entered into an electronic database. Tenderers are invited to submit tender offers based on search criteria and, if relevant, their position on the database. Tenderers are repositioned on the database upon appointment or upon submission of a tender offer
	Open procedure	Tenderers may submit tender offers in response to an advertisement by the client to do so
	Qualified procedure	A call for expressions of interest is advertised and thereafter only those tenderers who have expressed interest, satisfy objective criteria and who are selected to submit tender offers, are invited to do so
	Quotation procedure	Tender offers are solicited from not less than three tenderers in any manner the client chooses, subject to the procedures being fair, equitable, transparent, competitive and cost-effective
	Proposal procedure using the two-envelope system	Tenderers submit technical and financial proposals in two envelopes. The financial proposal is only opened should the technical proposal be found to attain the minimum threshold score
	Proposal procedure using the two-stage system	Non-financial proposals are called for. Tender offers are then invited from those tenderers that submit acceptable proposals based on revised procurement documents. Alternatively, a contract is negotiated with the tenderer scoring the highest number of evaluation points
Confined market procedure	Tenders are invited from a very limited number of contractors who are able to provide goods, services or works which are not freely available in the market, or which are provided solely for the client in accordance with unique requirements	

Table 8 (continued)

Procedure		Description
Competitive negotiation procedure (A procurement procedure which reduces the number of tenderers competing for the contract through a series of negotiations until the remaining tenderers are invited to submit final offers)	Restricted competitive negotiations	A call for expressions of interest is advertised and thereafter only those tenderers who have expressed interest, satisfy objective criteria and who are selected to submit tender offers, are invited to do so. The client evaluates the offers and determines who may enter into competitive negotiations
	Open competitive negotiations	Tenderers may submit tender offers in response to an advertisement by the client to do so. The client evaluates the offers and determines who may enter into competitive negotiations

5.9 Documenting a procurement strategy

The compiler of a procurement strategy should identify and document the advantages and disadvantages in the different options available to be able to make informed decisions, taking into account the stated primary and secondary procurement objectives and the outcomes of the various analyses that are undertaken.

The factors that influence decisions made in determining a procurement strategy can compete against each other. Factors may need to be weighted and scored to arrive at the optimum option.

The procurement strategy that is decided upon for a particular procurement or category of procurement needs to be documented in such a manner that the logic behind the choices that are made at each step can be communicated to and reviewed by others. It should also summarize the decisions made in respect of the component strategies in respect of each contract or group of contracts as indicated in [Table 9](#).

In the case of construction contracts, it may be appropriate to also indicate the design and interface management strategy as indicated in [Table 10](#).

Table 9 — Headings and illustrative content of a documented strategy for a particular contract

Aspect of strategy	Comments
Packaging strategy	brief description of package framework / non-framework+
Contracting strategy	contract type: construction / design, build and operate / professional service/ service / supply+
	standard form of contract: bespoke / [name standard form of contract e.g. FIDIC Red Book]+ pricing strategy: price-based (activity schedule / bill of quantities / lump sum / percentage of cost of construction / price list / price schedule) / cost-based (cost plus / target cost / time-based)/ performance-based+
Targeting strategy	granting of tender-evaluation points / accelerated rotations / evaluation points in expressions of interest / financial incentives / creation of contractual obligations+#
Selection method	negotiation procedure / competitive selection procedure (nominated / open / qualified / quotation / proposal using a two-envelope system / proposal using a two-stage system / confined market procedure) / competitive negotiations (restricted / open) / order issued in terms of a framework contract+
Key	
+ delete options which do not apply	
# describe so that readers understand the essence of the strategy and the KPI that is promoted	

Table 10 — Additional information for construction contracts

Aspect of strategy	Comments
Design and interface management strategy	design strategy: design by client / develop and construct / design and construct / design and supply+ interface management strategy: construction management / management contractor / general contractor+
Key	
+ delete options which do not apply	

6 Tactics

6.1 Concept

Procurement tactics are required to successfully implement procurement strategies and in so doing improve project outcomes. They also impact upon the cost effectiveness of specific procurement transactions.

Procurement tactics commonly relate to:

- the publicity to attract the right level of interest from the market;
- the sequencing and timing of the issuing of tenders and orders;
- the setting up of procurement documents to solicit tender offers and to enter into contracts, focusing on the selection of a contractor (the other party to a contract) who is most likely to provide the most advantageous combination of factors such as financial offer, quality and expertise to meet procurement objectives or deliver a cost-effective solution through the performance of the contract and the setting up of the terms and conditions of contracts to not only allocate specific risks between the parties to a contract but also incentivize performance to achieve best results.

6.2 Publicity

Clients should alert markets through open and transparent processes to the opportunities presented by a project well in advance of the project, particularly where the project is large and complex. Market engagement may take many forms, including supplier conferences and newsletters. Communications with potential tenderers (including key subcontractors) should commence well before the embarking on procurement processes. Clients should in such communications provide a clear understanding of what their core business activities and strategies are to enable contractors, who carry out their own research, to match their tenders to client requirements.

Advertisements should be placed in a medium that enables a wide spectrum of suitably qualified and eligible tenderers (target market) to access the opportunities that are presented. Advertisements should enable prospective tenderers to make informed decisions regarding the attractiveness of the tender opportunity.

6.3 Procurement planning and sequencing

It is critically important to plan the sequencing and timing of the procurement of work packages and the issuing of orders in terms of a framework agreement, particularly where there are interdependencies and interfaces between work packages forming part of a project. Sufficient time should be built into the overall programme to allow for all planning stages to be fully completed (both before construction starts and during the progressing of the project). Good planning should include getting the construction sequence right, assessing and managing project risks and using value management to assess the contribution of each part of the construction process to improve the likelihood of achieving the project objectives and value for money (see [Annex A](#)) and to minimize the likelihood of delays, extra costs and waste/inefficiency.

The procurement process should not be rushed. Rushing it can lead to inadequate preparation by the client or insufficient time for tenderers to consider, research and refine their submissions. This can result in a failure to achieve value for money.

Consideration also needs to be given to the timing of procurement processes. Issues such as the following may need to be considered when planning the advertisement date for tenders:

- seasons and industry holiday or shutdown periods;
- the current volume of work of a similar nature that has been put out to tender;
- the client's procurement approval requirements at control points (see ISO 10845-1:2020, Annex E) leading to the award of a contract or the issuing of an order in terms of a framework agreement;
- the workload on those responsible for processing submissions; and
- the current economic cycle which may impact on the market's interest in submitting tenders.

A procurement plan should be produced to indicate the planned workload for all procurement processes within a project or programme over at least a one-year horizon to enable resources to be allocated to process the proposed procurements in accordance with the various project programmes.

6.4 Setting up of procurement documents

6.4.1 General

Tactics are applied in the formulation of submission data, tender data, contract data and the pricing data associated with a contract (see ISO 10845-2) to secure a suitable contractor to deliver the required goods and services of an acceptable quality at a reasonable outturn cost (cost post-execution of the contract), while being mindful of life cycle costs.

6.4.2 Tactical variables associated with the process of offer and acceptance

The tactical variables included in the standard conditions for calling for expressions of interest and the standard conditions of tender contained in ISO 10845-4 and ISO 10845-3, respectively, are indicated in [Table 11](#). Tactics should be directed towards the selection of a contractor who is most likely to provide the most advantageous combination of factors such as financial offer, quality and expertise to meet procurement objectives through the performance of the contract, life cycle costs of what is offered, the availability of spares, operation and maintenance requirements.

Time and effort are required by interested parties in responding to requests for expressions of interest and making tender submissions. The amount and type of information requested for return by clients should be appropriate and not be overly elaborate.

Tender assessment schedules may be required to reduce tender offers transparently to a comparative basis, particularly where pricing parameters are tendered which allow the price to be developed once the work is identified using a cost-based pricing strategy or to determine the cost of changes in requirements or events for which the contractor is not at risk.

NOTE A tender assessment schedule, correctly formulated, allows all tendered parameters to be assessed and taken into account in the evaluation of tenders on a comparative basis; for example, the total of prices and the fee / profit and company overhead percentages tendered and other tendered rates are combined so that the impact on price of each of these parameters are capable of being compared on a comparative basis. This is usually performed in terms of a mathematical expression – see ISO 10845-1 and ISO 10845-3.

6.4.3 Identification of a suitable standard form of contract

Standard forms of contract are drafted around significantly different objectives and principles, e.g. master-servant relationships or collaboration between two experts, risk sharing or risk transfer,

independent or integrated design, short-term relationships based on one-sided gain or long-term relationships focused on maximizing efficiency and shared value.

Delivery processes for construction works can be loosely described as either being “traditional pre-planned” or “collaborative”. Traditional pre-planned approaches commonly involve detailed designs and specifications being prepared to allow procurement to proceed on the basis of the lowest price with or without an adjustment for a preference, once the scope of work has been developed and is capable of being measured and priced. This method works well for simple well-defined projects where the process of offer and acceptance is straightforward. In such approaches, the range of tactics which may be employed is low.

Table 11 — Examples of tactical variables included in standard conditions for the calling for expressions of interest or tenders

Standard conditions	Example of tactical variables	Commentary
Conditions for the calling for expressions of interest (see ISO 10845-4)	Eligibility criteria	Eligibility criteria can be used to <ul style="list-style-type: none"> — introduce minimum qualification or pre-qualification criteria to screen out unsuitable respondents prior to the evaluation of submissions on a compliance / non-compliance basis, or — allow capability and capacity to deliver the required goods, services and construction works to be evaluated in two stages or to be omitted in the evaluation of tender offers during the second stage.
	Clarification meetings	Clarification meetings can be used to interact with and to communicate specific requirements, innovations etc. associated with a procurement to respondents and to familiarize potential tenderers with unusual or not well understood procurement strategies
	Procedure for the evaluation of submissions	Respondents can be evaluated in terms of their capability and capacity to perform the contract in terms of a scoring system, with or without minimum qualifying thresholds, to reduce the number of respondents invited to submit tenders (usually not less than three) to make the tender process more manageable and attractive to prospective tenderers The scoring criteria can be formulated in such a manner so as to favour those respondents who are most likely to contribute to the client’s objectives for the procurement

Copyright International Organization for Standardization

Table 11 (continued)

Standard conditions	Example of tactical variables	Commentary
Conditions of tender (ISO 10845-3)	Eligibility criteria	Eligibility criteria can be used to introduce minimum qualification or pre-qualification criteria to screen out unsuitable tenderers prior to the evaluation of submissions on a compliance / non-compliance basis
	Compensation of tenderers for preparing aspect of the tender	Incentives for quality submissions can be provided, e.g. the awarding of cash prizes in design competitions or the payment of a lump for submitting a tender where tenderers are required to design the proposed construction works
	Clarification meetings	Clarification meetings can be used to interact with and to communicate specific requirements, innovations etc. associated with a procurement to tenderers and to familiarize tenderers with unusual or not well understood procurement strategies
	Alternative tender offers	Main tender offers are not required to be submitted together with alternative tenders. This can be used to encourage innovation in certain circumstances
	Tender submission	Tenderers may be permitted to offer parts or the whole of the goods and services that are solicited. This can be used to make the contract more attractive to smaller or specialist contractors who may not be able to provide the full range of goods and services that are required
	Procedure for the evaluation of responsive tenders	Tender offers can be evaluated in terms of two or three variables, namely financial offer, preference and quality in terms of a points scoring system which include weightings to weight the relative importance of the evaluation criteria and sub-criteria (see ISO 10845-1 and ISO 10845-3) Minimum quality thresholds can be set to ensure that tenderers who are evaluated satisfy a minimum acceptable quality threshold and therefore compete on a "level playing field" basis
	Reducing tender offers to comparative offers	The reduction of tenders to a common basis can be based on life cycle costs e.g. the cost divided by the service life (see ISO 10845-1 and ISO 10845-3)

Traditional pre-planned procurement often seeks to offload considerable risks on the supply chain through standard prescriptive terms. This transfer of risk is priced by contractors and incorporated into their tender sums. A collaborative approach allows the parties to negotiate both value-and-cost efficient solutions in relation to these risks. Risks can be identified more readily within an integrated team working together on a project, and risk can be discussed more openly with a greater emphasis on mitigation. Clients may wish to retain certain risks to benefit from lower tendered sums. Collaborative contracts require a number of tactical decisions to be made to enable the contract to not only allocate specific risks but also to incentivize performance to achieve best results.

Teamwork can overcome problems or difficulties which are encountered. Teamwork applies just as much to the internal relationships between the members of the client's in-house staff as well as to the working relationships between members of the client delivery management team and those of the delivery team. Standard forms of contract can be drafted around significantly different objectives and principles. Some forms of contract are drafted on a collaborate working contracting basis, based on the belief that collaboration and teamwork across the whole supply chain optimizes the likely project outcomes. The choice of a standard form of contract is accordingly a tactical decision. The choice also needs to be informed by the organizational culture.

6.4.4 Specific conditions of contract

The tactical issues that may need to be considered in the conditions of contracts for a procurement include:

- caps on liability and the exclusion of certain types of losses, e.g. limiting professional liability, to make contracts more attractive to the market;

- ownership of intellectual property;
- guarantees and appropriate bonds;
- advance payment to allow contractors to purchase, buy or mobilize items of equipment before commencing with construction;
- measures to hedge the impact of currency fluctuations;
- incentives to encourage superior performance;
- non-collusion clauses and/or certificates of independent bids and reciprocal anti-bribery agreements;
- in complex construction contracts, the selection of subcontractors on behalf of the client to harness the design and installation skills of specialist trade contractors.

6.4.5 Approaches to achieve quality

Quality can be regarded as the totality of features and characteristics of a product or service that bears on the ability of the product or service to satisfy stated or implied needs. The satisfying of stated needs can be viewed as compliance with requirements or specified performance whereas compliance with implied requirements can be viewed as the degree of excellence. Quality includes aesthetics, robustness, durability, maintainability, user comfort, environmental sustainability and life cycle costs as well as the delivery of a product or services within an agreed time and cost.

The manner in which quality can be addressed through procurement documents, in addition to the full and unambiguous specification of requirements in the scope of work (see ISO 10845-2:2020, Annex D), includes:

- a) inviting tenderers who responded to a call for an expression of interest and who satisfy objective criteria to submit tender offers i.e. apply the qualified selection method as described in ISO 10845-1;
- b) introducing quality considerations into the eligibility criteria e.g. requirements for ISO 9001 (quality management systems), ISO 14001 (environmental management systems) ISO 45001 (occupational health and safety (OH&S) management system) certification, prior experience in completing contracts of a similar nature, requiring tenderers to submit plans for monitoring and applying quality management principles in the performance of their contracts and demonstration of financial standing and capability;
- c) establishing a category of preference for quality in the evaluation of tenders, e.g. ISO 9000 (quality management systems), ISO 14001 (environmental management systems) ISO 45001 (occupational health and safety (OH&S) management system) certification;
- d) evaluating selected quality criteria as an integral part of the tender offer (see [6.4.6](#));
- e) taking cognizance of whole-life costing in the financial evaluation of tender offers e.g. reducing tender offers to a common basis by dividing price by service life (see ISO 10845-3);
- f) establishing common requirements for managing information over the whole life cycle of construction project using building information modelling (BIM) (see ISO 19650-1 and ISO 19650-2).

Quality measures should not promote captive markets and should result in quality that is appropriate to comply with user requirements as opposed to the best quality available.

6.4.6 Cost-effective procurement

There is a delicate balance between paying too much for a procurement transaction and paying too little and run the risk of obtaining an inferior procurement outcome or a product that is not capable of performing as intended. There is accordingly a need for a mechanism to differentiate the quality of what is being offered in the tender process. It is necessary to consider matters that form an integral part

of the tender offer that cannot be directly expressed in monetary terms alongside the financial offer to improve procurement outcomes, including outturn or final project costs, and to determine the most economically advantageous offer or the offer that represents the best return on the investment. Such a mechanism needs to provide those tasked with the evaluation of tenders with a means for making a reasoned judgement in this regard in a fair, transparent and accountable manner.

ISO 10845-1 and ISO 10845-3 make provision for the evaluation of tender offers in terms of three variables, namely, financial offer, preference and quality (totality of features and characteristics of a product or service that bears on the ability of the product or service to satisfy stated or implied needs). A point scoring system with weightings is used where the financial offer is evaluated along with preference or quality or both variables to rank tender offers. The tenderer with the highest score is considered to be the most competitive. Tender offers can accordingly be evaluated and ranked in terms of financial offer (adjusted for a preference if applicable) (lowest-priced compliant tender offer) or on a balance between the financial offer (adjusted for any preference if applicable) and quality (best-value or economically most advantageous tender offer).

The awarding of contracts on the basis of lowest-price compliant tender offer for construction projects is not always cost-effective and may compromise the attainment of a client’s value proposition for a project. Cost-effectiveness requires that processes, procedures and methods enable best-value outcomes in respect of quality, timing and cost and the least resources to effectively manage and control procurement processes. Cost-effectiveness also requires that decision-making focuses on the attainment of value for money through the evaluation of relevant costs and benefits together with the assessment of risks (see ISO 10845-1).

Figure 6 illustrates quality considerations in the setting of weightings between financial offer and quality. Quality in the evaluation of tenders is an important tactical tool to differentiate between tenderers. It enables a balance between financial offer and quality to be found in a competitive and transparent manner and seeks to achieve cost-effective outcomes. Quality as an evaluation criterion is commonly omitted in the procurement of general goods and services which are well defined and where contractual risks are low (see ISO 10845-1:2020, Annex B) as there is frequently no need to differentiate between compliant tender offers other than on the basis of the financial offer. Quality should be included in the evaluation of tender offers where downstream impacts and contractual risks are high.

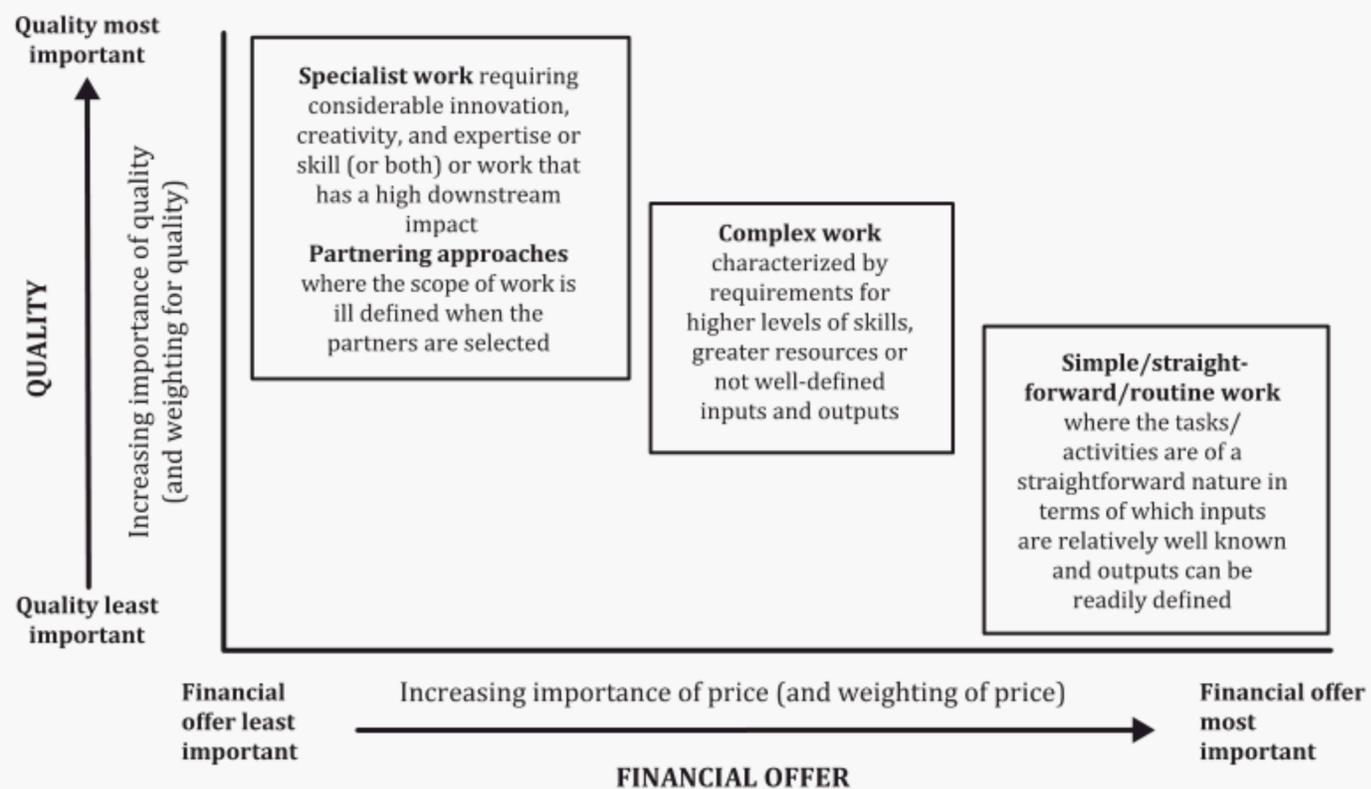


Figure 6 — Quality considerations in the evaluation of tender offers

The design of construction works commonly represents 1 % to 2 % of the overall life cycle cost of a project, with construction accounting for approximately 6 % to 18 % of the cost. Accordingly, 80 % to 93 % of the lifetime asset cost, is accounted for by operations, annual and capital maintenance and

decommissioning activities. The downstream costs associated with poor and inefficient designs and poor construction is considerable.

There are many risks to manage in the procurement of construction works projects due to unforeseen events occurring during the delivery of the project (see ISO 10845-1:2020, Annex B). Different teams have different abilities to deal with risk events which impact directly on the timing and cost of the procurement should they manifest. Furthermore, a range of different combinations of goods and services with differing characteristics such as initial cost, reliability, life-cycle costs, and operating costs may satisfy the performance requirements. The outturn cost (cost post-execution of the contract) can be very different to the initial contract price when a contract is entered into.

It is therefore imperative that where downstream impacts and contractual risks are high, those with the requisite skills are appointed to undertake the work at a reasonable price rather than the lowest-priced compliant tender offer. The evaluation of quality in tender offers as provided for in ISO 10845-1 and ISO 10845-3 provides an opportunity for balancing the financial offer against the likelihood of achieving the intended outcome. It promotes cost-effective procurement outcomes and mitigates risks such as damaged reputations, undesirable and unexpected side effects and a failure to achieve long-term value over the life of the asset.

Annex A (informative)

Delivery management concepts and practices

A.1 General

The construction industry delivers its products in a uniquely project-specific environment which continuously involves the occurrence of events, which may be foreseen or unforeseen, that can impact on project outcomes during a protracted delivery process. It also involves different combinations of funders, clients and built environment professionals, site conditions, materials and technologies and general contractors, specialist contractors, skills and workforces.

A supply chain can be regarded as the sequence of tasks that provides products or services to the organization. The supply chain for construction works can be represented as the flow of information from one set of tasks to the next with decision points or gates at the boundaries between tasks. Such gates provide an opportunity for ensuring that the proposed project remains within agreed mandates, aligns with the purpose for which it is conceived, and can progress successfully to the next task. Contracts bind the participants in the supply chain (built environment professionals, general contractors, specialist and subcontractors) and define the obligations, liabilities and risks that link the parties together in a process that needs to deliver value for money.

A.2 Fundamental concepts

Procurement may be defined as the process which creates, manages and fulfils contracts. Procurement commences once a need for goods and services or any combination thereof has been identified and it ends when the goods are received, the services are completed, and contracts closed out. There are accordingly three phases to the procurement process associated with construction works projects, namely:

- a planning phase during which decisions are made as to what, where and when goods and services are required, how the market is to be approached and what is the number, type, nature and timing of the required contracts;
- an acquisition phase during which contracts are entered into following the development of procurement tactics enabling a procurement strategy to be effectively implemented and the execution of a selection procedure;
- a contract management (or contract administration) phase during which compliance with requirements, changes in requirements and risk events which manifest during the execution of contracts are managed, the construction works are commission and contracts are closed out.

Delivery management is the critical leadership role played by a knowledgeable client to plan, specify, procure and oversee the delivery of construction works projects. Delivery management as such includes knowledgeable leadership, consistent governance and systematic administration of procurement, contracts and project finances. Delivery management activities include planning at a programme and project level and the procurement and management of a network of suppliers including, as necessary, professional services, contractors and subcontractors to design, scope, detail and deliver construction projects on a site.

Value for money refers to a project that is well worth the money spent on it. It is the effective, efficient and economic use of resources, or the optimal use of resources to achieve intended outcomes. Value for money is the attainment of a desirable or satisfactory outcome in relation to a carefully considered budget. In the context of construction works projects, project outcomes are benchmarked against the

client’s value proposition, usually set at the outset of the project and perhaps modified at the start of construction or supply.

The efficient and effective functioning of the client’s procurement and delivery management system is fundamental to delivering value for money. Value for money is all about striking the balance between economy, efficiency and effectiveness while being mindful of a fourth “E” – equity in the results chain framework indicated in [Figure A.1](#) and [Table A.1](#). Implementation sits between “economy” and “effectiveness”. Projects need to be executed “efficiently” to minimize delays, scope creep and unproductive costs and to mitigate the effects of uncertainty on objectives so as to maintain the value for money proposition formulated at the outset of the project. Any gap between intended and achieved outcomes put value for money for a project at risk.

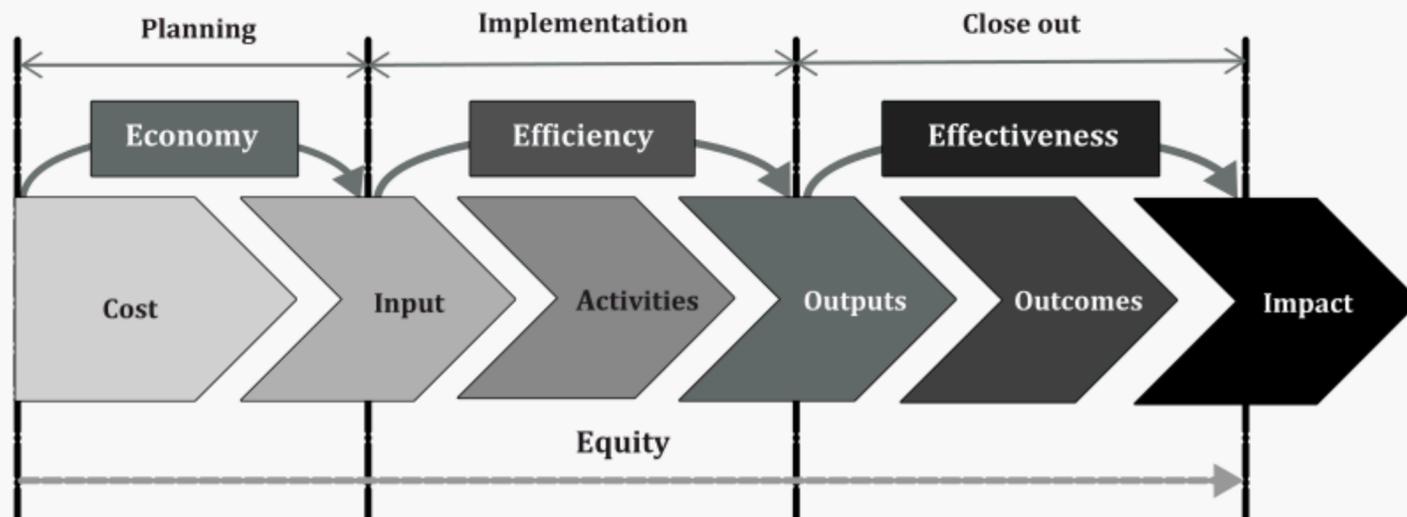


Figure A.1 — The value for money concept

Table A.1 — The value for money concept

	Economy (cost)	Efficiency (productivity)	Effectiveness (impact)	Equity
Objective	Obtain the right inputs at the right cost (obtain a good deal)	Obtain the most from the inputs (obtain a lot for the efforts)	Obtain the expected results from the outputs (do the right things)	Promote business, employment and skills opportunities for target groups
Focus	Reducing / minimizing the cost of resources	Minimize waste and maximize value in the converting of resources (inputs) into results (outputs)	Achieving targets and ensuring the right work is being completed	Leverage business, employment and skills opportunities for target groups through the project
Key question	What is the cost of the resources consumed and the value of the output delivered?	How resourcefully are inputs converted into outputs and subsequent outcomes?	What is the gap between what has been achieved and what was intended?	What legacy does the project leave behind?

The planning phase is negatively impacted on by optimism bias (the human mind’s cognitive bias in presenting the future in a positive light) and strategic misrepresentation (behaviour that deliberately underestimates costs and overestimates benefits for strategic advantage usually in response to incentives during the budget process). The implementation phase is positively impacted upon by procurement strategy and tactics and negatively impacted on by the inability to manage risk, multiple projects against an annual budget, interference and scope creep and a failure to create an enabling environment within which delivery is to take place.

A.3 Achieving the client’s value proposition for a project

The physical delivery of construction works necessitates that a delivery team be put in place using an organization’s own resources or contracted resources. This team performs a “supply” function and

carries out project management and design functions, provides professional support services and manufactures, maintains, constructs, installs, provides, alters, rehabilitates, refurbishes or alters construction works. A client delivery management team, led by a client delivery manager, also needs to be established to provide effective leadership and direction to the delivery team and meaningfully engage with internal and external stakeholders. This team, which performs a “buying” function, needs to own the business case, procure and pay the resources to deliver the project, lead the project, manage relationships, oversee aspects of delivery and provide client direction (see [Figure A.2](#)).

A client delivery manager needs to be held accountable for project outcomes. Such a manager also needs to lead the client team with single point accountability and have direct access to senior client management when decisions regarding a significant departure from the plan or budget need to be taken. The client delivery manager needs to be supported by both a technical team and an administrative team. The technical team may be required to provide advice on a range of matters, gather, process and store information that is necessary to manage the delivery of projects, manage activities associated with the initiation of projects, formulate, shape and document the client’s specific requirements, monitor and evaluate the outputs of the delivery team, establish financial and cost controls and reporting systems and procure the resources which are necessary to deliver the project. The administrative team needs to prepare the necessary documents for payment and to develop and maintain and keep up to date a number of registers for project governance purposes which capture information such as that relating to planned procurements, contractual commitments, contracts, payments and purchase orders.

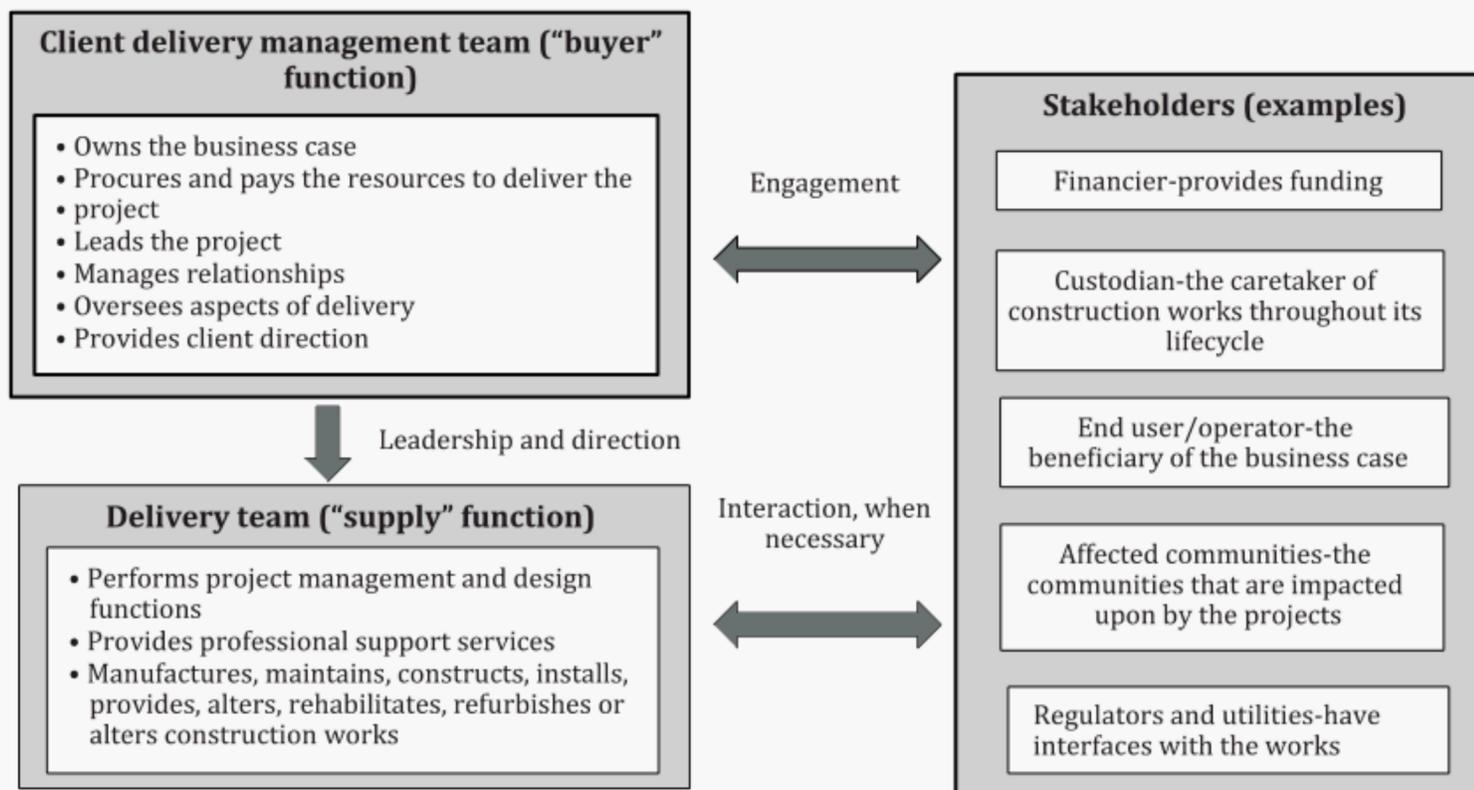


Figure A.2 — The principal role players in the delivery of construction works projects

The client’s business case, vision, values and project priorities collectively make up the client’s value proposition for a project i.e. the promise of measurable benefits resulting from the project. Activities associated with the planning, designing, manufacturing / fabrication, construction / installation and commissioning need to translate the client’s value proposition into project outcomes which impact on the three aspects of sustainability (economic, environmental and social) and result in a product. Clients can influence project outcomes through client leadership at both a programme and project level, governance and procurement strategy and tactics (see [Figure A.3](#)).

NOTE ISO 10845-1:2020, Annex C highlights different development priorities between the developed nations and developing nations, outlines a number of different approaches to achieving sustainable impacts through construction contracts and identifies common drivers for objectives associated with contributions to sustainability.

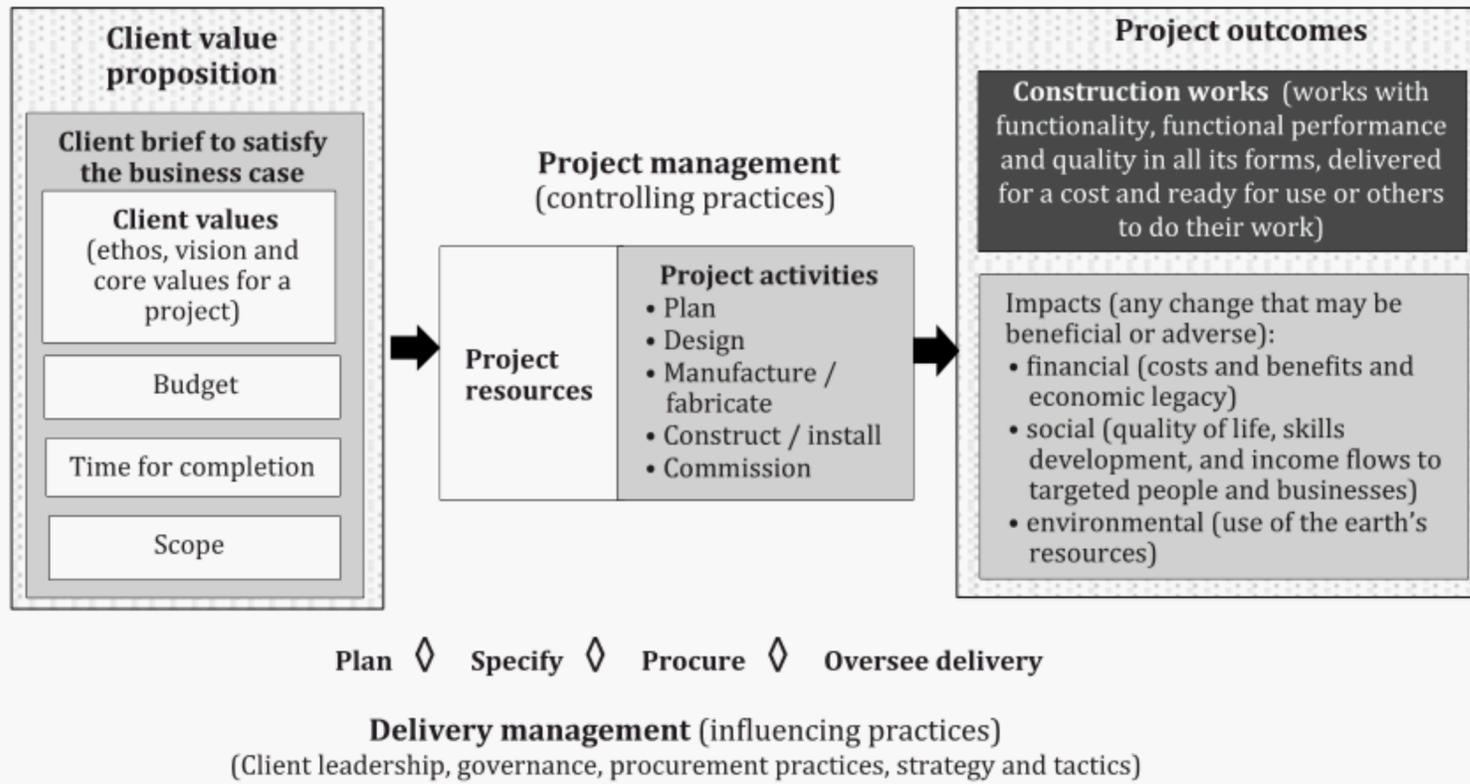


Figure A.3 — Translating the client value proposition

A.4 Procurement cycle for construction works

The procurement cycle for construction works is indicated in [Figure A.4](#). Policy lies at the heart of the procurement system (see ISO 10845-1).

The starting point in the first sub-phase of planning (initiate) focuses on the identification of the business need which should in the first instance examine whether procurement is in fact necessary. It should also assess the skills, capabilities and resources available to the organization. A business case is then developed to justify the procurement activity and expenditure and to establish whether the investment is worthwhile in terms of value for money. A feasibility study may be required to inform decision making or for scrutiny by the funders or the client governing body. A decision then needs to be made to invest in the project and to proceed to the second subphase of planning (plan and specify).

Project planning takes place in the second sub-phase of the project planning phase. It is during this sub-phase that a procurement strategy is developed in accordance with the guidance provided in this document. A strategic brief which defines project objectives, needs, acceptance criteria and client priorities and aspirations, and which sets out the basis for the development of a concept report is developed. A concept report is then developed which sets out a viable solution to the strategic brief. A decision is then made to implement the project. A gateway review or financial feasibility studies may be required to inform this decision.

During the acquisition phase, procurement tactics in accordance with the guidance provided in this document and procurement documents are developed (see ISO 10845-1, ISO 10845-2, ISO 10845-3 and ISO 10845-4) prior to approaching the market for the services of a contractor. Tender offers are then solicited and evaluated; and a contract awarded is with the successful tenderer (see ISO 10845-1).

During the contract administration phase, the focus is on administering contracts in accordance with the administrative procedures included in the conditions of contract and confirming compliance with the requirements of the contract. The commissioning of the works and the handing over of the works to the end user or operator needs to be overseen. Ultimately the contract needs to be closed out, final amounts due in terms of the contract settled. It is also important to close out the project and document the lessons learned to improve future project outcomes.

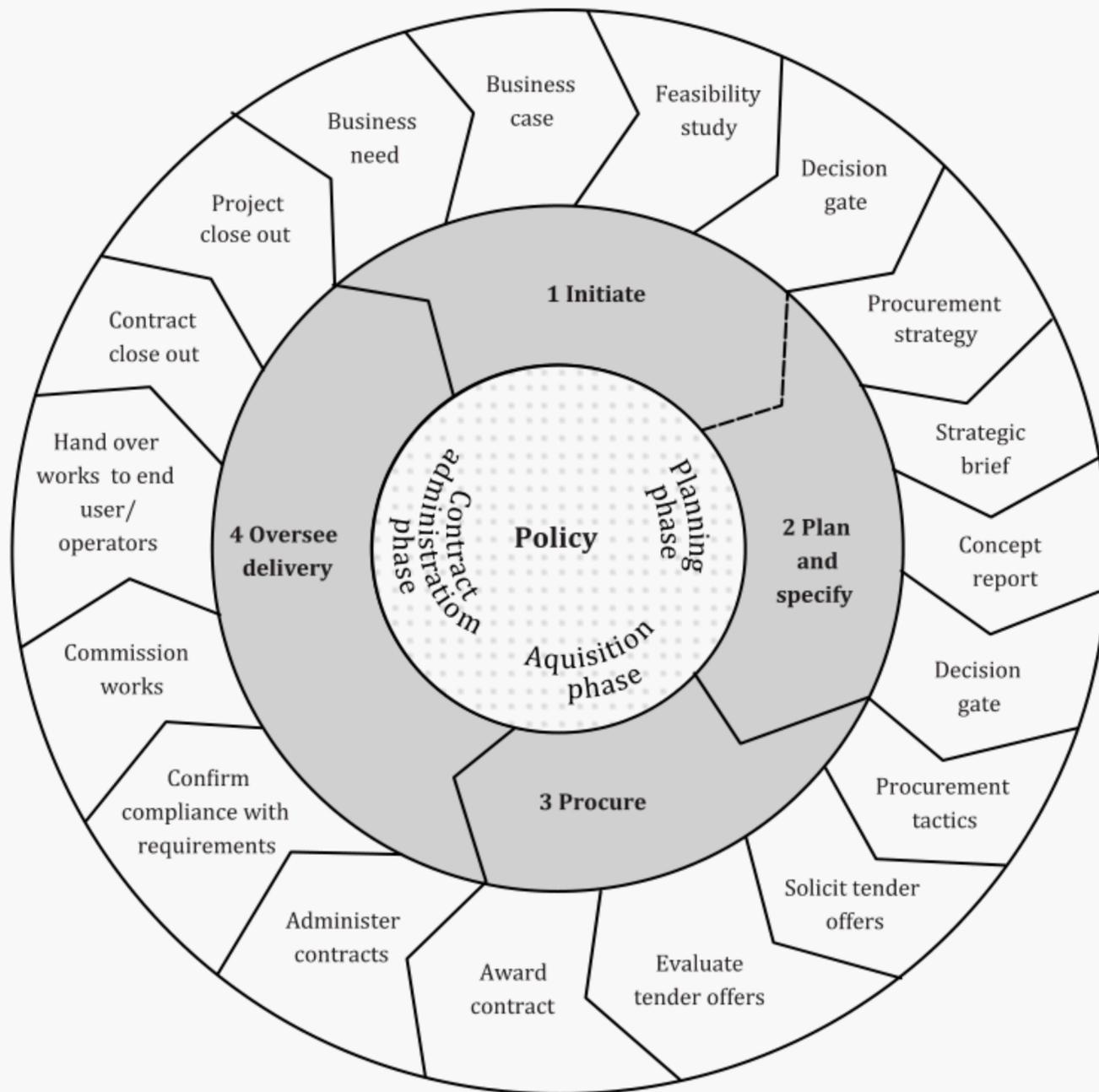


Figure A.4 — The procurement cycle for construction works

Bibliography

- [1] ISO 6707-1:2020, *Buildings and civil engineering works — Vocabulary — Part 1: General terms*
- [2] ISO 6707-2, *Buildings and civil engineering works — Vocabulary — Part 2: Contract and communication terms*
- [3] ISO 9000, *Quality management systems — Fundamentals and vocabulary*
- [4] ISO 9001, *Quality management systems — Requirements*
- [5] ISO 10845-1:2020, *Construction procurement — Part 1: Processes, methods and procedures*
- [6] ISO 10845-2:2020, *Construction procurement — Part 2: Formatting and compilation of procurement documentation*
- [7] ISO 10845-3, *Construction procurement — Part 3: Standard conditions of tender*
- [8] ISO 10845-4, *Construction procurement — Part 4: Standard conditions for the calling for expressions of interest*
- [9] ISO 10845-5, *Construction procurement — Part 5: Participation of targeted enterprises in contracts*
- [10] ISO 10845-6, *Construction procurement — Part 6: Participation of targeted partners in joint ventures in contracts*
- [11] ISO 10845-7, *Construction procurement — Part 7: Participation of local enterprises and labour in contracts*
- [12] ISO 10845-8, *Construction procurement — Part 8: Participation of targeted labour in contracts*
- [13] ISO 19208, *Framework for specifying performance in buildings*
- [14] ISO 19650-1, *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 1: Concepts and principles*
- [15] ISO 19650-2, *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM) — Information management using building information modelling — Part 2: Delivery phase of the assets*
- [16] ISO 21500:2021, *Project, programme and portfolio management — Context and concepts*
- [17] ISO 14001, *Environmental management systems — Requirements with guidance for use*
- [18] ISO 21502, *Project, programme and portfolio management — Guidance on project management*
- [19] ISO 45001, *Occupational health and safety management systems — Requirements with guidance for use*
- [20] BS 8534, *Construction procurement policies, strategies and procedures – code of practice*
- [21] HUGHES W, CHAMPION R, MURDOCH J, (2015) *Construction Contracts: Law and management*. Fifth Edition. Routledge London. ISBN 978-0-414-65704-4
- [22] WATERMEYER R., (2018) *Client Guide for Improving Infrastructure Project Outcomes*. School of Construction Economics and Management, University of the Witwatersrand and Engineers Against Poverty. ISBN 978-0-620-79293-6

.....

