IsDB
البنك الإسلامي للتنمية
Islamic Development Bank

PPR
PROJECT PROCUREMENT

Guidance Note on Contract Management Practice

March 2021

This Guidance Note was prepared by the Islamic Development Bank based on the Procurement Guidance- Contract Management Practice of the World Bank. IsDB thanks the World Bank for allowing the use and modification of the document for use in the IsDB operations.

It is intended to complement the Guidelines for Procurement of Goods and Works and related services and the Guidelines for the Procurement of Consultant Services under Islamic Development Bank Financing, approved by the Board of Executive Directors (BED) of the Islamic Development Bank, and published in April 2019. This document may be used and reproduced for non-commercial purposes. Any commercial use, including without limitation reselling, charging to access, redistribute, or for derivative Works such as unofficial translations based on these documents is not allowed.

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Common Abbreviations and Defined Terms

Common abbreviations and defined terms that are used in this Guidance Note. Defined terms are written using capital letters.

Abbreviation / term	Full terminology / definition
Annex	An Annex to this Guidance Note
Bank	The Islamic Development Bank (IsDB).
Bid	An offer, by a firm or joint venture, in response to a Request for Bids to provide the required Goods, Works or Non-consulting Services.
Bidder	A firm or joint venture that submits a Bid for Goods, Works, or Non-consulting Services in response to a Request for Bids.
Beneficiary	A Beneficiary is the recipient of IsDB Project Financing. This term includes any entity involved in the implementation of an IsDB financed project on behalf of the Beneficiary.
CMP	Contract Management Plan
Consultant/Engineer	A Consultant Firm or Individual Consultant that provides Consultant Services. A Consultant is independent of both the Beneficiary and IsDB.
Consulting Service(s)	A Consultant Firm or Individual Consultant that provides Consultant Services. A Consultant is independent of both the Beneficiary and IsDB.
Contractor	The entity named in the respective contracts to execute a contract for Goods, Works or Non-Consulting Services. To improve readability, the term "Contractor" and "Sub-contractor" are throughout this guidance written as "contractor" and "sub-contractor" respectively. In some contexts, such as related to Goods contracts, the term "supplier" is also used in place of "contractor."
Contract Manager	For the purpose of this guidance, "Contract Manager" is a generic term used to refer to a legal entity, a natural person/team assigned to/ authority vested on/ delegated to manage the execution of a contract. Depending on the applicable contract form, "Contract Manager" may refer to: • a range of contract management arrangements such as the: o "Engineer" in FIDIC: Conditions of Contract for Construction or Conditions of Contract for Plant & Design build; "Engineer" means the person appointed by the Employer to act as the Engineer for the purposes of the Contract. o **"Employer's** Representative" in FIDIC: Conditions of Contract for EPC/ Turnkey; o "**Project Manager**", for example, in Bank's SPDs for Small Works, « The Project Manager is the person named in the Particular Conditions of the Contract (PCC); or • the Beneficiary's internal team when assigned to manage a contract.

Abbreviation / term	Full terminology / definition
CPM	Critical Path Methodology.
D&B	Design and Build.
DBB	Design, Bid, Build.
DBO	Design, Build, Operate.
EPC	Engineering, Procurement and Construction.
Fraud and Corruption	The sanctionable practices of corruption, fraud, collusion, coercion or obstruction defined in IsDB's Guidelines on Combatting Fraud and Corruption and in IsDB Group Anti-Corruption Guidelines on Preventing and Combating Fraud and Corruption in IsDB Group-Financed Projects.
GBV	Gender Based Violence.
GCC	General Conditions of Contract.
Goods	A category of Procurement that includes: commodities, raw material, machinery, equipment, vehicles, Plant, and related services such as transportation, insurance, installation, commissioning, training, and initial maintenance
GRM	Grievance Redress Mechanism.
Non-consulting Services	Services which are not Consulting Services. Non-consulting Services are normally bid and contracted on the basis of performance of measurable outputs, and for which performance standards can be clearly identified and consistently applied. Examples include: drilling, aerial photography, satellite imagery, mapping, and similar operations.
Plant	The provision of equipped facilities, such as those executed on the basis of design, supply, installation and commissioning.
Procurement	The function of planning for, and sourcing Goods, Works, Non-consulting Services, and/or Consulting Services to meet required objectives.
Procurement Documents	A generic term used in the Guidelines to cover all Procurement Documents issued by the Beneficiary. It includes: GPN, SPN, EOI, REOI, Prequalification document, RFB and RFP, including any addenda.
Procurement Process	The whole Procurement lifecycle that starts with the identification of a need and continues through planning, preparation of specifications/ requirements, budget considerations, selection, contract award, and contract management. It ends on the last day of the warranty period
Project Procurement Plan (PP)	The Beneficiary's Procurement Plan for IsDB projects, as referred to in the Guidelines (Paragraph 1.43 of the Guidelines for Procurement of Consultant Services and Paragraph 1.42 of the Guidelines for Procurement of Goods, Works and Related Services) and incorporated by reference in the Financing Agreement.
Project Procurement Strategy (PS)	A project-level strategy document, prepared by the Beneficiary, that describes how Procurement in financing operations will support the development objectives of the project and deliver VfM through the application of IsDB's core procurement principles.

Abbreviation / term	Full terminology / definition
SCC	Special Conditions of Contract.
SEA	Sexual Exploitation and Abuse.
Standard Bidding Documents (SBDs)	Standardized procurement documents issued by IsDB to be used by Beneficiaries for IsDB financed projects. These include IsDB's standard documents for, e.g.: GPN, SPN, Prequalification, LOI, RFB and RFP.
TOR	Terms of Reference (usually referencing a Consulting Services contract).
VE	Value Engineering.
Value for Money (VfM)	VfM means obtaining the optimum benefits with the effective, efficient, fair and economic use of resources. This requires an evaluation of relevant costs and benefits, along with an assessment of risks, and non-price attributes and/or life cycle costs, as appropriate. The lowest price alone may not necessarily represent VfM.
Works	A category of Procurement that refers to construction, repair, rehabilitation, demolition, restoration, maintenance of civil work structures, and related services such as transportation, insurance, installation, commissioning, and training.

Contents

Section 1 - Introduction

1.1 Purpose

The purpose of this Guidance Note on Contract Management Good Practice is to support and strengthen Beneficiaries' contract management knowledge and practices. It is a comprehensive technical guide with hands-on explanations.

1.2 Scope

Contract management is part of the Procurement Process. The procurement process, as described in the Procurement Guidelines, starts with the identification of a need and continues through planning, preparation of specifications/requirements, budget considerations, selection and contract management. This guidance focuses on the contract management activities undertaken during the period from the award of contract, through implementation and execution, to contract completion. Where applicable, this period includes the expiry of the defects liability period and/or warranty period.

1.3 Bank's contract management requirements

The purpose of this guidance is to provide additional and consolidated information to Beneficiaries on Contract management practice. This guidance supplements, and should be read in conjunction with, the contract management requirements detailed in the Bank's Guidelines for Procurement of Goods and Works and related services and for the Procurement of Consultant Services under Islamic Development Bank Financing (Procurement Guidelines). As such, this guidance is non-mandatory and offered as practical advice only.

Section 2 - General Principles of Contract Management

2.1 Relevant considerations

Contract management is the process of actively managing contract implementation to ensure the efficient and effective delivery of the contracted outputs and/or outcomes.

Effective contract management enables Beneficiaries to maximize value for money (VfM) in delivering development outcomes. The main focus of contract management is on the activities that are undertaken during the contract execution/implementation phase, following the award of contract (downstream activities). However, the success of contract management is strongly influenced by activities undertaken during the procurement planning, choice of contract, and Contractor selection phase (up-stream activities).

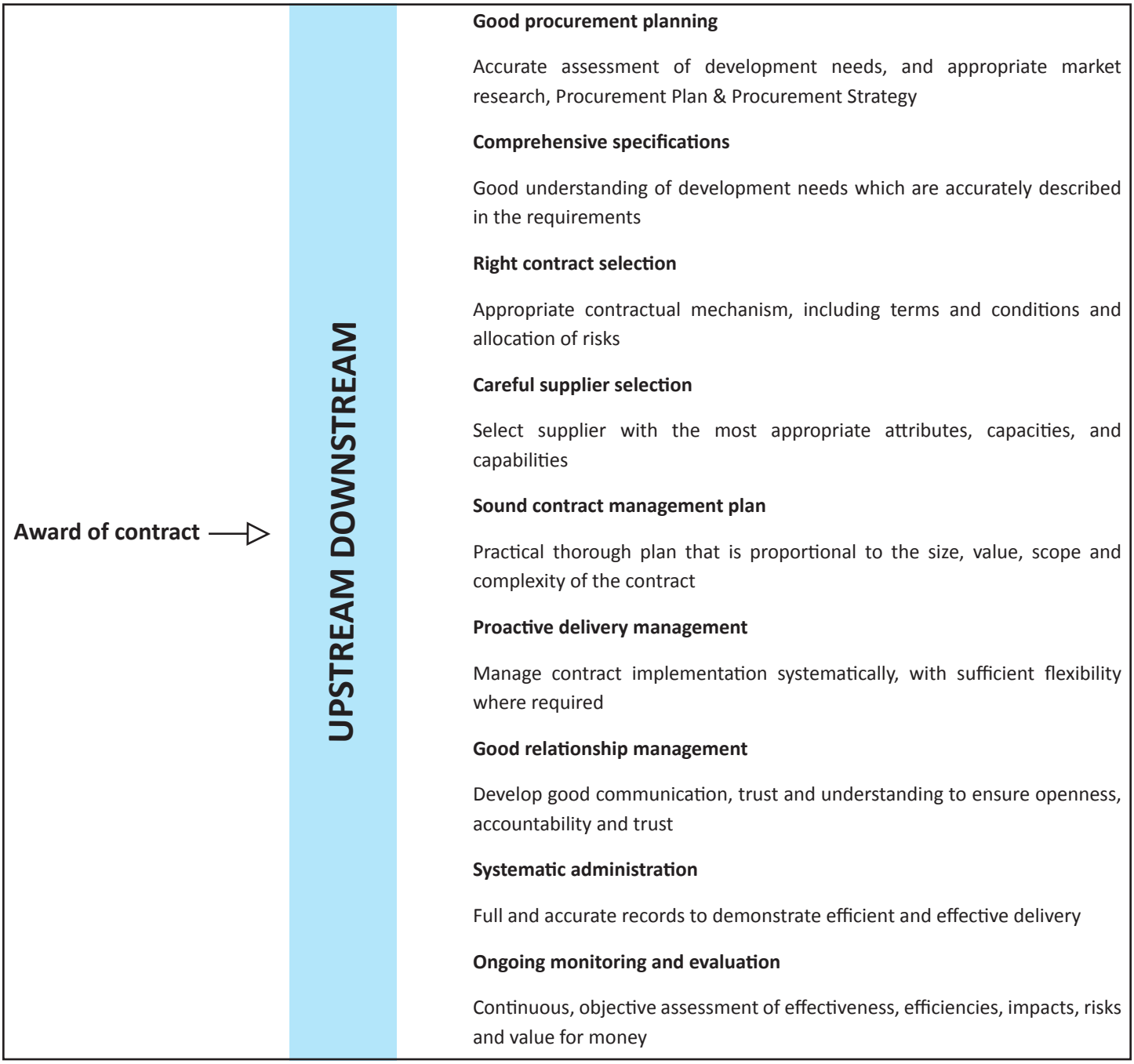

Figure I- Upstream and downstream phases of contract

2.2 Contract management objectives

The key objectives of contract management are to ensure that the contract is:

1. delivered on time, at the right place and in the right quantity;
2. .completed to the required specifications, standards and/or quality;
3. completed within the agreed price.

Contract management continues throughout the life of the contract. This means that the Beneficiary needs to plan for, and undertake:

1. effective and efficient management of performance, delivery and payment;
2. methodical and measured change control;
3. active risk mitigation and management;
4. agile resolution of issues and disputes.

2.3 Plan, do, check

Good project management involves planning how to manage the project, implementing the plan and then checking the results. Applied to contract management these key steps are illustrated in Figure II.

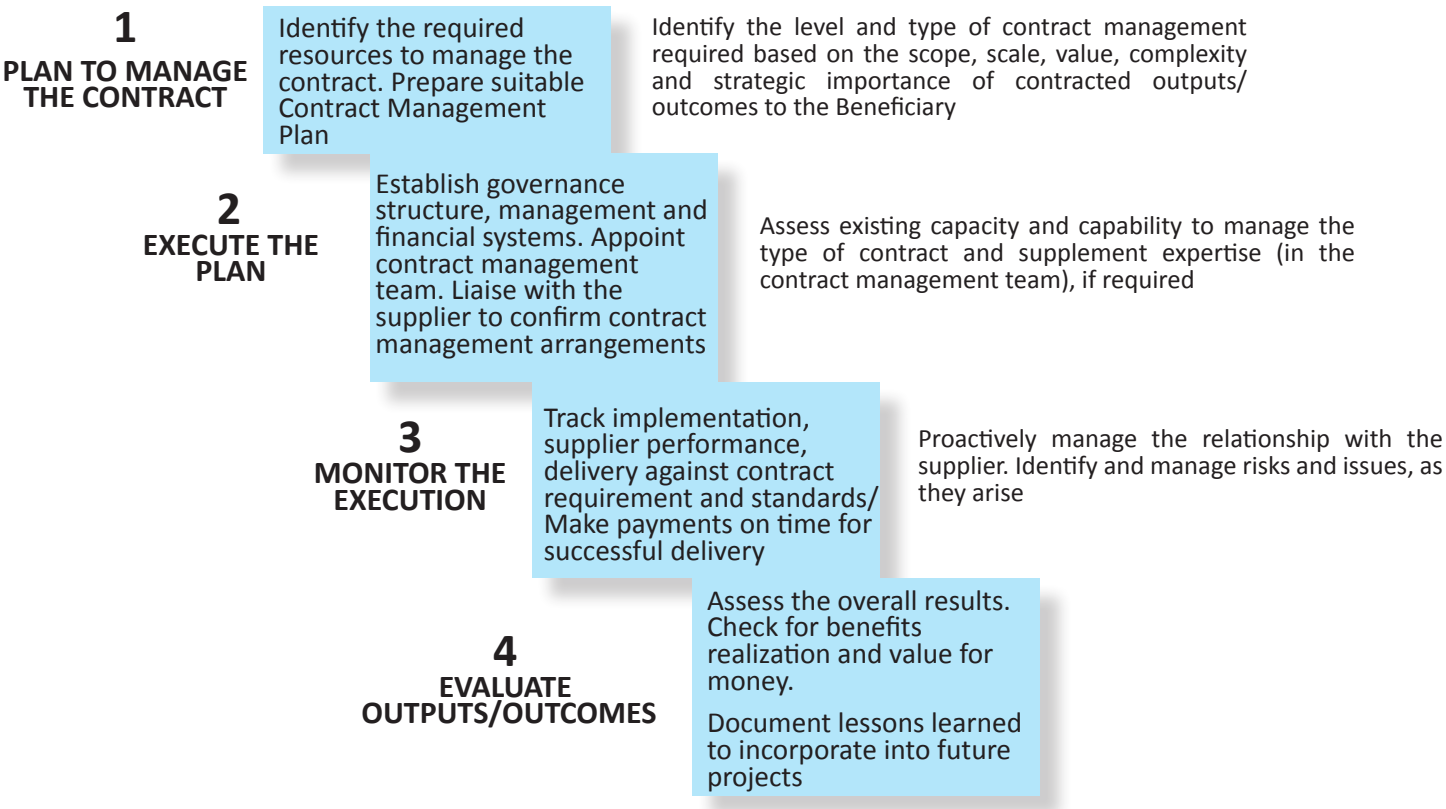

Figure II – contract management basics: plan, execute, check, evaluate

To achieve good contract performance, Beneficiaries should ensure that the terms of the contract are adhered to and that both parties to the contract understand their respective obligations. Contract management also involves a level of flexibility by both parties and a willingness to adapt the contract terms to reflect any changing circumstances, as appropriate. Good contract management is strengthened by systematic and efficient planning, execution, monitoring, and evaluation.

2.4 Role of contract manager

The contract manager is the person appointed to have overall responsibility for the successful implementation of the contract. Good practice requires that a contract manager is appointed for every contract. For small, routine contracts, this may be one person, who has a portfolio of contracts to manage. For large, complex, high-value contracts this may be a contract manager in charge of a contract management team. The contract manager, and the team if applicable, need to have the appropriate range of qualifications, skills and experience.

A contract manager needs to multi-task on a number of levels.

Figure III – Contract Manager Responsibilities

2.5 Hard and soft skills

Hard skills are teachable skills that are easy to quantify. Typically, hard skills are acquired through education, training, reading, and on the job training. These are sometimes referred to as 'technical skills'. Soft skills, on the other hand, are subjective skills that are much harder to quantify. Soft skills are the way one behaves and the way one relates to and interact with other people. These are sometimes referred to as 'interpersonal skills'.

A contract manager requires an appropriate mix of technical skills (e.g. financial literacy) and soft skills (e.g. interpersonal and relationship management). The relevant mix of skills will depend, to some extent, on the nature of the contract, the levels of risk and the delivery/operating environment.

Hard skills - technical skills

A contract manager, or team, need to have the appropriate mix and levels of skills. The standard type of technical skills, knowledge and experience required include:

1. procurement;
2. project management;
3. legal knowledge (at least an ability to understand the legal aspects of the contract, including remedies);
4. financial literacy;
5. administrative, record keeping.

Additional skills may be required for complex contracts, or because of the subject matter. In particular, it is essential to have sufficiently experienced subject matter experts as part of the team, as and when required. For example:

1. civil engineer for Works contracts;
2. dedicated environmental, social, health and safety (ESHS) experts where ESHS risks are moderate to high;
3. systems or IT experts for a software development project;
4. medical expertise when purchasing medical diagnostic equipment.

Soft skills – interpersonal skills

In addition to technical ("hard skills") a whole range of "soft skills" are required to build a successful relationship with the supplier, and to build successful contract management teams. Examples of relevant soft skills include:

1. leadership, motivation and team building;
2. decisions making;
3. delegation;
4. interpersonal, communication and relationship management;
5. mentoring and knowledge transfer;
6. analytics and reporting;
7. problem solving;
8. negotiation and conflict resolution;
9. ability to work as part of a team;
10. individual responsibility and accountability;
11. time management;
12. goal orientated, outcome focused;
13. anticipation and solutions oriented.

Some of the key skills that a good contract manager should possess are listed in Table I.

Feature	Relevance
Technical competence: Thorough knowledge and understanding of all aspects of the contract (technical specifications, terms of reference, conditions of contract, remedies etc.) and full understanding of their interdependencies (e.g. how to read the bills of quantities in conjunction with the technical specifications, the method of measurement and the drawings etc.)	**Critical**
Leadership skills Self-motivated, focused, confident, thrives under pressure, calm, cooperative, politically savvy, personal integrity, diligent, honest, team management, risk aware, mitigating risk, managing risk.	**Critical**
Implementation skills Organized, efficient, punctual, ability to multi-task, pro-active, can think outside the box, devoted to the success of the project/contract, resourceful, responsible, results focused, risk aware, problem solving, conflict resolution.	**Important**
Interpersonal skills Articulate, approachable, persuasive, good verbal and non-verbal communication, listening skills; emotional intelligence, courteous, decision making, problem solving, conflict resolution	**Important**

Figure III – Contract Manager Responsibilities

2.6 Teamwork

Where a contract management team is formed a team leader needs to be appointed with ostensible authority to manage the team and clear lines of reporting. Individual team members need to demonstrate the skills, experience or knowledge for which they have been appointed. The individuals will not need to meet all the time but, the team leader must ensure that they are included and consulted as, and when appropriate. Depending on the size and complexity of the project, there may be a core group that meets regularly, and this will be the core contract management team. Others, often additional experts required for the project, will then be called on as and when required.

It is essential that individual team members have the ability to contribute as team players, are accountable for their areas of responsibility and are able to communicate effectively to manage risk, coordinate activities and keep to schedule.

2.7 Governance and management

Governance is a critical element of contract management. A well-designed governance structure provides a decision-making framework that is logical, robust and repeatable. It ensures accountability and probity.
For large, complex, or sometimes high value procurements it is essential to establish a formal contract / project governance structure. This must include the role of the contract management team. The governance structure should reflect the Beneficiary's circumstances and the needs of the particular procurement. A governance structure allows the delegations, accountabilities, responsibilities, decision making, lines of reporting, stakeholder engagement etc. to be mapped and agreed in advance. It ensures accountability and probity.

Principles of good contract/project governance

1. clearly defined roles and responsibilities at all levels;
2. each role has sufficient representation and authority to fulfil its responsibilities;
3. disciplined governance arrangements supported by appropriate systems and controls (especially tracking progress, monitoring against service levels/quality standards, financial controls (budget, invoicing, forecasts etc.) and reporting);
4. a multi-tiered decision-making framework which provides for escalation from operational to management to governance;
5. decisions made at appropriate authorization points are recorded and communicated;
6. independent scrutiny of project progress, outputs and outcomes undertaken on a regular basis;
7. a comprehensive contract management plan which is agreed and communicated to all parties;
8. strict control of change management decisions;
9. comprehensive communications strategy;
10. project stakeholders are engaged at a level that is commensurate with their importance to the project and in a manner that fosters trust;
11. culture of improvement and of frank internal disclosure of contract/project information.

2.8 In-house vs. outsourcing

A decision to be addressed at the procurement planning stage (i.e. PP&PS), is whether a contract should be managed in-house, out-house (outsourced) or a combination of in-house with additional externally sourced support (limited outsourced).

1. In-house: contract management undertaken entirely by the Beneficiary's staff, due to availability of adequately qualified and experienced staff.
2. Outsourced: a specialist contract management company is contracted by the Beneficiary to manage contract implementation. The specialist company may be: project management company, engineering firm, procurement agent.
3. Limited outsourced: the contract is primarily managed by the Beneficiary's staff, with additional resources from external experts, contracted as required. Such experts can provide services ranging from specific inputs (e.g. ESHS, IT systems/solutions) to permanent resourcing (e.g. in the case of civil works contracts the supervising engineer).

In practice, contract management can never be fully outsourced. Regardless of contracting out some or all of the contract management functions the implementing agency retains overall responsibility for successfully implementing the project. Outsourcing arrangements must provide sufficient oversight, checks and balances for the Beneficiary so that vital functions, like financial control, acceptance of the deliverables (outputs), are retained.

In deciding an appropriate outsourcing option the implementing agency should accurately assess its capacity in terms of:

1. in-house staffing;
2. technical expertise (such as technical or financial, contractual literacy (legal), administrative skills, fluency in the language of the contract or of the contractor etc.);
3. adequacy of soft skills;
4. relevant experience;
5. workload (would the current or future workload allow the in-house staff to manage the contract effectively?);
6. risk appetite based on assessment of risk: e.g. to what extent can the engineering function be delegated?

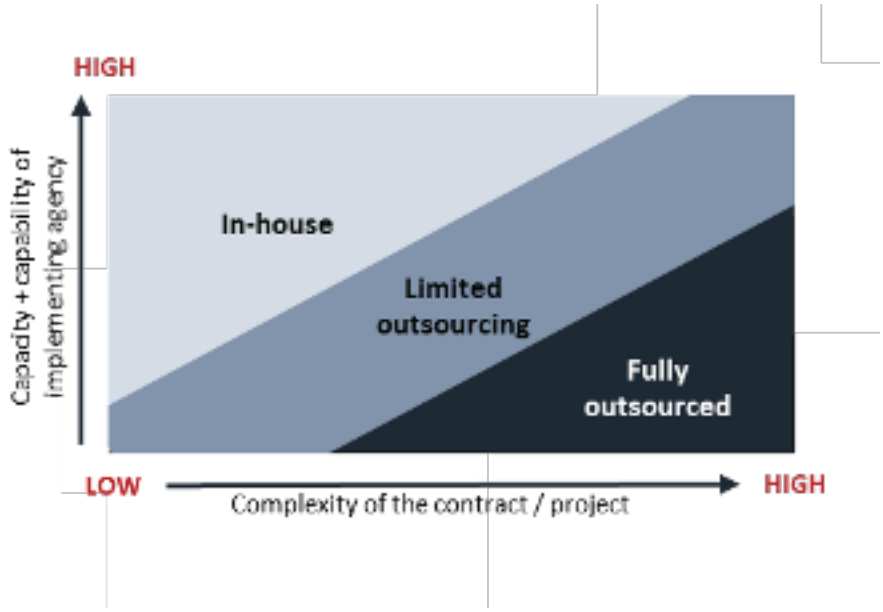

Figure IV – In-house vs. outsourcing: based on risk, complexity, capacity and capability

2.9 What can go wrong and why?

Although there are a broad range of reasons for failures in contract implementation, common causes include:

1. insufficient planning prior to the transition from award of contract to the contract execution phase;
2. poor communication;
3. insufficient resources (capacity and/or capability);
4. inadequate governance;
5. poor decision making;
6. vulnerability to fraud and/or corruption;
7. ineffective risk identification and/or problem resolution;
8. general inability to control the risks associated with complex environments.

Good contract management practice demands timely identification and management of issues and risks. Examples of causes of poor practice, and their consequences are described in Table II.

Cause	Consequence
Failure to plan The Beneficiaries and Contractor fail to adequately plan for the transition to contract implementation.	• A chaotic start where no provisions are in place to support implementation.
Poor specifications and contractor selection The Beneficiary's requirements are poorly specified and the contractor's assumptions are not checked.	• The contractor does not understand the nature and quality of the goods, works or services required. • The contractor's delivery is inconsistent with the Beneficiary's requirements, and the intended benefits, outputs or outcomes are not realized.
Inappropriate choice of contract The contract terms and conditions are inappropriate for the type of procurement.	• The legal terms and conditions fail to provide a suitable contractual framework, allocation of risk, or appropriate remedies to best resolve issues that arise. • The respective obligations and responsibilities of the Beneficiary and contractor may be inadequate.
Inadequate resourcing and poor decision making Inexperienced contract management team (unfamiliar with the technical specifications, terms of reference and/or conditions of contract, as well as with standard contract monitoring methods, systems and/or tools). The delegations and responsibilities for making decisions are not clear. The contract managers appointed by the Beneficiary and the contractor have different levels of skills and experience, which makes it difficult to control expectations and achieve results.	• Understandings between the Beneficiary and the contractor differ on how to best deliver, implement and monitor the contract. Progress is slow – even stalled. • Contract management is poor, issues are not resolved and can build up until they become bottlenecks, and the contractor is not held to account. • Misunderstandings and disagreements arise. Too many issues are escalated inappropriately. • The relationship deteriorates and becomes unworkable. • The contractor fails to deliver and the agency fails to notice. • Decisions are not made at the right time, if at all. Staff who have no authority make decisions. Decision-making is inconsistent. • Where the Beneficiary fails to adequately perform their part of contract management, the contractor is obliged to take control, resulting in unbalanced decisions that are not always in the Beneficiary's interests.

Cause	Consequence
Lack of readiness for implementation Lengthy approval process of contract Outstanding land acquisition issues Delay in making advance payments Delay in project effectiveness	Delay in contract effectiveness and contractor mobilization
Poor contract supervision and monitoring The contract's context, complexities and dependencies are not well understood. The Beneficiary fails to monitor and measure the contractor's delivery and performance. The Beneficiary fails to monitor and manage related risks (e.g. operational, financial, commercial, political). Failure to enforce the contractual requirements and contractual remedies	• The Beneficiary cannot assess whether it is getting full delivery and value for money, including quality results that it requires and expects. • Failure to achieve contract objectives.
Missed opportunities for improvement Parties focus on delivery arrangements rather than the potential for improvement and/or innovation.	• Opportunities are missed to improve efficiencies, value for money and performance (value engineering and innovation**).**

Table II – Examples of causes of poor contract management practice

Case Study: Costs of remedying a defect

Situation: A tender document for civil works was issued with an error in the technical requirements for the materials to be used. It wrongly specified a lower quality material than what was required.

Case study: The following table shows the time and cost it will take to remedy this error, at the various stages of contract implementation. Generally, the further into contract implementation, the greater the cost and time to rectify.

Box I – Case study: Costs of remedying a defect

Procurement process status	Remedial action	Cost	Time
During bidding process	Amend the bidding documents.	**Negligible**	**Negligible** Possibly, an extension of time for the submission of bids, if necessary.
During mobilization	Amend the contract. Employer and Contractor may easily agree on the price of the change.	**Moderate** The new unit rate for the higher quality of concrete will be higher than the unit rate offered in the bid.	**Moderate** Additional time needed to agree on the new rate and execute the contract amendment.
During contract execution	Amend the contract. PLUS Remove the material that has already been laid. PLUS Replace using the correct material.	**High** Cost of laying the original material. PLUS Higher price for the new unit rate. PLUS Cost of removing the low-quality material.	**High** Additional time for completion to allow for the removal of the low-quality material and procuring and laying the new material. Contract time extension may be required.
After expiry of the Defects Liability Period (could have significant implications on budget; time needed to secure it)	Select a contractor to remove all works affected by the low-quality material and complete the works as per the correct specifications	**Very high** (new contract with potentially higher prices, plus the cost of removing all works previously done; potential loss of use, loss of production etc.)	**Very high** (the time needed to select a new contractor and the time needed to execute the new contract- could potentially be lengthy)

Table III – Case study: Costs of remedying a defect

2.10 Document Management

Management of the various documents produced during the implementation of the contract is critical. This includes correspondence, drawings, site records, measurements etc. For high value contracts an online Document Management System (DMS) could be considered. The investment cost in such a system would be offset by the benefits it generates. A specialized IT firm would require to be engaged, but it is possible to include this within the scope of the supervision Engineer who may hire the IT firm on sub-contract basis. The Engineer will work with the firm to design the structure of the DMS. The IT firm will set up the necessary hardware, software and operate the system for the duration of the contract. Upon completion, all data will be handed over to the Beneficiary for installation on the Beneficiary's servers and for operation and maintenance of the facility.

Section 3 - Proportionate (Fit-for-Purpose) Contract Management

3.1 Proportional

The time and other resources applied to manage a contract are proportional (relative in size) to the monetary value, scope, complexity, duration, levels of risk, and strategic importance of the procurement. Where an ideal level of time and resources is applied the contract management methodology and approach can be described as “fit-for-purpose”.

For example, a low-value, routine purchase for off-the shelf goods requires minimal contract management oversight and attention. Compared to a high-value, complex IT system that is strategically important to the beneficiary agency which will need a dedicated contract management team (including specialists), greater monitoring, evaluation, risk management and higher levels of decision making. There will need to be a higher degree of control and stronger approach to relationship management.

Too many levels of control can result in an overly bureaucratic culture that can delay decision making, impede contractor payments and stifle value engineering and innovation. Too little control can result in an undisciplined, crisis management culture. Getting the balance just right is the success to “fit-for-purpose” contract management.

3.2 Supply positioning

A significant factor in designing a fit-for-purpose contract management strategy is identifying how critical or important the goods, works, non-consulting or consulting services are to the Beneficiary. This in turn, indicates the approach to be taken to building the relationship with the contractor. For example, the provision of hospital facilities and services in an at-risk district will be more critical to secure than the procurement of office consumables for a public-sector agency.

A useful tool to help this analysis is the “supply positioning matrix”. This is a model that helps Beneficiaries to rank, in order of importance, their procurements, based on the value of the contract (including life-cycle costs, if applicable), and the level of vulnerability (impact and consequences) to the agency if the Contractor fails to deliver. If the goods, works, non-consulting or consulting services are not delivered on time, how will this affect the delivery of the development needs, and what will be the impact on the beneficiary stakeholders?

The supply positioning matrix can be used at various phases in the procurement, from the planning and market research phase through to contract management.

Figure V – Supply positioning matrix

Figure VI – Supply positioning matrix explained

The impact of the supply positioning in relation to the approach to contract management is described in Table IV. This should be read in conjunction with the next section "Managing relationships", as the two concepts are closely linked. Section 4 - Managing Relationships

Quadrant	Contract management (CM) approach	Contract arrangements
Tactical acquisition	• Brief CM plan • Minimum attention • Fixed price or formula • Look to rationalize	• One-off contract or purchase order • Framework Agreements • E-purchasing • Procurement Cards
Tactical profit	• Short CM plan • Drive VfM • Use leverage through bulk purchasing/volume	• Short-term contract • Ongoing active sourcing for competitive price
Strategic security	• Detailed CM plan • Ensure supply • Long term contracts • Contingency planning	• Build reserve of stocks (where appropriate) • Consider alternative products to minimize risk
Strategic critical	• Detailed CM plan • Closely manage supply • balancing the control of costs with managing risk	• Med/long-term contract • Contingency planning in event of failure

Table IV – Explanation of the supply positioning matrix

Section 4 - Managing Relationships

4.1 Successful relationship management

Managing relationships is one of the essential skills required of contract managers. It involves understanding the nature of different types of relationships (e.g. between the Beneficiary and contractor, or Beneficiary and end-user) and identifying how much time and resources should be committed to communicating and handling each relationship. Each contract is different, so careful considerations of the parties/groups involved, the nature of the contract, and its value, scope and complexity need to be taken into account when developing a relationship management strategy, as part of the Contract Management Plan.

The hallmarks of good relationships include:

1. commitment to the relationship;
2. honesty;
3. trust;
4. goodwill;
5. effective two-way communications;
6. common understanding;
7. mutual respect;
8. openness and accountability.

In a procurement setting certain factors promote successful relationships and others inhibit successful relationships. Table V describes such factors.

POSITIVE FACTORS for successful relationships	NEGATIVE FACTORS that inhibit successful relationships
• securing senior level support for the project • ensuring that the governance arrangements are robust and fair • open sharing of information • ensuring that relationships between the parties are peer-to-peer as far as possible • ensuring that roles and responsibilities are clearly understood by all parties and that the necessary authority levels have been delegated • ensuring that escalation routes (for issues and disputes) are clear and understood • issues and disputes are resolved as early as possible and as low down the management tree as possible • separating strategic matters from the day-to-day service delivery issues • ensuring that appropriate attitudes and behavior are practiced and displayed to assist the promotion of a positive and constructive interactions • communicating and sharing information at the appropriate levels, e.g. strategic, business and operational levels • timely and effective change management in accordance with the contract • fair and consistent application of remedies as per the contract • timely payment for successful delivery • formal and methodical change management of the contract	• failure to prioritize managing the relationship • discourteous, bullying or offensive styles of communicating • failure to communicate information that is important to the other party • failure by either party to fulfill their contractual obligations, without intimation or explanation • frequent recourse to contractual remedies to overcome problems • clashes in cultures which are so disparate as to prevent the creation of the level of trust and confidence required • reluctance by the contractor to cooperate in value for money or benchmarking tests conducted by the Beneficiary.

Table V – Positive and negative factors affecting relationship management

4.2 Plan and act early

Do not wait until there is a problem to start engaging! Relationship-building takes time. For example, engagement with the contractor/consultant starts at the beginning of the procurement process, through contractor selection, negotiation and contract award. The way that Bidders/Candidates are treated during these stages can have a significant impact on the quality of the relationship by the time it gets to contract implementation. Relationships with the beneficiary group/stakeholders are initiated during the early procurement planning stages through feasibility studies and community impact assessments.

Engagement strategies for relationship management should be developed early. These can be included in the Contract Management Plan. The type of strategy and the amount of resources applied to relationship management need to be in line with the needs of the individual procurement/project i.e. fit-for-purpose. A good start is to map the parties and their respective relationships.

4.3 Relationship mapping

The typical contract management relationship is between the purchaser and supplier (Beneficiary/implementing agency and contractor/consultant). In addition, there is often a beneficiary group or stakeholders whose needs are to be considered. For IsDB funded procurements there is also the IsDB. Figure VII provides an example mapping of these inter-relationships.

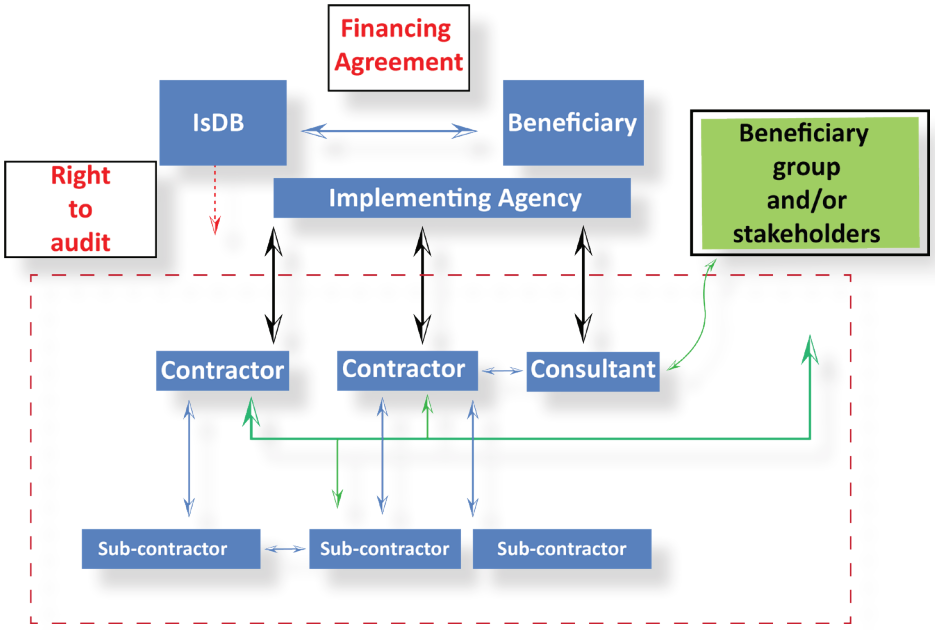

Figure VII – Key relationships mapping in Bank financed contracts

Bank and Beneficiary

The legal relationship between the Bank and Beneficiary is established through the financing agreement. Each party's obligations and responsibilities are clearly described in these documents. The Bank supervises Projects financed by it, which may normally comprise of numerous contracts. In addition, for contracts subject to prior review, significant modifications (as specified in the Procurement Guidelines) or contract terminations require the Bank's no objection.

Beneficiary and contractor

The contract governs the relationship between the Beneficiary and contractor. Depending on the nature of the contract, the Beneficiary may wish to develop a close partnership or invest less time and resources in managing this relationship.

Beneficiary and Contract Manager

The relationship between the Beneficiary and the Contract Manager depends on the duties assigned to/ authority vested on/ delegation to manage the execution of a contract. This could range from assigning contract management duties to internal staff to employing consultants to serve as "Engineer", "Project Manager", "Employer's Representative" etc.

Contract Manager and contractor

The relationship between the Contract Manager and contractor is governed by the applicable contractual arrangements. The role of the Contract Manager is specified in the contractor's contract.

Bank and contractor/consultant (Contract Manager)

There is no contractual relationship between the Bank and contractors/consultants. Specific provisions in the contract between the Beneficiary and the contractor/consultant state that the Bank has inspection and audit rights.

However, the IsDB's Guidelines for procurement of goods and works stipulate that "For leasing, instalment sale and Istisna'a modes of financing, the contracts relating to the components financed by IsDB shall clearly indicate that the Beneficiary is acting as IsDB's agent in the said contracts.[1]

Contractor to contractor

In small scale procurements there is often no relationship between contractors. However, in large scale, complex projects, with many dependencies and multiple contractors and subcontractors, the need to coordinate activities and manage these relationships i.e. interface management becomes essential.

A systematic approach is required to streamline communications, effect good communications and apply robust reporting systems. This involves identifying critical interactions and monitoring the progress of the work. The interaction of the contractors could be related to:

1. physical interactions;
2. harmonizing functional requirements;
3. competing contractual obligations;
4. information exchange;
5. utilization of resources;
6. coordinating implementation schedules.

[1]Guidelines for procurement of goods and works – paragraph 1.6
Relationship between IsDB, the Beneficiary, Bidders and Contractors
1.6 The Financing Agreement governs the legal obligations between the Beneficiary and IsDB regarding procurement financed by IsDB. No party other than the parties to the Financing Agreement shall derive any rights therefrom or have any claim to the funds provided by IsDB. The Bidding Documents issued by the Beneficiary and the contract signed between the Beneficiary and the Contractors define the rights and obligations of the Beneficiary, Bidders and Contractors. For leasing, instalment sale and Istisna'a modes of financing, the contracts relating to the components financed by IsDB shall clearly indicate that the Beneficiary is acting as IsDB's agent in the said contracts.

Not having an effective interface management system could negatively impact the cost and schedule of the contract. Factors to consider when establishing an interface management system include:

1. assign a manager or consultant to be responsible for the interface between contractors and create an interface team;
2. each contractor should identify a contact person with sufficient authority to work with the interface manager for each party affected by the interface;
3. clearly define the roles and responsibilities of each interface team member;
4. share regular reports on performance and critical issues;
5. risk is assigned to the party best able to manage it. Emerging risks are shared and a common management plan is agreed.

Beneficiary and beneficiary/stakeholder group/s

This refers to relationships between the Beneficiary and the beneficiary (end user) and/or stakeholder groups (e.g. affected communities). Just as consulting with end users and affected communities in early procurement planning and design stages has significant benefits to the development of specifications/requirements, it is essential to continue these relationships throughout contract implementation.

The needs of the beneficiary/stakeholder groups should to be understood, their requirements and concerns should be communicated to the contractor/consultant, and the risks and issues formally addressed. This requires a degree of ongoing coordination and channels of communication, so that end-users/community groups have a voice. The Beneficiary should develop a communications plan to keep end-users and communities engaged during contract execution. This is particularly important in large infrastructure contracts which have a significant impact on end users/communities. ESHS specialists would need to actively support these relationships.
Actively involving the community has several benefits including:

1. better control of the contractor's implementation and operational risks, which leads to improved contract outcomes;
2. reduced incidence of fraud and corruption (communities can often act as active watchdogs);
3. better management of ESHS risks (including Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA));
4. opportunity to identify and address grievances in a timely manner;
5. increased ownership and sustainability.

Prior to contractors mobilizing on site, the Beneficiary should implement a project grievance redress mechanism (GRM) for affected communities. This allows concerns and complaints from these communities to be intimated to the Beneficiary and contractor, and for these to be uniformly managed and formally addressed. Depending on the nature of the contract there may need to be special considerations for handling GBV and SEA complaints.
Section 6 - Contract Start-up

Section 5 - Preparing the Contract Management Plan

5.1 Why plan

Planning how, when, where and by whom the contract will be implemented, monitored, managed and administered is an important step to the ensuring that what is being purchased will be delivered. A Contract Management Plan (CMP) provides a structured and systematic approach (although not a document forming part of the Contract per se). An example CMP is provided in Annex 3.

The CMP need not be a large document, as the CMP should be tailored to the scope, nature, value, and complexity of the contract. For a low-value routine purchase the CMP could be as short as one page.

5.2 When to plan

The Beneficiary begins development of the CMP as early as possible in the procurement process. Preferably, the plan should be completed when signing the contract or promptly after it. The plan may be subject to periodic updates as needed.

5.3 How to plan

Each CMP should be fit-for-purpose. This means that the level of detail and length of the document should be proportionate to the scope, value, complexity and duration of the contract. The planning itself should be systematic. Typically, a CMP will cover some, if not all of the following:

1. contract management roles and responsibilities (ensure that each party has established the necessary authorizations and delegations for its personnel at the beginning of the contract as this is an important prerequisite to ensuring that all contracting decisions are valid and enforceable);
2. list of key contacts (e.g. the names and contact details of the key contacts for the Beneficiary and the contractor);
3. governance structure;
4. contract documents (including key contractual terms and conditions);
5. key deliverables and/or milestones (including the critical path and payment procedures consistent with contractual provisions);
6. Key Performance Indicators (KPIs) and a description of the standards or measurement process, if relevant;
7. key contract deliverables (identified and properly described, and updated to account for change orders during the execution of the contract);
8. reporting requirements (types of reports, times, contents etc.) and lines of reporting;
9. payment procedures;
10. record keeping requirements and procedures;
11. audit or independent assurance requirements;
12. change management or contract variation procedures;
13. issues management and escalation;
14. key contractual remedies;
15. risk management plan (which identifies potential risks such as delays in the contractor's right of access to site, payment delays, and other defaults in the Beneficiary's contractual obligations that could potentially lead to contractual disputes, as well as risk avoidance and risk mitigation strategies);
16. stakeholder engagement plan;
17. communication plan;
18. insurance coverage, if required;
19. guarantees and/or securities, if relevant;
20. price adjustment formula and circumstances, if relevant;
21. interface management (between contractors), if relevant;
22. contract closure procedures.

The CMP should be shared with the contractor and all parties involved in contract implementation, management, administration and governance. The Beneficiary should go through the plan with the contractor (face-to-face) to ensure that it is fully understood, especially the allocation of risks and responsibilities.

Section 6 - Contract Start-up

6.1 Transition

There is a transition period between contact award and the start of contract implementation (contract start-up). In some circumstances, this transition period can also involve a changeover from the previous contractor to the new contractor. Depending on the nature and circumstances of the contract, the transition may be something that itself requires planning.

6.2 Facilitating contract start-up

It is incumbent upon the Beneficiary to support, and where possible facilitate, the contract start up. This includes:

1. preparing a CMP and discussing it with the contractor;
2. ensuring that the contract management team is in place and fully resourced to undertake its responsibilities;
3. ensuring that the contract management team is familiar with the CMP, the contract management systems and processes, and all of the actions necessary for contract start-up;
4. ensuring that the Beneficiary completes its start-up obligations such as: site preparation, resolution of environment, social and other requirements;
5. assisting the contractor in obtaining the necessary documentation such as: visas, residency, work permits etc. for expatriate staff.

In some contracts there are contract effectiveness/commencement conditions that need to be met e.g. in civil Works contracts. These conditions are detailed in the contract documentation.
Where such effectiveness/commencement conditions exist, the Beneficiary should ensure that it meets its obligations in a timely manner. If this does not happen, it could lead to delays in start-up, cost compensation requests by the contractor, and even termination of the contract.

Generally, the Beneficiary needs to take the following actions:

1. properly analyze and understand contract's needs, including functional/ performance/technical requirements;
2. establish Key Performance Indicators (KPIs) with contractor's input, as appropriate;
3. ensure that the contractor submits an acceptable performance security, if required, in due time. Check that the amount, validity and text are in accordance with the tender documents;
4. if there is reason to suspect the performance security, verify the authenticity of the performance security with the issuing financing institution;
5. subject to submission of an acceptable advance payment guarantee ensure that the advance payment is made in a timely manner;
6. verify adequacy of any insurance policy taken out by the contractor prior to commencement of contract;
7. if the contract uses letter of credit as an instrument for payment, ensure that an error free Letter of credit is issued in a timely manner;
8. for works related contract, ensure that the contractor has submitted required ESHS documentation as required by the contract.

6.3 Insurance

Insurance provisions are valuable risk management tools. The Beneficiary has to ensure that:

1. the insurance policies are in place in accordance with the contract;
2. the coverages are adequate and within the thresholds specified in the contract;
3. the insurance policies contain the essential information such as coverage, duration, applicability etc.;

due diligence is applied to checking the authenticity of the insurance document and payment of insurance premiums.

Insurance Verification Checklist

Issuing company: Is the issuer of the policies a properly established and reputable insurer in the Beneficiary's country or abroad? Information on foreign insurance companies may be available through the insurance market regulators in the home country.

Payment of insurance premiums:

Amount: Does the insured amount properly cover the requirements of the contract?
Coverage: Does the policy fully cover all general and specific risks that may occur on the site?
Continuity: The Beneficiary should check proof of payment of insurance premiums and periodically request confirmation from the insurance company (say twice a year) that the respective policies are still valid.
Validity: Is the policy valid for the entire period required by the contract? Did the contractor submit the proof of paying the premiums to the insurance company? If payments are to be made by the contractor periodically, the Beneficiary would need to periodically request evidence of payments.
Insured parties: Does the policy expressly name both the Beneficiary and the contractor as jointly insured? Policies where only the contractor is insured are not acceptable as they transfer the entire risk on the Beneficiary.

Exclusions: Are there any exclusions? The Beneficiary should check the exclusions of the policies and should request that the insurance company confirm the exact list of exclusions and their applicability.
Deductibles: These represent the amounts that the insured party must cover from its own funds when an insured event occurs. Higher deductibles translate into cheaper insurance premiums, but also in higher risks, because the contractor and/or the Beneficiary will need to cover more of the damage. The Beneficiary should check the adequacy of the deductibles.

Terms and conditions: Check any terms and conditions that may render the policy invalid and under what circumstances or events. The Beneficiary should check any conditions attached to the insurance policies such as prior notification requirements and any other clauses that may affect its rights under the terms of the policy.

Table V – Positive and negative factors affecting relationship management

6.4 Some bottlenecks affecting contract start-up

Some examples of such bottlenecks are indicated below.

Permits

If the Beneficiary has to acquire planning, zoning, building permits or similar permissions for the Works, these should be obtained early in the process to allow effectiveness/commencement. If the processes for obtaining such permits is cumbersome or lengthy the Beneficiary should plan to initiate the process well in advance and take adequate measures to mitigate the risk of delays. Such measures may include:

1. acquiring the permits before entering into the contract;
2. if the final design must be completed before the permits can be obtained, then completing the design before inviting Bids/Proposals (rather than apply a Design and Build approach, for example).

Access to site

A common cause of complications in infrastructure contracts is delay in giving the contractor access to, and possession of, the site within the time stated in the contract. If no time is stated in the contract, the Beneficiary should give the contractor access and possession within such time that enables the contractor to proceed without disruption in accordance with the agreed program.
If the start of the program is delayed, this may result in justified time extensions for the Works, and increased costs to the Beneficiary. Given the consequences, it is good practice that Beneficiaries prepare themselves well before award of contract to enable them to give full rights of access and possession, or at a minimum sufficient access and possession to allow the work program to commence.

Delays of the resettlement of affected populations living on the sites of works as identified under the Environmental and Social Management Plan (ESMP) may also impact access to site.

If access to site is foreseen to be a potential obstacle for reasons of resettlement or land acquisition or other reasons, consideration should be given by IsDB to inserting a condition of effectiveness of the Financing Agreement or a condition of first disbursement.

Letter of credit

Letters of credit are commonly used where goods are being purchased from an overseas supplier. Where the Beneficiary has to arrange a letter of credit, it is important that this is done in a timely manner (to allow the goods to be shipped) and that the letter of credit is in the correct form. Errors in the letter of credit, require formal amendment, and this process results in delays. Further, as a copy of the issued letter of credit is a key document for the Bank to disburse funds using the “Irrevocable Commitment to Reimburse” disbursement method, it is important that the letter of credit is operational (e.g. with valid expiry date).
Customs clearance

Even if not normally an effectiveness condition, any expected custom clearance bottleneck should be addressed by the Beneficiary as early as possible. Customs clearance can in some places involve complex and lengthy processes. Delays can be caused by:

1. delayed payment of custom/import duties by the Beneficiary or the contractor (whoever is responsible);
2. incomplete documentation or documents that don’t comply with customs requirements;
3. inherent bureaucratic hurdles in clearance procedures.

The time and effort needed to handle the formalities may be identified in the PP&PS and factored in to the contract management plan. Appropriate mitigation measures should be put in place.

Three-dimensional approach

Managing time, cost and quality is a "three-dimensional" approach to contract management. Time, cost and quality can be seen as three constraints within which the project needs to be delivered. Changes in one constraint may necessitate changes in another to compensate.

Flexibility may be necessitated when negotiating contract changes and modifications. The contract manager may trade between constraints but must be aware of how a change in one will impact the others. Wherever possible, the contract manager should ensure that an optimal balance of time/cost/quality is maintained.

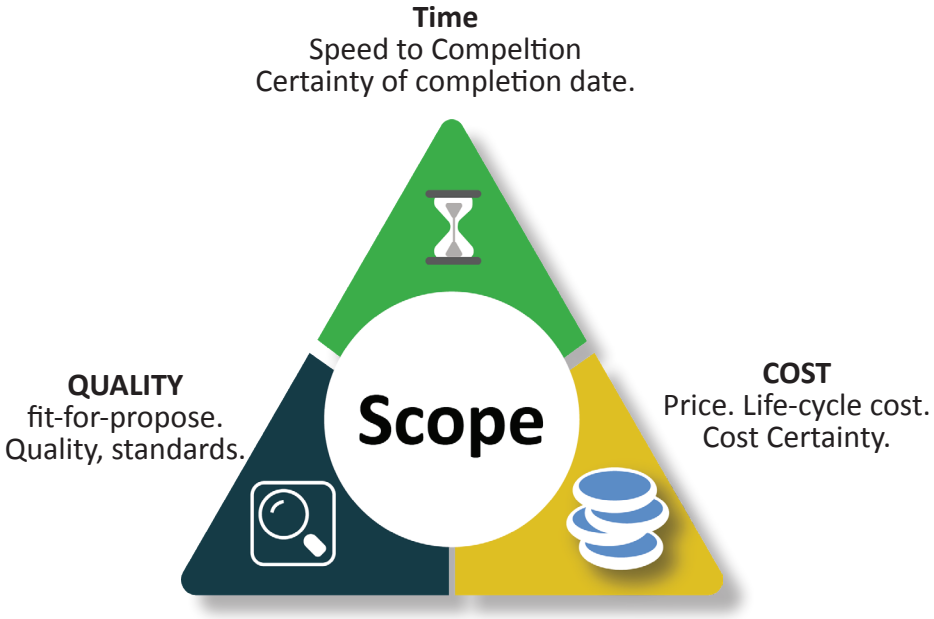

Figure VIII – Time, cost, quality (TCQ) interdependencies

7.1 Time control

An essential part of contract management is identifying the critical path. The critical path is the sequence of activities, which add up to the shortest time possible to complete the contract. Identifying the activities, the sequencing and other dependencies, and estimating times for completion, are the first steps in developing a robust and realistic schedule for contract implementation.

Specialized software is often used to prepare, update and monitor time schedules. To ensure that Contractor, Engineer and Beneficiary are using the same software it may be desirable to specify in the bidding documents the scheduling software that is required to be used.

Key factors in time control include:

1. developing a comprehensive, practical and realistic schedule of key activities (this may include key deliverables and milestones and projected contract completion date);
2. undertaking a quality assurance check of the schedule including identifying any flaws in logic or faulty assumptions;
3. ensuring that the Beneficiary and the contractor are working to the same schedule;

4. implementing an effective tool or system to track and monitor progress against the schedule;
5. appointing one person with the role of monitoring scheduled activities against actual, identifying delays and their impacts, and reporting directly to the contract manager;
6. ensuring early intervention when a possible or actual delay is identified;
7. implementing appropriate action to mitigate or manage a delay and recording the decision/s;
8. making a realistic adjustment to the schedule, where required, and communicating this to all relevant stakeholders;
9. understanding the impacts of a time delay on costs and quality, and making appropriate concessions.

Time extensions

The contract manager will often be required to decide when it is appropriate to allow a time extension. How the contractor manager resolves delays will depend on the facts and circumstances of the delay, and always based on the contract. These include, for example, a delay that:

1. is due to the Beneficiary being in default (e.g. failing to carry out its contractual responsibility which impacts on the contractor's ability to progress the work);
2. is due to new or extra work/services not included in the original scope.

A FIDIC Construction contract provides in principle for an entitlement to the contractor for extension of time for completion for any of the following causes (inter alia):

1. Variation instructed by the Contract Manager;
2. Exceptionally (unforeseeable) adverse climatic conditions;
3. unforeseeable shortages in the availability of labour or goods caused by an epidemic or governmental actions; or
4. delay attributable to the Beneficiary or other Beneficiaries' contractors on site.

The IsDB Smaller Works provides for a similar entitlement to the contractor under the contract provision for Compensation Events.

7.2 Cost control

Managing costs is essential to ensure that the contract is delivered within the contract price. The approach to managing costs will depend to some extent on the nature of the contract. The contract manager should put in place appropriate financial systems and reporting mechanisms that record the budgeted costs, track actuals and provide alerts where there are cost overruns. It would be helpful to have an assigned person for tracking costs against actual and reporting to the contract manager.

Cause of cost overrun	Action
1. The Beneficiary's design has flaws. 2. The Beneficiary's design is not capable of being implemented or constructed.	• On discovering the flaws, the contractor notifies the Beneficiary in accordance with the contract. • This may trigger a variation order and likely result in a cost increase.
3. Increased price of raw materials or products as a result of inflation, fluctuations in exchange rates, or changes in taxes, or duties or subsidies.	• should be managed in accordance with the contract.
4. Unforeseen conditions emerge, e.g. a significant difference in sub-surface ground conditions from what was expected.	• If contractually justified, the Beneficiary may approve the contractor's variation order.
5. Higher level of change orders/variations than expected (especially if they relate to high unit rates or prices).	• The Beneficiary needs to scrutinize all change order/variation requests and when granted, to track and control cost increases. • The contractor must provide proper contractual justification, analysis, method statements, evidence of the origin of additional costs and the reasonableness of the cost increase. Circumstances that may justify approval include: • necessary design modifications; • genuine errors or omissions; • unforeseen change in conditions that materially affects costs; • additional/reduced scope of works; • Beneficiary-directed acceleration or slowdown of contract progress; • delays caused by force majeure; • delayed, denied or restricted access to the site.

Table VI – Examples of causes of cost overruns

Price adjustment

Some contracts allow the price to be adjusted in specified circumstances. For example, where there is likely to be significant variations in the costs of raw materials. If applicable, the process for adjusting the price is detailed in the contract, including the appropriate formula to be applied. Contract cost control mechanisms include monitoring the correct application of price adjustment provisions, where included in the contract.

The Guidelines for Procurement of Goods, Works and Related Services stipulate that "Bidding Documents shall state either that Bid prices will be fixed or that price adjustments will be made to reflect any changes (upwards or downwards) in major cost components of the contract, such as labour, equipment, materials and fuel. Price adjustmentprovisions are usually not necessary in simple contracts involving delivery of Goods or the completion of Goods, Works and/or related services within eighteen (18) months, but they shall be included in contracts which extend beyond eighteen (18) months. However, it is normal commercial practice to obtain firm prices for some types of equipment regardless of the delivery time; in such cases, price adjustment provisions are not needed.

Prices may be adjusted by the use of a prescribed formula (or formulae) which breaks down the total price into components that are adjusted by price indices specified for each component or, alternatively, on the basis of documentary evidence (including actual invoices) provided by the Bidder. The use of the formula method of price adjustment preferable to that of documentary evidence. The method to be used, the formula (if applicable) and the base date for application shall be clearly defined in the Bidding Documents. If the payment currency is different from the source of the input and corresponding index, a correction factor shall be applied in the formula to avoid incorrect adjustment."

For further guidance and fully explained methodology in designing and applying contractual price adjustments, Beneficiaries may refer to the Guidance on Price Adjustment [reader may want to refer to separate Guidance Note on Price Adjustment for additional detailed guidance].

Payment Certificates

The FIDIC 2017 Red Book conditions require certification by the Engineer within 28 days of the Contractor submitting his statement and payment is to be made within 21 days by the Employer (Beneficiary). This means that Interim Payment Certificates (IPCs) need to be processed quickly so that disbursements can take place in time. IPCs are only interim in nature and the final amount due to the Contractor is only known accurately in the Final Certificate. Speed of processing of IPCs is therefore more important than absolute accuracy which is difficult to achieve in the limited time available. IPCs can be adjusted for in a subsequent month if found to be inaccurate.

A standard template should be adopted for IPCs, especially if the Beneficiary is managing several different contracts at the same time. A typical standard template for IPCs is shown in Annex 7.1. In Annex 7.2 a simple (Excel) spreadsheet is also shown which may be used to monitor the overall status of payments in a contract in order to ensure proper financial closure.

7.3 Quality control

It is good practice to monitor and assess quality as the contract is being implemented. This ensures that quality is controlled and consistently delivered. There are many different types of quality management and control systems. It is important to select an appropriate system or methodology based on the nature of the contract. The system should be agreed with the contractor and put in place before the contract commences.

Cause of cost overrun	Action
1. Flaws in the Beneficiary's design	• On discovering the flaws, the Beneficiary/ contractor immediately notifies the other in accordance with the contract. This may trigger a variation order and likely result in a cost increase.
1. The deliverables do not meet the required specifications.	• investigate to determine the cause/s. • apply the appropriate contractual remedies.
3. Poor quality assurance tests or inspections do not identify issues with the quality being delivered.	• Redesign the quality assurance tests or inspections to ensure that quality issues are found and dealt with.
4. Fraud and corruption result in inferior materials being used and poor quality outputs.	• Report suspected fraud and corruption to the Bank. • Apply appropriate contractual remedies.

Table VII – Examples of causes of poor quality outputs

Tests and inspections

In some contracts the Beneficiary is entitled to attend tests and/or inspections in the premises of the supplier/ contractor. The Bank's standard contract provisions require the supplier/contractor to provide all reasonable facilities and assistance related to the inspection/tests at no charge to the Beneficiary. However, the Beneficiary is required to bear its own travel and accommodation costs and expenses in relation to attending the inspection/ test. Any practice of demanding that the supplier/contractor meets these costs, including per diems, could create ethical issues, and is therefore not recommended.

Non-Conformance Reports (NCRs)

A good practice for monitoring quality is for the supervising Engineer to issue a NCR whenever there is poor work by the Contractor. The report shows the non-conformance of a certain activity and its deviation from the specification (defect). The Contractor proposes the remedial method which is to be accepted by the Engineer. The case identified in the NCR remains open as long as the remedial action is not fully completed. The NCR case is closed when the Engineer accepts the Contractor's remedial work. In case the contractor fails to remedy a certain defect the Engineer must follow up as per relevant contract condition. The issue of the Taking Over Certificate will depend on closing all pending NCR cases. A typical NCR is shown in Annex 8.

Section 8 - Managing Risk

8.1 Principles

Good international practice is that there is a fair and balanced allocation of risks between the implementing agency and the contractor. This practice is reflected in the Bank's standard form of contracts. The following factors help determine what is fair and balanced. Which party:

1. can best foresee/identify the risk?
2. can best control the risk and its consequences?
3. can best bear the risk?
4. suffers the most if the risk materializes?

The Beneficiary should be thoroughly familiar with the risk distribution of the contract. Any attempts during contract execution to materially modify standard clauses such as liability, care of works, insurance etc. should be avoided as it could have grave consequences on the allocation of risks.
As an example, the Table below illustrates how risk is distributed in a typical Bank's standard contract for Procurement of Plant.

Case study: risk distribution in Plant contract

Contractor's risk, loss or damage

1. Generally, the risk of loss or damage remains with the contractor until completion of the facilities, or the part thereof, in which such Plant is incorporated.
2. Negligence of the contractor

Beneficiary's risk, loss or damage

1. If an experienced contractor could not have reasonably foreseen or could not have reasonably made provision for or insure against, or such risks are not normally insurable in the market.
2. Any use or occupation by the employer, or any third-party authorized by the employer of any part of the facilities.
3. Any use of or reliance upon any design, data or specification provided or designated by, or on behalf of the employer, or any such matter for which the contractor has disclaimed responsibility for.
4. Negligence of employer.

Note: Transfer of ownership is not necessarily transfer of risk.

Box III –risk distribution case study

8.2 Risk register

The key risks to the contract should be identified and recorded in a risk register. This should be done during contract management planning. The risk register is normally part of the CMP. The Beneficiary should regularly update the risk register during contract implementation. Emerging risks should be proactively identified and analyzed, and mitigation measures taken, prior to the risk materializing and creating bottlenecks or liabilities.

8.3 Risks related to Beneficiary's responsibilities

The Beneficiary should closely monitor risks related to activities for which it is responsible, especially where these could impact on the contractor's performance. For example, delays relating to:

1. providing possession of site, and any permits to be acquired by the Beneficiary;
2. providing design and drawings to contractors and making any changes in design (when design is the Beneficiary's responsibility);
3. issuing/approving variation orders;
4. giving/responding to contractor's notices.

8.4 Insurable risks

The contract can require a party to insure against a particular risk/liability. Such clauses are valuable risk transfer tools that, if properly drafted, require the other party's insurer to pay for costs or losses associated with that risk materializing. Leases, construction contracts, license agreements, and nearly every other type of contract contain some insurance clauses.

Details about insurance provisions are explained in Section 6.3.Insurance

Example: Civil Works contracts: the typical insurances required in a Civil Works contract are:

1. for Works and Contractor's equipment;
2. against injury to persons and damage to property (including third party liability);
3. for Contractor's personnel.

Other types of insurances include:

1. professional liability insurance (consultancy services);
2. insurance as per INCOTERMS (goods).
3. Decennial (i.e. latent defect) liability insurance in civil law countries

Section 9 - Managing Contract Change

9.1 The need for change

To some extent, the need to change or vary a contract will depend on the nature and complexity of the Goods, Works, Non-consulting or Consulting Services being purchased. A one-off straightforward purchase of goods is unlikely to require changes to the contract (unless there has been an error) compared to a complex infrastructure contract which may require a number of changes as works progress. Despite the best efforts of the contracting parties, changes in a contract can be necessary for a range of reasons such as mistake, unforeseen conditions, emerging risks and changes in the Beneficiary's needs.

Furthermore, changes in a contract may also be wanted une application of Value Engineering provisions (re. Section 10).

9.2 Change management procedures

The key to managing change is to establish robust change management procedures and to ensure that these procedures are followed. Some tips to good practice change management include:

1. as early as possible during the contract execution phase, establish a formal and documented change management process consistent with the scope of the contract and contractual change management procedures;
2. have appropriate forms and clear procedures for requesting a change proposal (or change order), estimating the change (e.g. scope, costs, implications and risks), and approving the change proposal (the SBD/SRFP-Plant, for example, includes relevant change order procedure and forms);
3. clarify who is responsible for what during change management, and ensure that individuals have clear delegated authority to act, or to escalate change requests where there are issues;
4. familiarize everyone involved in contract change management (e.g. contract managers, consultants, contractors) with the procedures, documents, decision making process and record keeping requirements;
5. identify areas susceptible to change, evaluate risk, and proactively manage those areas;
6. ensure timely communication of change information to the relevant people;
7. make sure all relevant factors are taken into account when assessing change proposal (e.g. in terms of technical, quality, impact and risks (including on ESHS (if applicable)) and cost);
8. monitor the change management process to ensure that proper procedures are being followed;
9. ensure that changes are captured as Addenda to the contract, and approved at the appropriate level specified in the contract;
10. unless contractually justified and/or due to emergency situation, do not execute changes to a contract without the appropriate change documentation;
11. where relevant, comply with the Bank's requirements for prior review to changes to a contract;
12. adhere to the Bank's requirements where the changes relate to a contract with a firm that has been sanctioned by the Bank (see below);
13. keep records of all change orders, including the reasons;
14. at contract close-out, evaluate the changes and their impact/s on the contract cost, schedule and performance for future use as lessons learned.

9.3 Bank sanctioned firms or individuals

According to both the Bank's Procurement Guidelines and Consultants Guidelines and the Bank's Group Anti-Corruption Guidelines on Preventing and Combating Fraud and Corruption in Bank's Group-Financed Projets, the Bank does not finance any new contract, or any amendment introducing a material modification to an existing contract, where the contract is with a firm or individual that has been suspended or debarred by the Bank. This applies on or after the effective date of suspension or debarment. What is considered to be a material modification needs careful assessment on a case-by-case basis.

Section 10 - Managing Value Engineering

10.1 Definition

The term 'value engineering' (VE) refers to a technique for improving the value in a contract during the implementation phase. In this context value is the ratio of function to cost. Value can be increased by either improving the function or reducing the cost. It is sometimes described as "providing the necessary function/s at the optimal cost".

VE involves a systematic method of analysis. It requires the examination of the function of the project, system, product, item of equipment, building, facility, or service, with the objective of improving performance, reliability, quality, safety, and/or costs (including life-cycle costs). VE could result in the reduction of time or the substitution of better materials, more efficient methods, or less expensive inputs, all without sacrificing the needed functionality, longevity, or reliability. The fundamental premise is that the basic function/s is preserved and not reduced as a consequence of a VE improvement.

10.2 Benefits

VE analysis could help the Beneficiary to realize benefits such as:

1. design improvements;
2. cost savings;
3. improved constructability;
4. accelerated incorporation of new materials and construction techniques;
5. elimination of unnecessary functions and establishment of combinations of functions that are more responsive to the needs of the Beneficiary;
6. reduced environmental impacts;
7. reduced schedule;
8. reduced risk;
9. improved operations;
10. greater opportunity for stakeholders' participation in the process;
11. improvement of standards and/or policies.

VE may be undertaken at various stages during the procurement, including:

1. concept design;
2. preliminary design;
3. submitted Proposals and before the decision to award the contract;
4. final design stage;
5. contract execution e.g. during construction.

Where a contract allows for VE, the process for undertaking VE will be stipulated in the contract. Normally, the contract will state:

1. how the benefits arising from the VE will be shared between the parties;
2. the process for the contractor to prepare and submit a VE proposal;
3. the VE proposal is prepared at the contractor's cost, and the decision of whether or not to adopt the VE proposal rests solely with the Beneficiary;
4. the acceptable reasons for initiating a VE proposal, such as: reduction of costs to the Beneficiary, enhanced performance, shortened completion time, or the creation of some other benefit/s to the Beneficiary.

10.3 VE at the design stage

VE may be used when the design is in the schematic stage. VE provides an opportunity to review the proposed design solution/s, the cost estimate, and the proposed implementation schedule and approach, with the objective of refining the solution to find the best value for the money option.
Undertaking a VE workshop at the initial design stage can reap rewards for both parties. Workshop activities include:

1. determining and evaluating the essential functions of the present design;
2. realistic assessment of costs;
3. examining costs and determining the present design constraints;
4. obtaining relevant and up-to-date information from the best possible sources;
5. brainstorming to challenge the initial conceptual design and thinking and creating alternative design/s that meet the basic function required;
6. using sound, practical judgement;
7. assessing the technical and financial feasibility of the new design/s;
8. consulting experts to test the new design/s;
9. making a VE recommendation describing and justifying the new design.

10.4 VE pre-contract award

At pre-contract award stage, VE occurs in general as a result of an alternative bid having been submitted by the Bidder offering the best VfM or as part of a negotiation procedure. The Beneficiary

1. When applied at a pre-contract stage all the cost savings typically go to the Beneficiary,
2. Pre-contract award value engineering may be conducted with the preferred bidder to improve Value for Money of the bid,
3. Exceptionally design fees may need to be paid to the contractor,
4. It is often used in conjunction with negotiation,
5. It is best practice for this process to be overseen by a Probity Assurance Provider, as this helps to meet the requirements for transparency.

10.5 VE during contract implementation

During contract implementation, VE improvements may still possible if provided for in the contract. A contractor working on site every day is in a good position to identify VE opportunities and can provide a fresh approach to the construction methods or materials that could reduce the cost and/or time.

The purpose of including the VE provisions in the contract is to encourage contractors to investigate improved construction methods and materials, submit VE proposals and, upon acceptance, receive fair and reasonable compensation.

The VE process is described in the contract. For example, in a civil Works contract the contractor prepares a VE change proposal. This is submitted by the design-bid-build or design-build contractor to the Beneficiary. The VE proposal may suggest a change or substitution in the requirements, materials and/or methods prescribed in the contract, the schedule or the sequencing of activities.

10.6 Submitting a VE proposal

When the contractor makes the decision to submit a VE change proposal, the contractor would need to realize that the chance of the proposal being approved depends on the completeness of its preparation and the demonstrated benefits (value) to the Beneficiary. Sufficient information must be provided so that the Beneficiary can conduct a thorough evaluation within a reasonable period of time. Failure to provide adequate data may result in a request for additional data (which could delay the process) or may even result in the rejection of the VE proposal.

The following is generally good practice information (for exact required information, refer to the subject contract), for a contractor's VE proposal:

1. the proposed change/s, and a description of the difference to the existing contract requirements;
2. sufficient ESHS information to enable an evaluation of ESHS risks and impacts;
3. a full cost/benefit analysis of the proposed change/s including a description and estimate of costs (including life-cycle costs) the Employer may incur in implementing the VE proposal;
4. a description of any effect(s), implications or risks of the change on performance/functionality;
5. a description of the comparative advantages and disadvantages of existing contract requirements and the VE requirements;
6. a justification when an item's function or characteristic is being changed and any effect of the change on the end item's performance;
7. any pertinent objective test data;
8. any contract requirements that must be changed if the VE proposal is accepted, including any suggested specification revisions.

Section 11 - Managing Contractual Disputes and Remedies

11.1 Contract disputes

Contractual disputes could be time-consuming, expensive and difficult. They can damage purchaser/supplier relationships, cause delays and negatively impact contract execution. They could also substantially increase the contract price. It is therefore in the interest of contracting parties to work at avoiding disputes in the first place. This can be achieved, among other things, through developing good communications and working relationship management with the contractor.

Despite best of efforts, disputes can occur. When they do, every attempt should be made to find a fast, efficient and cost-effective resolution. The dispute should be managed actively and positively and at the right level/s. A quick resolution saves time, money and effort at later stages, if the dispute remains unresolved. On the other hand, delays in resolution can lead to rapid escalation of costs and further damage to relationships and ultimately termination of the contract.

Dispute resolution, in its widest sense, is any process which can bring about the conclusion of a dispute. Techniques range from the most informal discussions, through to formal negotiations, mediation and arbitration. Arbitration and litigation should be considered as resolution methods of the last resort.

Disputes may involve legal issues and procedures. Beneficiaries will often need to involve their legal counsel. The services of a specialized construction lawyer (possibly provided through the Engineer) may sometimes be required in case of high value and/or complex disputes.

11.2 Dispute management

Each contract should set out the procedures to be used when a dispute arises. Often these will focus on formal processes such as arbitration. However, much can be done, and should be done, before a dispute gets to the stage where only arbitration is the only option available.
For major contracts (such as Works, Plant), the contract documents specify the role of the Contract Manager (Engineer, Project Manager etc.) in making determinations on claims. All parties are expected to act in accordance with the contractual provisions in this regard.

Depending on the contract, alternative dispute resolution mechanisms include:

1. adjudicator,
2. dispute review expert, or
3. dispute review board.

If the contract provides for the appointment of such a dispute resolution mechanism, contracting parties should ensure that the mechanism is put in place in a timely manner. Trying to establish this mechanism after a dispute arises is a recipe for failure. Contracting parties should do their part to ensure the effective operation of the chosen mechanism. The Bidding Documents typically provides for an appointing authority for the adjudicator or dispute review expert/board member in case of disagreement between the employer and the contractor in the appointment process.

If a party is not satisfied with the outcome of the mechanism in place to settle disputes, it is in the benefit of the parties to try to settle a dispute amicably before the commencement of arbitration. Amicable settlement if carried out professionally and in good faith could save contracting parties time and cost while preserving their working relationships.

In FIDIC Conditions of Contract, an 'ad-hoc' Dispute Adjudication Board (DAB) is recommended where most of the work is done off-site, e.g. manufacture, transport, etc. of Plant while a `standing' or 'full-term' DAB is recommended for construction projects where much work takes place at Site. The 2017 FIDIC editions provide for a "Dispute Avoidance / Adjudication Board" (or DAAB), which is empowered to provide informal assistance to the parties.

The DAAB is comprised of either: One sole Member or: Three Members
[For a Contract estimated to cost above USD 50 million, the DAAB shall comprise of three members. For a Contract estimated to cost between USD 20 million and USD 50 million, the DAAB may comprise of three members or a sole member. For a Contract estimated to cost less than USD 20 million, a sole member is recommended.]

Case study: lack of Dispute Board

Situation:

A dam construction contract provided for the appointment of a three member DAB. The appointment was initially processed as per the contract. However, the contractor subsequently challenged (on reasonable grounds – the Employer nominated member had once worked for the government, which was not disclosed in his CV) the impartiality of the DAB member nominated by the Employer but the Employer disagreed. No agreement was reached between the parties for replacing that DAB member and furthermore the contract did not offer a clear-cut solution for this situation. Eventually a major litigation occurred as the (foreign) contractor alleged that their government had issued a warning advising its citizen to temporarily leave the region due to security concerns. After several months the contractor's government warning was withdrawn and the contractor returned to work with a full work team. The litigation lingered and no functioning DAB was available to facilitate amicable resolution. Eventually the case was taken to arbitration and the contractor was awarded a substantial amount in compensation.

Lessons to be learnt:

1. ensure that the contract has a safe provision on DAB – the 2017 FIDIC Red Book has a robust provision for cases when a DAAB member is challenged or repudiated;
2. both parties must be careful in nominating DAB members, and ensure that their credentials are fully disclosed, hence reducing the likelihood of a member being challenged subsequently.

Box IV Case study on lack of functioning dispute board

11.3 Arbitration

Contracts with international firms should apply international commercial arbitration in a neutral venue. International commercial arbitration has many advantages compared to national courts. As contracting parties (for contracts with foreign contractors) come from different jurisdictions around the world with different legal, cultural, political and ethical contexts, international commercial arbitration provides a neutral venue to settle disputes effectively. Beneficiaries should utilize this facility if the need arises.

Some of the aspects that may help in preparing for an arbitration include:

1. check the pre-arbitration procedures in the contract and assess whether you have complied with them;
2. conduct an early case assessment with legal advisors at the outset of the dispute, and review periodically as the arbitration progresses. This helps to get an early sense of potential outcomes and costs of the arbitration and make necessary preparation accordingly;
3. brief relevant management/authorities on: what the arbitration will be about, why the parties have been unable to resolve the dispute, how long the arbitration may take, expected costs and outcomes;
4. advise concerned staff and managers that an arbitration is about to be initiated so that they will be readily available (if needed) at the arbitration hearing (if possible, it may be a good idea to book possible hearing dates in their diaries to ensure their availability);
5. manage the risk of internal and external communications on the issues in dispute: relevant Beneficiary staff would need to be advised to avoid any internal or external communications outside of the established contract management protocol with legal counsel advice;
6. document retention notice: advise all involved to preserve/retain relevant documents by explaining the nature of the documents and how to retain them. In international arbitration documentary evidence is very important. Where the contract had a systematic recording mechanism, this may not be an issue.

11.4 Contractual remedies

Remedies are actions taken by a party to a contract to resolve a contractual issue in accordance with the contract conditions. Contractual remedies are available for both the Beneficiary and the contractor. The main purpose of such remedies is:

1. to ensure each party to the contract does its part;
2. to provide financial protection against damage, delay, defect and other situations calling for remedial actions.

Contracting parties are expected to be familiar with the contractual remedies available. The remedies available will depend on the nature of the contract.

Example: Beneficiary's remedies, based on contract for Works.

Remedy	Situations which may trigger this remedy
1. withholding of payments	• failing to perform work or obligation in accordance with the contract. • not meeting ESHS obligations.
2. Calling performance security	• contractor breaches its obligations under the contract.
3. Calling ESHS performance security	• contractor breaches its ESHS obligations under the contract.
4. applying liquidated damages (delay damages)	• when the contract/sections of contract are not completed within time stipulated.
5. termination	• upon the occurrence of a termination event identified in in the contract.

Table VIII – Example: Beneficiary's remedies

Example: Contractor's remedies

Remedy	Situations which may trigger this remedy
1. extension of time for completion, 2. cost compensation	• Employer is in default of the contract: e.g. delayed drawings or instructions, failed to provide access to and possession of the site. • consequences of force-majeure.
3. financing charges	• late payment by the employer
4. Suspension	• delays in payment, unavailability of funds.
5. Termination	• upon the occurrence of one of the termination events described in in the contract

Table IX – Contractor's remedies

Performance security

The performance security is an important and powerful contractual remedy tool available in Goods, Works and Non-consulting Services contracts. Despite having this provision in the contract, Beneficiaries/contract managers may not enforce it adequately.

Liquidated damages

Another important remedy instrument that the contract manager can use is liquidated damages (or liquidated damages for delay i.e. delay damages). These are easier to enforce because they are specified on a quantifiable basis.

Contracts provide a percentage or an amount to be deducted from the payments due to the contractor /supplier if it fails to deliver the Goods or the Works within the stipulated time. There is usually a limit on the aggregate amount (say, 10% of the contract price), and sometimes there is also a contract termination condition once the aggregate amount of liquidated damages amount has reached this limit.

It is important therefore to have a payment schedule that allows for the deduction of liquidated damages. For example, if the payment schedule was front-loaded and the supplier has already received 95% or 100% of the contract price, the Beneficiary would need to invoice and pursue the contractor/supplier to receive the damages due through other means.

Termination

Termination of a contract is the ultimate remedy for default. The table hereafter summarizes some of the key issues observed when Beneficiaries try to terminate a contract.

Issue about the termination	Recommended action
1. There is a lack of evidence supporting the Beneficiary's claim that the contractor has defaulted e.g. insufficient records	• Keep records of performance, delivery, communications, notices, dates and the people involved. • Ensure adequate book keeping facility is in place to be able to recover appropriate records.
2. No contractual justification for the termination.	• Before initiating the termination, check that the breach is described in the contract as a cause for termination.
3. Not complying with termination procedures as set out in the contract. This can lead to the following issues: a. manner the contractor leaves the site and the employer entering to have the works completed; b. valuation at date of termination; c. determination of payment including amounts for any loss or damage.	• Before initiating the termination, check the procedures and follow them.
4. Following termination, lack of timely action by the Beneficiary in completing the remaining Works leading to deterioration of the components of the Works already delivered (e.g. an in complete road is left to deteriorate for months).	• • Quickly assess the status of the Works and decide the most feasible option to complete the remaining Works e.g. force account, open bidding, limited bidding (shopping), direct contracting etc.

Table X – Contract termination issues

Case study: no record of early warnings

Situation:

An Employer issued three 18-months Works contracts to a contractor to rehabilitate rural roads. Six months after contract signature, the Employer found that the contractor was performing only in one contract and there was no progress in the other two. The Employer informed the contractor several times to rectify this. After twelve months, the Beneficiary decided that the two contracts with no progress should be terminated.

Issue:

When the Beneficiary decided to issue the letter of termination, it found out that all previous notices to the contractor were verbal and there was no written documentation to substantiate them.

Result:

The termination process was delayed for several months with all the consequences**.**

Box V – Case study: no record of early warnings

Case study: Beneficiary causes the problem

Situation:

In a Works contract, the Beneficiary tried to terminate by using one of the contractor's defaults that could lead to termination i.e. the contractor abandons the Works. The contractor contested stating that it had given the required notice to the Beneficiary on its suspension of Works due to delay in contractual payments by the Beneficiary. The contractor provided evidence of how the Beneficiary had been delaying payments which resulted in serious impact on the construction cash flow to the extent that the contractor was not able to sustain the site operations.

Issue:

Termination due to the alleged contractor's default was indefensible.

Lessons to be learnt:

3. Understand the provisions of the contract and how they apply;
4. Apply the contract provisions;
5. make payments on time when Work has been delivered in accordance with the contract;
6. be mindful of the consequences of undue delay in payments to a contractor, which in this case resulted in stopping site operations because of cash flow problems;
7. "crying foul" after creating a problem does not help.

Box VI– Case study Beneficiary causes the problem

11.5 Fraud and corruption

The Bank requires compliance with the IsDB Group Anti-Corruption Guidelines on Preventing and Combating Fraud and Corruption in IsDB Group-Financed Projects and sanctions procedures, and as described in the Fraud and Corruption (F&C) provisions of the contract.

Any allegation related to an integrity violation must be promptly referred to IsDB's Integrity & Ethics Department.[2]

In summary:

1. Contracting parties and all those that are involved in the delivery of the contract, are required to observe the highest standards of ethics and refrain from F&C during the procurement process and contract execution of IsDB-financed contracts. All parties involved in the execution and management of contracts should therefore hold themselves and their staff to the highest levels of integrity and professional conduct;
2. Contracting parties should take F&C seriously and take appropriate remedial actions (such as removal of personnel from site and contract termination).
3. The Bank has the right to inspect the Site and/or the accounts and records relating to the procurement process, selection and/or contract execution, and to have such accounts and records audited by auditors appointed by the Bank if requested by the Bank.
4. Any obstruction to impede the exercise of the Bank's inspection and audit rights constitutes a F&C with all the consequences.

F&C practices could manifest themselves in different forms. Not all poor contract execution is necessarily attributed to F&C. Some examples of red flags include the following:

[2] https://www.isdb.org/who-we-are/integrity/integration-and-anti-corruption-policy

Red flag	Possible Mitigation measures
1. Poor quality of supply, or work or deliverables, including change orders that are not contractually justified or unjustified changes in specification and/or contract conditions.	• third party monitoring; • consider independent technical audits for high risk contracts; • institute strict acceptance testing; • include factory inspection and test witnessing, sound physical verification; • involve end-users and communities as appropriate from the start.
2. Inflated measurements by supervision consultants (collusion) in admeasurement works contracts, or payment not in accordance with the contract.	• at the PP&PS stage, consider other contracting mechanisms by assessing the pros and cons (such as design and build); • ensure quality of supervising engineer in the technical proposal; • third party monitoring.
3. Consistently undue delays.	• include intermediate timelines for monitoring; • monitor timelines closely.
4. Inconsistent, missing or apparently altered contract documents, progress reports, test results etc.	• require the contractor to institute strict documentation quality assurance and recording keeping system from the start of the contract; • monitor closely the application of the system.
5. Inflated or duplicate or false invoices.	• Increase diligence when paying invoices and strengthen internal control including audit controls.

Table XI – Fraud and corruption red flags

Section 12 - Special Considerations: Works and Plant Contracts

Managing infrastructure contracts such Works and Plant demand additional considerations in addition to the generic aspects described earlier.

12.1 Project management software

Complex contracts, such as civil Works and complicated supply and installation contracts, normally require the use of proper project management software. The chosen software should enable the contract management team to monitor the physical progress of the Works/Plant against the planned schedule, and actual payments made against budget. The Beneficiary should ensure that the contract management team is properly trained in the chosen software, and that the software is deployed and operational from the start of the contract.

Infrastructure contracts (such as the FIDIC Conditions of Contract for Construction 2017 (Red Book)) require that the work program is prepared and revised using the programming software named in the specification (if not stated, the programming software acceptable to the Engineer). There are many types of software that are based, for example, on tracking the critical path (Critical Path Methodology (CPM)). The Beneficiary may choose software which has been reviewed and pre-approved. If the Beneficiary wishes to name a software in the specification, it is recommended that the words “or substantially equivalent” be added. If not included in the specification, the Beneficiary should ensure that the contract management software to be used by the contractor is fit for the purpose of the contract.

The software chosen to support contract implementation should serve at a minimum:

1. provide additional assurance by the contractor of adequate, planning, scheduling, progress, financial management, risk management and reporting so that the activities under the contract are carried out in an orderly and expeditious manner within the contract end date and the milestones specified in the contract;
2. provide additional assurance by the contractor of the coordination of the work of the contractor and its subcontractors;
3. enable the Beneficiary/Contract Manager to monitor the progress of the Works/Plant and evaluate the contractor’s progress payments;
4. assist the Beneficiary/Contract Manager to evaluate the potential impact of proposed changes to the contract;
5. assist both the Beneficiary/Contract Manager and the contractor in detecting problems, risks and issues to enable taking timely corrective action and provide a mechanism for determining and monitoring such corrective actions.

The Beneficiary/Contract Manager should use the software to determine if the contract is starting to fall behind. It may also give an early warning that the contractor is having difficulties that may result in a claim against the Beneficiary. This could be done, among other things by:

1. requiring that major revisions to the contractor’s work program should be preceded by a full documentation of the status of the contract. Minor revisions (such addition of changes and unanticipated events to the last update to determine their impact) may be done on a contemporaneous basis;
2. requiring a full and complete update of the status of the contract prior to modifying the approved baseline plan;
3. checking that the actual start and finish dates and remaining durations for work in progress matches the actual situation on the ground;
4. carefully reviewing to determine if the contractor is deviating from its plan and the reasons why;
5. reviewing the near-term critical and near-critical paths so that the risk is mitigated in a timely manner;
6. checking signs of understaffing or lack of progress on non-critical but soon to be critical activities.

12.2 Delays due to the Beneficiary

Lack of timely readiness and planning (prior to entering a contract) by the Beneficiary is known to be a major cause of delays in execution of infrastructure contracts.

Case study: polder land upgrade

Situation:

A Beneficiary issued a Works contract for upgrading infrastructure. There were significant land related issues .

However, the Beneficiary tried to advance the land related issues in parallel with the procurement process. The Beneficiary awarded the contracts while some land issues were still not resolved.

Two years after contract award, the Beneficiary was not able to fully resolve the land related issues. The contract was revised with reduced scope and contract execution was delayed by about 18 months**.**

Lesson learned:

1. Beneficiaries should apply a project management approach and an appropriate software tool covering: site acquisition, resettlement, environmental clearance, coordination with other relevant government departments, consistency of design review and contract selection and implementation plan.
2. The Beneficiary should take prompt action on activities identified or could fall on the critical path.

Box VII– Case study: Infrastructure upgrade

Case study: new water treatment system

Situation:

A Beneficiary issued a Works contract for a system to rehabilitate drinking and waste water. This is a design and build contract and there were several design changes.
Initially it was a lump-sum contract and then it was converted to an ad-measurement contract. The contract was amended seven times and had three variation order price increases. There were many non-tendered items in the revised bill of quantities.

Lesson learned:

Choose the right contracting strategy from the outset based on a number of considerations (see Annex 1) instead of trying to change when the contract is in progress.

Box VIII– Case study: new water treatment system

12.3 Variations

Considerations to managing variations in Works admeasurement contracts. These may include:

1. verifying supporting documents (specifically to check how appropriate or necessary are the proposed variations);
2. checking how the variation was valued (i.e. were the existing contract rates correctly applied; if new rates were used, were they correctly constructed based on fair market prices etc.);
3. checking if a change in unit rates would be appropriate or required according to the contract;
4. checking if the time impact (extension of time for completion) has been correctly assessed and is duly justified;
5. checking if the variation has taken due consideration of ESHS aspects, as applicable;
6. checking the level of approval required for the variation (e.g. approval by the Contract Manager or Beneficiary).

12.4 Site visits

One of the key responsibilities of the Beneficiary throughout the execution of an infrastructure contract is to maintain a good understanding of what is happening on site. This cannot effectively be done without inspecting the site. Beneficiary's technical experts should be actively involved in the site visits and it is recommended that the Beneficiary undertakes joint site visits with the Contract Manager. This will ensure that any issues identified during the site visits can be discussed with the Contract Manager, and appropriate action agreed.
The Contract Manager should undertake regular site inspections to ensure activities are progressing in accordance with the contract requirements. The Contract Manager should ensure that it has the right skills available to inspect the activities being undertaken and that inspections are regularly carried out jointly with the contractor. The types of aspects that should be checked during a site visit inspection include:

1. follow-up of previously agreed action
2. actual progress of Works against planned/scheduled;
3. quality of works (do the works comply with the quality requirements in the technical specifications?);
4. deployment of staff and labor in accordance with the contract;
5. contractor's materials and equipment (does the Contractor have all necessary equipment and construction materials to complete the Works per the specifications and on time?);
6. health and safety with regard not only to the contractor's personnel, but also to public safety (have all necessary health and safety measures been implemented?);
7. environmental issues (is the contractor's Environmental Management Plan being enforced appropriately?);
8. adequacy of measures in place to manage risks of gender-based violence and sexual exploitation and abuse;
9. is the contractor's code of conduct being implemented effectively?
10. are permits in place and is documentation up-to-date?

12.5 Engineer/Contract Manager's documents

The Engineer/Contract Manager should have a set of desk control documents available for inspection. At a minimum these should include:

1. measurement logs: for admeasurement contracts;
2. activity reports: daily, weekly, monthly showing in tabular format quantities of work done, number of staff and equipment involved, consumption of materials, testing and samples, ESHS reporting etc. The reports should also mention any specific events, incidents, weather conditions etc.;
3. issues log: which records all issues that have occurred during the execution of Works, with appropriate descriptions and the date, cause, remedial measures taken, responsible party, status of remediation etc.;

4. variation orders: all variation orders showing the justification for the changes in quantities, prices and times of completion;
5. communications: records of all communications with the contractor and any third party;
6. inspection and control logbook: being a record of technical inspections which are either conducted by or witnessed by the Engineer/Contract Manager , audits and controls performed by any relevant party (e.g. Beneficiary, environmental agency, financial control, local authorities etc.).

12.6 Design and Build contracts

While Beneficiaries are used to the traditional design-bid-build-(DBB) contracts (e.g. contracts based on the FIDIC red book), managing integrated contract delivery approaches such as design and build (D&B) can pose some challenges. This section is devoted to managing D&B type of contracts.

Success factors

Beneficiaries should be mindful of the following factors when managing D&B type contracts:

1. D&B requires a higher level of trust and partnering comparing to the DBB approach;
2. D&B requires the Beneficiary to develop definitive, functional driven performance criteria as opposed to detailed design and drawings;
3. D&B is a scope driven effort;
4. the contractor owns the design;
5. establish the contract management team early and keep it together;
6. designers have been doing design for Beneficiaries and constructors have been doing construction of the designed Works in the traditional approach (DBB) whereas this approach demands a construction team integrated with design professionals.

Performance/functional criteria

It is helpful to realize that in DBB, requirements are communicated to the contractor through complete drawings and specifications. In contrast, the Beneficiary communicates its requirements for a D&B contract through the description of the performance/functional criteria. The contractor develops the design based on the latter.

Design review

In D&B approach, because the contractor owns the design, the Beneficiary/Contract Manager's design review, unless otherwise specified, is normally to verify that the design solution complies with the performance criteria. The main reason for this is to ensure that the legal design liability remains with the contractor.

Initial design meeting

It may not be possible in the Bidding Document/Request for Proposal for the Beneficiary to elaborate every potential preference or expectation that it may have in a complex D&B contract. Therefore, after the contract is awarded, it is good practice to have an initial design meeting with the contractor. An outline for the agenda for such a meeting may include:

1. breakdown of the design scope into specific features of tasks (that can be designed, reviewed, approved and constructed in that order) and identify features where the contractor may have design flexibility;
2. identify the features that have limited or no option for variance during the design process so that there is

clear understanding from the outset;
3. identify any design criteria that may have been incorporated by reference in the contract;
4. identify any features whose design is contractually open to interpretation;
5. discuss the list of preliminary design solutions for all features of Works in scope;
6. discuss the Beneficiary/Contract Manager's review process of design submittals and establish a communication system;
7. develop a system whereby a difference of professional judgment that is not clearly covered by contract language can be expeditiously resolved.

Contract administration

DBB contract administration is based on the administration of the design consultants, and their deliverable, and administration of the construction contractor, and their Works. In a D&B contract, both the design and construction are the responsibility of the contractor.

The cultural shift from a DBB to a D&B contract administration demands that both the Beneficiary and the contractor create a contract administration system that supports the development of design and is responsive to the D&B contract. The Beneficiary/Contract Manager needs to be aware of the time element in D&B administration and the fact that the contractor expects the Beneficiary/Contract Manager to collaborate by expediting design reviews. Given the significance of close coordination during the design phase, it is recommended to require that the contractor has an experienced design professional to manage the internal and external coordination during the design phase.

If the Beneficiary has separate design and construction administration systems, they both need to be integrated and operating throughout the delivery of a D&B contract.

Payments

The scope of a D&B contract is defined by a set of performance criteria to be completed within a specified period of time. This normally requires the contractor to offer a lump sum price (broken down into activities in order to facilitate payments). As cost and time are already set-out in the contract, quality is constrained by both cost and schedule. As a result, at the outset of the contract, it is important to both the contractor and the Beneficiary to have a clear understanding and agreement on the requirements for quality.

Constructability

One of the stated benefits of a D&B approach is improved constructability due to significant contractor's input during the design phase. Unlike DBB, a D&B contract design can be thought to be under continuous constructability review. To maximize the benefits of a continuous constructability review, the D&B contract administration system must play an enabling role to facilitate this critical process.

Progress payments

Beneficiaries are normally used to unit price contracts where measured quantities of unit price items are used to compute progress payments and where the risk for quantity overrun is absorbed by the Beneficiary. The transition to a lump sum D&B contract should be carefully managed to ensure that the contracting parties understand the financial implications.
Prior to the first progress payment, in order to facilitate payment, the two sides may agree on a schedule of values i.e. breakdown of each lump-sum item in the contract into component parts of design deliverables or

construction Works for which progress payments may be requested. This essentially requires the D&B contractor to assign a value for each activity in its program. Such a schedule of values shall include enough details to facilitate continued evaluation of payment application and progress reports. Upon review and approval by the Beneficiary/Contract Manager, this allows the development of a periodic payment estimate to be made for those activities that were underway during the pay period. This helps the Beneficiary/Contract Manager to ensure that the contractor's financial progress reasonably reflects the physical progress. It also ensures that the contractor continues to get progress payments that closely follow the physical activities.

12.7 Contractor's claims in construction contracts

The FIDIC conditions of contract define a claim to be a request or assertion by one contracting party to the other party for an entitlement or relief under any clause of the conditions of contract or otherwise in connection with, or arising out of, the contract or the execution of the Works.

Through good contract management practices, the Beneficiary and Contract Manager should take measures to avoid situations that lead to contractor's claims. Some of these measures include:

1. having a thorough understanding of the contract document and how the contract is to be implemented;
2. ensuring timely payment for successful delivery;
3. ensure that there is a proper definition of scope of works, appropriate specifications and timely provision of design and drawings (if it is the responsibility of the Employer);
4. provide timely possession of site;
5. ensure timely responses to contractor's notices.

Role of Contract Manager

The Contract Manager (Engineer, Employer's Representative etc.) has a key role in making a fair determination of the matter or claim, in accordance with the contract, taking due regard of all relevant circumstances. Agreement or Determination is regulated by, for example, sub-clause 3.7 of FIDIC: Conditions of Contract for Construction, 2017, which requires the Engineer, when carrying out its duties under the sub-clause to act neutrally between the contracting parties and shall not be deemed to act for the Employer. Similarly, this matter is treated in, for example, sub-clause 3.5 - Agreement or Determination of FIDIC: Conditions of Contract for EPC/Turnkey, 2017, which states to the effect that when carrying out its duties under that sub-clause, the Employer's Representative shall not be deemed to act for the Employer.

Requirements for contractor's claims

In general, the contract documents define the primary relationship between the parties and form the basis of claims. Claims should include statements of the contractual and/or other legal basis.

Timely notice and submission

Timely notice and timely submission by the contractor is essential as otherwise delayed notice and submission have consequences based on the contract.

Proof of entitlement and damages

The Contract Manager is expected, as much as possible, to ensure that the contractor's claim is substantiated by an analysis of actual costs and supporting documentary evidence such as invoices, reports and records etc.

Assessment of claim

The Beneficiary/Contract Manager assesses the claim to ensure that the contractor has demonstrated:

1. that it is entitled under the contract to claim for the cost/time;
2. that it has indeed incurred the additional cost/time, and the extent of the claimed cost/time is reasonable;
3. that there is a cause and effect between the Beneficiary's default and the damages incurred by the contractor.

12.8 Claims due to delays in execution

Determination of time extension

Granting a time extension to a contractor has implications both for the implementation schedule and price increase. The Beneficiary/Contract Manager should ensure that the contractor provides sufficient details including an updated contract schedule and impact schedule (of delay events) clearly justifying the requested time extension. Determination of costs

The Beneficiary/Contract Manager should carefully check the determination of any costs associated with a compensable delay. Some examples include:

1. Additional labor or equipment costs: When a contract is delayed due to action of the Beneficiary, the contractor may normally claim for additional labor or equipment. When claiming for labor or idle equipment, the contractor needs to show that the labor or equipment could not have been discharged or used in other activities without risking unavailability for the contract when needed.
2. Site and home office overhead costs: While direct cost of the contract may reduce during the delay period, the site and home office overhead costs (normally fixed) continue to accrue during the delay period. A certain portion of the overhead cost may therefore not be absorbed or may be extended because of the delay. The Beneficiary/Contract Manager should ensure that the contractor's claim for unabsorbed overhead costs is reasonably demonstrated.
3. Profit: In addition to recovering overhead, the contractor may be able to recover profit on the additional costs. The Beneficiary/Contract Manager should verify the contract to check whether the relevant contractual provision allows cost compensation only or cost + profit. Unless the profit % is already specified in the contract, the Beneficiary should ensure that the claimed profit rate is reasonable.

12.9 Assessment of contractor's claimed amounts

Reasonable cost

The Contract Manager is expected to check that, whenever applicable, the contractor's claims are based on contractual unit rates for equivalent or similar items. When no equivalent contractual unit prices are applicable (example a new item of work), the quantification would need to be based on actual historical costs recorded and maintained as the costs incurred on the contractor's books. When this is not applicable, market rates may be used as a proxy.

Analysis of contractor's billing

In a change order situation, the first determination that the Beneficiary/Contract Manager needs to make is to check whether the claimed extra work is not an item which is contractually in-scope and that has been improperly characterized as an extra by the contractor. In such a situation, it is important to understand the nature of the

work claimed by the contractor as extra work. Once this is established, the claimed costs should be checked to be related to the extra work and reasonable as mentioned above.

Analysis of labor, material and equipment costs

A contractor normally breaks its claimed amount in terms of labor, material and equipment.

There are different methods and approaches in the industry to determine ownership and operating costs i.e. capital recovery by a contractor. The Beneficiary/Contract Manager may refer to the most common methods of calculating ownership and operating costs.

The Beneficiary/Contract Manager should assess that the method applied is reasonable and appropriate. For relatively complex claims, it would be helpful to seek the support of an experienced claims expert, as there is often a disagreement between the contractor and the Beneficiary/Contract Manager as to which costs are to be covered and how they are calculated.

Overhead costs

Construction claims by their nature may include, as a component, a demand for overhead costs. Both field overhead and home office overhead may be elements of a claim incurred because of a delay

1. Field overhead: are direct contract costs such as power, water, communications which may easily be identifiable.
2. Home office costs: The concept of unabsorbed overhead is based on the assumption that during a delay period the cash flow that should have been generated by the delayed contract is no longer available. Thus, home office overhead costs, which in general are fixed, are absorbed by the contractor's other activities. The allocable portion of home office overhead costs attributable to delays is however not so straight forward. One method applied by contractors to determine unabsorbed home office over head is the Eichleay formula (see below). Generally, before the formula is applied, the contractor should show that it was imprudent or impractical for a reasonable contractor to take other work during the delay period given the facts and circumstances.

Eichleay formula

The Eichleay formula is one approach for estimating the amount of unabsorbed home office overhead resulting from construction delays. Some of the aspects that the Beneficiary/Contract Manager may request additional information from the contractor to support it are:

1. have the delays decreased the stream of direct costs?
2. are the contractor's home office overhead costs pertinent to make sure that questionable costs are not included?
3. was there a possibility for the contractor to shift the overhead costs to other contracts concurrent with the contract being challenged? The contractor must, for example, show that it was unable to take other concurrent work.

Case study: Eichleay formula

This example is a calculation to determine the portion of the home office overhead to be allocated to the contract. The contract is expected to pay its fair share of home office overhead and this is a way of calculating that amount.

Basic Eichleay formula:

1. Allocable overhead. This is a calculation to determine the portion of the home office overhead that should be allocated to this contract. This contract is expected to pay its fair share of home office overhead and this is a way of calculating that amount.

$$\text{Contract's allocable overhead} = \frac{(\text{contract price} \times \text{total home office overhead})}{\text{total firm billings}}$$

2. Daily allocable overhead. Next, we want to determine a daily rate for the allocation of home office overhead.

$$\textbf{Daily allocable overhead} = \frac{\text{contract allocable overhead}}{\text{contract period in days}}$$

3. Home office overhead damages. This is simply a matter of multiplying the number of compensable delay days by the daily allocable overhead rate.

$$\text{Home office overhead damages} = \text{daily allocable overhead} \times \text{compensable delay days}$$

Worked example:

The contract price is $10 million. The contractor has suffered compensable delays of 20 days. During this period, the contractor has 10 contracts whose aggregate value is $80 million. The contractor's home office overhead during this period totaled $2 million. The duration of this project, including excusable delays is 400 days. The sample calculation of home office overhead damages follows:

Contract's allocable overhead = 10 x 2/80 = $0.25 m = $250,000
Daily allocable overhead =250,000/400 = $625 per day
Home office overhead damages (unabsorbed overhead) = $625 x 20= $12,500

The contractor may therefore claim $12,500 in compensation for home office overhead that should have been allocated to this contract because of the increased duration of the contract.

Box IX – Case study: Eichleay formula

12.10 Construction contracts Taking-over

Once the Works or Plant are substantially completed in accordance with the contract except for any minor outstanding work and defects (as listed in the Taking-Over Certificate) which will not substantially affect the safe use of the Works or Plant, the taking-Over Certificate/completion certificate is issued and the Beneficiary takes over the Works (or part of, as applicable). For Plant, for example, this is followed by commissioning (including functional guarantee tests) and operational acceptance certificate.

At completion, depending on the contract, the responsibility for care and custody and the risk of loss normally passes to the Beneficiary and the defects liability period commences. Prior to taking-over by the Beneficiary, the Contract Manager is expected to ensure substantial performance by the contractor including the following:

1. required tests successfully completed and the Works or Plant are substantially completed as specified;
2. any ESHS design considerations have been delivered,
3. contractual requirements have been met by the contracting parties;
4. contractually required documentation (such as operation and maintenance manuals, as-built records etc.) have been handed over by the contractor and are acceptable;
5. equipment warranties, and documentation for any installed equipment are provided;
6. all surfaces are reinstated (unless for parts considered minor and included in the list included in the Taking-Over Certificate to be carried out by the contractor);
7. ancillary features such as borrow pits, quarries, disposal sites are restored to according to permits, consents or the Contract Manager's instructions
8. 8. the site is clean of debris and any required reinstatement
9. any change orders are reviewed to ensure that these have been completed;
10. Beneficiary notes are reviewed to ensure that any requests have been attended to and that the site is ready to be handed over;
11. demobilization (equipment, personnel etc.) from the work site is done in an orderly manner.

12.11 Defect Liability Period

Any outstanding work at the time of completion and defects due to design, workmanship etc. as specified in the contract is remedied by the contractor at its cost and risk. The defect liability period is important as it is the opportunity to have any outstanding Works (that did not affect substantial completion) completed and to have the contractor repair, replace or make good any defects concealed in the Works and may become apparent during the defect liability period.

The Beneficiary should ensure that appropriately trained staff operate/maintain the Works/facilities, as, depending on the contract, improper operation or maintenance of the Works/facilities (not attributable to matters for which the contractor is responsible) by the Beneficiary or operation of the Works/facilities outside the specifications provided in the contract may not be covered under the defect liability period.

Section 13 - Special Considerations: Managing ESHS Risks in Works Contracts

13.1 Background

Ensuring that ESHS requirements are implemented in Works contracts requires professionals with appropriate skills to be part of the teams managing and executing the contract. Such professionals may be required on part time or full-time basis, depending on the nature of the ESHS risks and impacts and the role they are performing. Along with the ESHS requirements for the Works, the need for specialist environmental, social or health and safety skills or experience is established during the preparation of the Procurement Documents. Guidance and information on how to integrate ESHS requirements into the Procurement Documents (including for specification of Works and TORs for Contract Managers) is provided in the Guidance Note on Gender Considerations, Social and Sustainable Public Procurement.

This section describes the responsibilities of the ESHS specialists (as part of Contract Manager, contractor, Beneficiary) during contract start-up/mobilization, contract implementation and contract close-out (taking-over). It describes not only the responsibilities according to the role/organization, but also, where appropriate, the interface that these roles may have with each other, and with other bodies such as regulatory authorities (with the right to inspect and monitor construction activities regarding ESHS performance).

13.2 Relationships and responsibilities

To understand fully their responsibilities, environmental, social or health and safety specialists need to appreciate the broader responsibilities of the role that they are performing (e.g. Contract Manager, contractor or Beneficiary), and the soft and hard skills that these roles require. A description of the relationships between these roles, their areas of responsibility and the skills required to perform the role are provided in The General Principles, and Managing Relationships sections earlier in this guidance note.

In addition, earlier sections of this guidance note set out where ESHS interacts with broader contract management actions (for example in the Contract Management Plan preparation,) and it is recommended that this section is not read in isolation of the whole guidance note.

13.3 Overview of the Roles

Beneficiary's ESHS Specialists

The Beneficiary should monitor the Contract Managers' performance in ensuring that the contractor (including their sub-contractors) delivers to the ESHS contractual requirements through mobilization, construction and demobilization.

The Beneficiary should assess the Contract Manager's performance through: review of the regular reports (usually monthly) on the contractor's ESHS performance provided by the Contract Manager; how the contractor is performing on site (Beneficiary site visits); and on how effective the project meetings are in dealing with ESHS issues.

In addition to the regular reporting there should be a requirement for the Beneficiary to be immediately notified of any serious ESHS event (e.g. serious accident or death on the site): how the Contract Manager responds is an indicator of the Contract Manager's performance. Timely reporting (as set out in the applicable contracts) of ESHS performance and outcomes enables the Beneficiary to identify opportunities for improvement, address poor performance issues, and take contractual remedial actions as appropriate.

In addition to reviewing the written reports, it is essential to have regular meetings with the Contract Manager to review ESHS performance as against the contractual requirements and identify any emerging risks or issues.

Contract Manager's ESHS Specialists

The Contract Manager is responsible for supervising/monitoring that the contractor delivers the ESHS requirements of the contract.

The Contract Manager's ESHS specialists would need to be aware of the duties, roles, delegation and authority assigned to them and be fully conversant with the relevant provisions of the contract including the applicable ESHS requirements and specifications. As an example, the Contract Manager's ESHS specialists should review any contract change proposals to ensure that the proposal has given adequate attention to ESHS aspects.

In carrying out their function, the Contract Manager's ESHS specialists should also be mindful of the roles of other key Contract Manager's staff (such as the resident engineer), and respect the relevant communications protocol of the contract which describes who is authorized to issue communications and other requirements.

Contractor's ESHS Specialists

The contractor's ESHS specialists should advise the contractor on the measures necessary to ensure compliance with the Works/Employer's ESHS requirements during execution of the Works.

The contractor's ESHS specialists should serve as the "eyes and ears" on the site to support and ensure that the contractor's personnel (including sub-contractors) are all complying with the contractual ESHS obligations. They therefore need to maintain professional relationship with all the contractor's personnel.

The contractor's ESHS specialists should ensure that the necessary equipment, material and other resources are provided to fulfill the requirements such as spill kits, drip trays, segregated waste facilities, bonded storage, covered storage, vehicle washing, concrete washout pits, etc. to deliver the specified environmental outcomes. They should also ensure that the necessary equipment, material and other resources are provided to ensure the health and safety at site, such as flashback protectors for welding, welding masks, hats, gloves, overalls, boots, ear defenders, eye protection, speed guns, noise meters, traffic control, barricade tape, signage and fencing.

Independent ESHS Specialists

Independent ESHS specialists may be employed as third- party monitors in order to advise the Bank and/or the Beneficiary on whether the environmental and social requirements agreed for the Project are being implemented as required. Although there is no direct contractual relationship between them, the contractor's and Contract Manager's ESHS specialists should provide support to the third-party monitor as necessary for the third-party monitor to undertake their duties.

Regulatory Authority

Contracting parties would need to recognize that in many jurisdictions there are regulatory authorities whose function is dictated by law. These authorities may undertake periodic inspections to determine whether activities are being carried out in compliance with applicable laws and regulations and/or permit conditions. The purpose is normally to uphold the law and not to monitor on day-to-day basis whether contractual requirements and obligations are being met. These authorities may have the power to investigate breaches of the law and take

appropriate measures such as invoking judicial proceedings, issuing instructions to stop the work, issuing fines or to require certain actions to be taken. It is important that the contracting parties cooperate with them.

13.4 Contract mobilization/contract initiation

Following contract award and prior to commencement of the Works, there are conditions to be met as discussed in the contract start-up section of this guidance. The commencement of Works normally begins with a mobilization or preconstruction phase during which the site is prepared for construction.

The mobilization period should be carefully managed by the contracting parties and given its significance to the successful execution of a contract, the contract mobilization may itself require a plan. See example template in Annex 4 of this guidance.

The mobilization or pre-construction phase can include major activities such as land clearance, excavation, building access roads to the site, work site establishment and construction of contractor's personnel accommodations. This is often an overlooked period of ESHS impacts, and therefore it is critical that the correct documents, training, procedures, and systems are in place to ensure that all ESHS impacts are identified and managed appropriately. Beneficiaries should not require contractors to begin work until the Contract Manager is satisfied that appropriate measures are in place to address ESHS risks and impacts. The appropriate measures should be agreed during a pre-mobilization meeting; at a minimum, the contractor shall apply the Management Strategies and Implementation Plans and ESHS Code of Conduct, submitted as part of the bid/proposal and agreed as part of the contract.

During the contractor mobilization/contract initiation phase the following should be undertaken.

Hold Pre-mobilization meeting

The Beneficiary should ensure that ESHS requirements are discussed during a pre-mobilization meeting so that all parties have a common understanding and are aware of their obligations. During the meeting the Contract Manager should agree with the contractor the documents and information that are needed prior to any activity, to demonstrate effective management of the ESHS risks and impacts, such as method statements/ safe systems of work. The meeting should involve not only ESHS specialists but also the responsible managers of the Beneficiary, contractor, Contract Manager and any other relevant party.

Review and Develop Management Strategies and Implementation Plans (MSIPs)

The contractor should be required by the Contract Manager to develop any additional MSIPs to those agreed at contract award to ensure that all ESHS risks and impacts likely to arise during mobilization will be effectively managed. These should be subject to the prior approval of the Contract Manager. If the health and safety management plan is not ready at mobilization, an MSIP describing how the mobilization activities would be undertaken safely should be prepared.

The contractor should be required to submit, on a continuing basis through mobilization and into implementation, for the Contract Manager's prior approval, further MSIPs as needed to supplement those already agreed to manage the ESHS risks and impacts of ongoing Works.

Monitor Contractor's and Contract Manager's Code of Conduct

The Beneficiary should monitor to ensure that the contractor's and Contract Manager's codes of conduct, agreed in the respective contracts, are in place and are being implemented. The contractor and the Contract Manager

should keep in mind that compliance with the codes of conduct starts from the day the contract is signed.
Confirm ESHS Induction Proposals

The Beneficiary shall ensure that the contractor and the Contract Manager provide ESHS awareness and induction to all individuals authorized to be on site.

The content of the induction should describe the contract's ESHS impacts and the activities to be undertaken to manage risks; describe the various duties and responsibilities of the personnel; and ensure understanding of the ESHS code of conduct, stakeholder relationships, security arrangements as a minimum. Furthermore, relevant personnel of all parties involved in the execution and management of the contract shall be made aware of the worker and public grievance mechanisms and how to access them, and contractors should develop and implement appropriate (to the contract) SEA and GBV awareness training for staff at all levels.

Some further considerations in developing an ESHS induction program are:

1. coverage: to include Beneficiary's personnel, Contract Manager's personnel, contractor's personnel, visitors and other individuals authorized to be on site;
2. system: what system will be used to ensure that the contractor can identify the personnel on site that have been inducted (card site access system, displayed ID card, helmet sticker etc.);
3. frequency: how often will the induction be repeated (recommended to be conducted at least once a year) and how it will be tracked (what records will be kept)?

Review ESHS Training Plans

During mobilization phase, the contractor should identify the technical training required during the Works and prepare an appropriate plan for the timely delivery of that training. The contractor should ensure that personnel receive technical training in ESHS matters adequate to perform their duties. This may take the form of, for example, specialized training courses in remedial actions such as hazardous materials management and controls, or toolbox talks on safe systems of work. The contractor should keep records of the training provided.

The Contract Manager should review the training plans and provide comments as necessary to ensure the training is adequate and appropriate for the activities being undertaken.

13.5 Contract implementation

During contract implementation, the ESHS specialists' primary focus is to ensure that the contractual ESHS provisions are continuously adhered to. This will involve the timely preparation and/or review of documentation such as contractor's plans and procedures, undertaking of inspection, supervision, and/or audit, attending progress meetings, reporting and resolving issues that may occur.

Review and Develop MSIPs - Contractor's Environmental and Social Management Plan (C-ESMP)

The MSIPs agreed as part of the contract and during mobilization should continue to be reviewed, updated and supplemented during implementation to ensure adequate control of ESHS risks and impacts. Collectively the MSIPs comprise the Contractor's Environmental and Social Management Plan (C-ESMP). As stated in the standard Conditions of Contract, the C-ESMP should be approved by the Contract Manager prior to the commencement of construction activities (e.g. excavation, earth works, bridge and structure works, stream and road diversions, quarrying or extraction of materials, concrete batching and asphalt manufacture).

The approved C-ESMP (which may comprise a series of MSIPs) should be reviewed periodically and updated in a timely manner by the contractor to ensure that it contains measures appropriate to the Works activities being undertaken throughout contract implementation. The updates should be subject to prior approval by the Contract Manager.

Review and Approve Health and Safety Management Plan

The Contractor's Health and Safety Management Plan (HSMP) should be reviewed/approved by the Contract Manager prior to the start of Works. The HSMP should be updated by the contractor as necessary to reflect the needs of the Works to be undertaken.

The HSMP should describe the activities to be undertaken and, using Job Hazard analysis (JHA), identify the impacts and risks associated with those activities. The plan should describe any protective measures that would be required to manage the potential hazards and establish safe systems of work.

For each activity, the contractor should prepare and submit for approval of the Contract Manager a method statement describing the safe system of work that will be applied. In preparing the method statement, the contractor should draw from the information contained in the HSMP. For example, the HSMP should identify the risk of collapse when excavating on site, and the safe system of work described in the method statement should set out the controls of access to the excavation, the use of fencing at an appropriate distance from the top, shoring up the sides of the excavation etc.

Monitoring the Contractor's and Contract Manager's Code of Conduct during Implementation

The Beneficiary should ensure that the Contract Manager implements and monitors compliance with its code of conduct effectively.

In monitoring implementation, the Beneficiary may try to seek evidence of the following:

1. Is the code disseminated as envisaged in the contract? Is it easily accessible to the community and project affected people?
2. Is the code a condition of employment of the Contract Manager's staff?
3. What evidence is there of the Contract Manager's senior team leading by example?
4. Does the Contract Manager provide training and ongoing support to its staff? Or provide information and advice to clarify any aspects of the code?
5. Are training records maintained?
6. Do the Contract Manager's staff show confidence to challenge others when a breach of the code is suspected.
7. How are internal and external complaints handled? Are they taken seriously?
8. How is the Contract Manager perceived by the local communities?

The Contract Manager should, in turn, ensure that contractor implements and monitors the contractor's codes of conduct effectively. In doing so, the Contract Manager should seek answers to the questions as above as applied to the contractor.

Evidence on the implementation of the code of conduct could be found in progress reports, behaviors exhibited in progress meetings, discussions with representative personnel on site, through consultations with the local communities and the worker and community grievance redress mechanisms. In addition, the timeliness of the enforcement by the contractor or Contract Manager of disciplinary actions for violations of the code will indicate

how effectively the code is implemented.

The Beneficiary would need to be mindful of the Contract Manager's and contractor's code of conduct and not take any action or behavior that may undermine it. They should lead by example.

Monitoring Accordance with the ESHS Policy

During progress review meetings, the Beneficiary should ask adequate questions and seek evidence on how the Works are being implemented in accordance with the policy. . In addition, during site visits, the Beneficiary should consider whether site activities are in accordance with the policy. This may require, for example: interviewing site health and safety officials, site security officials and representatives of the local communities to get their perspective on the operation of site activities.

Contract Manager's Inspection and Supervision

The inspection of ESHS aspects should be integrated into the broader site visit process as described in the section "Special Considerations: Works and Plant contracts." The Contract Manager's ESHS specialists should follow a phased approach to inspections as described below:

1. Preparation: in preparing for the inspection, the ESHS requirements as set out in the contract, any permits and the regulatory framework should be reviewed: it is good practice to develop a list of the issues to be checked during the site visit. An understanding of the activities being carried out by the contractor should be obtained, for example, through reference to the work program, to assist in the selection of areas subject to site visit.

2. Document review: An important part of the inspection is to confirm that the contractor's documentation is in place and up to date. This should be done during a meeting with relevant contractor's personnel prior to undertaking the site visit, as the contractor's documentation may identify issues to be validated during site visit. As a minimum the status of the following contractor's documentation should be ascertained:

a. MSIP/ C-ESMP;
b. Code of Conduct;
c. HSMP/method statements;
d. Accident records;
e. Worker labor records;
f. Progress reports;
g. Induction and Training records;
h. Worker and community grievance.

3. Site visit: For large/complex contracts, a representative sample of the Works may be visited during the inspection. Selection of the areas to be visited should be informed by the activities being undertaken, their potential ESHS impacts, locations of sensitive/important environmental and/or social features, and the need to validate any aspects of the contractor's documentation. The issues to be considered during the site visits may include:

a. presence of safety features and equipment such as traffic signs and signals, protective fencing, machine guards, etc.;
b. labor facilities such as provision of drinking water and wash room facilities;
c. evidence of Good International Industry Practice in relation to, for example:
    Storage and handling of hazardous materials;

Concrete wash-out facilities;
Spill kits and water pollution prevention measures.

d. site security arrangements;
e. worker behavior.

4. Corrective actions: At the end of the site visit, an action plan should be agreed with the contractor to take any needed corrective actions. The action plan should clearly set out what the contractor should do and by when, and progress in resolving the actions should be checked by the Contract Manager on a timely basis. If necessary, further remedies to rectify non-compliances may be applied as discussed below.

Inspections should be documented, and records retained in contract files (minimum information to be recorded include: date and time, location, activity inspected, inspection observations and relevant data, corrective actions, if any, inspection team's name, signature and date).

Rectifying Contractor Non-compliance

The Contract Manager should bring to the attention of the contractor, in accordance with relevant provisions of the contract, non-compliances identified during contract execution. The instruction should refer to the relevant contract provision that has been breached, clearly stating what is needed to rectify it, by when it needs to be rectified and the contractual consequences if the contractor does not comply.

The contractual provisions set out how remedies are to be applied by the Contract Manager in the event of non-compliance, including with respect to the following:

1. removal of personnel from site (for example, for breach of Code of Conduct, or for repeated dangerous working practices);
2. withholding payments (for example for not rectifying a non-compliance in the specified time scale);
3. getting others to rectify the works at the contractor's expense (for example following repeated discussions and warnings regarding pollution from asphalt plant);
4. suspension of works (for example at a quarry or borrow pit until the operation can be made safe);
5. performance security (for repeated non-compliances and a lack of willingness to expediently and effectively address the deficiencies); and
6. termination.

For further detail see the section on Contractual Remedies.

13.6 Contract Taking-Over ESHS aspects

As mentioned in "Special Considerations: Works and Plant Contracts", prior to taking-over by the Beneficiary, the Contract Manager should ensure that performance has been achieved substantially by the contractor. Once the Contract Manager is satisfied, it issues the taking-over certificate and the Beneficiary takes-over the Works. After taking-over the Works, the Beneficiary becomes responsible for the care and custody of the Works. The consequences of taking-over Works that are deficient or prove unsafe has significant ramifications for the Beneficiary, including with respect to reputational and financial risks.

In terms of ESHS, the Contract Manager's ESHS team therefore needs to ensure that prior to issuing the taking-over certificate that, for example:

1. the ESHS design has been fully delivered;
2. there are no potential legacy issues, for example, that may substantially affect the safety and stability of the

site;
3. the site is clean of debris and all surfaces are reinstated (unless for parts considered minor and included in the list included in the Taking-Over Certificate to be carried out by the contractor);
4. ancillary features such as borrow pits, quarries, disposal sites are restored according to permits, consents or the Contract Manager's instructions;
5. the contractor does not negatively impact the environment and the communities while demobilizing (equipment, personnel etc.) from the work site.

13.7 Defect liability Period-ESHS aspects

As mentioned under "Special Considerations: Works and Plant Contracts", the defect liability period is also critical from the ESHS point of view.

The Contract Manager's and Beneficiary's ESHS specialists:

1. should inspect the site to identify any negative impacts to the ESHS aspects that may arise during this period attributable to the contractor;
2. monitor that any dismantling or repair work carried out by the contractor on site does not have a negative ESHS impact; and
3. monitor that the contractor's staff involved in any dismantling, repair, reinstallation, retesting etc. observe the code of conduct.

Upon the end of the defects liability period and issuance of performance certificate, the Beneficiary's and Contract Manager's ESHS team should ensure that the contractor:

1. removes any remaining contractor's equipment, surplus material, wreckage, rubbish and temporary Works from the site;
2. reinstates all parts of the site which were affected by the contractor's activities during the execution of the Works and are not occupied by the permanent Works; and
3. leaves the site and the works in the condition stated in the Specification (if not stated, in a clean and safe condition).

Section 14 - Special Considerations: Goods contracts

14.1 Supply chain management

A key consideration for supply of Goods is management of the whole supply chain from purchase, delivery to named place of destination or final destination, until the goods are used by the end users. This may include the following activities:

1. applicable quality assurance system put in place (such as factory test witnessing, pre-shipment inspection, acceptance tests);
2. formal acceptance of the Goods;
3. information provided to concerned Beneficiary/Contract Manager's staff on the warranty provisions (duration, coverage, service level agreement, contact information of any service provider etc.) so that they know what to do in case of defects or malfunction;
4. logistics (transport, insurance, incidental services) to deliver the Goods to the end users;
5. warehousing facilities at the various points of the supply chain including arrangements for e.g. space, climate control, electricity;
6. inventory control;
7. measures to avoid the risk of obsolescence and pilferage;
8. training of end users on the use of the Goods, if applicable;
9. end users' satisfaction survey.

For Goods that have a limited shelf life (such as medicines and pharmaceuticals), the Beneficiary must take measures to maximize the products' shelf life. This may include an action plan which details the measures to be taken. Such an action plan can be included in the CMP. Factors to be addressed in the action plan may include:

1. arrangements for recording dates of receipt of goods and dates of expiry;
2. arrangements to ensure "last-in first-out" distribution of Goods;
3. developing a system to manage the Goods by consulting the product specifications and relevant guidelines on storage requirements e.g.: storage space, cleanliness, cold storage, climate control (temperature, humidity), pest, water and dirt damage protection;
4. implementing safe handling measure and ensure appropriate safety equipment is used;
5. planning regular quality checks to ensure that the goods are not spoiling;
6. providing a means for the Goods to be readily available for distribution to the end users.

Case study: poor supply chain management

Situation A:

A Beneficiary procured transformers for indoor installation which were delivered to its warehouse. The Beneficiary accepted the transformers in accordance with the contract. According to the manufacturer instructions, the transformers are to be stored in a closed space.

The Beneficiary had planned to use its own installation team to install the transformers. However, the Beneficiary's installation team was still occupied with some earlier work and was not able to start this work before 12 months. The Beneficiary's indoor storage area was full of other items and the Beneficiary was obliged to leave the transformers outdoors for almost a year. The location was in the tropics with excessive humidity and rainfall. The outdoor area did not have a good drainage system. The Beneficiary did not take the necessary steps to prevent water condensation forming in the transformer accessories and parts that were delivered separately. There was no protection against corrosion. As a result, a good number of the transformers were damaged and not usable.

Situation B:

A Beneficiary awarded contract for the procurement of vehicles at a price of US$ 450,000 based on CIP (Incoterms). The Beneficiary received the shipping documents from the supplier before arrival of the Goods, so the supplier was not responsible for any consequent expenses. A delay in the clearance of the above vehicles from the port, led to demurrage charges amounting to US$130,000. Such charges were determined to be ineligible for Bank's financing.

Lesson learned:

1. delivery of goods to the warehouse is not an end by itself, plan for the whole of the supply chain to ensure the goods continue to be in working order at the time of delivery to the end user;
2. prepare appropriate storage area and facilities prior to delivery of Goods;
3. assess capacity and logistics in advance to inform the procurement and contracting strategy; e.g. if there is no appropriate facility available to store the goods, purchase them on the basis of supply and installation by the supplier;
4. Ensure that the appropriate arrangements are in place for timely clearances.

Box IX – Case study: Eichleay formula

14.2 Incoterms

Incoterms (known as international commercial terms) are sets of commercial terms published by the International Chamber of Commerce (ICC). The terms interpret commonly used foreign trade and deal with the transfer of title and risk in various contracting scenarios. For complete information on Incoterms refer to the Chamber of Commerce website.

For relevant procurements (such as Goods), the Bank's SPDs indicate the appropriate Incoterms that apply. The Incoterms that are mainly used in Bank contracts are CIP and EXW. Beneficiary/ Contract Manager should be familiar with the applicable Incoterms. See Box hereafter.

Case Study: misconception- Incoterm CIP

Situation:

The contract for supply of Goods specified CIP (named place of destination). The delivery period was stated as 180 days following the date of effectiveness of the contract. The contract became effective and the Beneficiary instructed the supplier that it expects the Goods to arrive in the named place of destination within the 180 days following the date of effectiveness. The supplier responded that as per as per the applicable Incoterm (CIP, in this case), its obligation is to deliver to the carrier within the 180 days and not to provide the Goods at the named place of destination within that period; the named place of destination is not for the purpose of specifying the delivery period.

Lesson learned:

Delivery, risks and costs are governed by the applicable incoterm used. If the Beneficiary's intention were to have the Goods in the named place of destination within the specified 180 days, the delivery period should have been specified to be less than that (if feasible) considering the additional time that will be needed for international or national transit to the named place of destination.

Box XI-Case study: misconception on applicable Incoterm

14.3 Export restrictions

Export restrictions may arise due to trade regulations from the country supplying the goods. Under such situations, the supplier is released from the obligation to provide deliveries or services. However, the supplier should have met all of its other contractual obligations including permits, formalities, licenses etc., in order to be released from its obligations (e.g. see contract provision: SPD, Goods, GCC 37).

14.4 Delay in L/C processing

As mentioned in the Section "Contract start-up", issuance of an operational letter of credit is a critical activity for the timely delivery of Goods. Suppliers of Goods from abroad may not normally ship Goods unless they have confirmation that an operational L/C is in place. Care would need to be exercised to ensure that the L/C is free of errors, as defective L/C results in delays and complications.

Any risks related to timely processing of an L/C should be identified early (e.g. at the PP&PS stage), and appropriate mitigation measures put in place.

14.5 Changes/Additional quantities

Clause 33 of the General Conditions of Contracts for Goods (Change Orders and Contract Amendments) does not allow for additional quantities to be instructed by the Purchaser. The changes allowed are changes in specifications, design..etc. therefore, if additional quantities are required – possibly due to utilization of savings at the end of the contract- then a Contract Amendment will need to be processed based on a Direct Contracting approach with the same Supplier if justified.

Section 15 Special Considerations: Information Systems contracts

This section presents some issues and lessons learned to support Beneficiaries in some of the issues that may be encountered in managing information system contracts.

15.1 Software license agreements

Issue: There are cases where a supplier provided no license, pirated license, or fewer number of licenses than required. Sometimes the licenses are not in the name of the Purchaser and some licenses are based on multiple-use. When this happens, the software does not run properly and will not be regularly updated with latest patches and upgrades.

Relevant contract condition: The Conditions of Contract should include a provision on "Software License Agreement") providing that the supplier shall grant to the Purchaser the original license to access and use the software, including all inventions, designs, and marks embodied in the software.

Case study: pirate licenses

Situation:

A Purchaser purchased 45,000 laptops and desktops, including licenses software, for schools. The winning bidder supplied a renowned brand of laptops and desktops. It was later found that the supplier did not provide genuine licenses

Lessons learned:

1. the terms of payment should be linked to the provision of the required licenses;
2. the Purchaser (using an IT specialists) should verify that the licenses are genuine and granted in the name of the purchaser. Most of the renowned firms in the industry publish specific license information on their websites;
3. when in doubt, the Purchaser may confirm with the software company if the licenses are genuine and in the name of the Purchaser.

Box XII – Case study: pirate licenses

15.2 Source code

Issue: In custom/bespoke software development contracts the Purchaser does not secure the base source code from the supplier/developer. This can result in significant problems for the Purchaser including performance issues, difficulty making modifications and upgrades, delays in the provision of an operating system and additional costs.

Background: Normally, there are two types of software systems, namely:

1. custom/bespoke software built by a developer (supplier) for the Purchaser's specific needs;
2. "commercial of-the-shelf" (COTS) software which is a standard system that has already been developed for generic needs, tested and launched commercially for use by multiple clients.

Having possession of the software source code is critical for custom or bespoke software systems. The source code allows the Purchaser to make subsequent modifications, bug-fixing, and updates. For COTS (commercial

off the shelf) software and software-as-a-service, the risk is much less, as the developer is responsible for future modification and regular upgrades of the system

In custom and bespoke software development contracts, the supplier (developer) is often reluctant to provide the source code to the software that it is developing. This may allow them to charge high prices for future modifications and upgrades. Even when the Purchaser requests and receives the source code, it may not have the specialist knowledge to check it on receipt. If the source code that has been provided is not correct this can result in serious problems when the Purchaser attempts to modify the system at a later date.

Relevant contract condition: *The Conditions of Contract should include a provision on "Source Code" specifying: "the database structures, dictionaries, definitions, program source files, and any other symbolic representations necessary for the compilation, execution, and subsequent maintenance of the Software (typically, but not exclusively, required for Custom Software)." 15.3 Specialist project manager*

Case study: base source code

Situation:

A purchaser developed a nationwide MIS system with key performance indicators. This was a competitive process and the cost was around US$600,000. But the Purchaser did not review the contract carefully and did not challenge the developer's provision that is would provide only "upper-level source code" and that the base source code will be the developer's property and will not be shared with purchaser.

The developer completed the contract successfully and handed over the MIS system with a one-year free service. During implementation of the system, many issues were identified and there was a need for modification and upgrade. The purchaser realized the "upper-level source code" provided by the developer was not sufficient to allow it to make these changes. As the required base source code belonged to the developer, the purchaser had no option but to grant a sole source contract to this developer at a relatively high price for the ongoing required modifications and upgrades.

Lessons learned:

1. do a market analysis of the product especially for custom made / bespoke software and check whether discloser of source code is allowed by the key developers;
2. include the appropriate source code discloser / ownership requirement in the contract;
3. appoint a qualified project manager in the field to manage the contract implementation and takeover "Source Code" from the Developer (if mentioned in the contract). The project manager should verify that all source code is duly received and in future the Purchaser can do modifications by its own staff or any other developer.

Box XII – Case study: pirate licenses

15.3 Specialist project manager

Issue: Generally, the Purchaser does not appoint a qualified project manager and tries to fulfill this function using its own staff, who may not be knowledgeable in such a specialized field. This can affect quality control and contract implementation.

Relevant contract condition: The Conditions of Contract should include a provision on "Project Manager" stating that the project manager shall have the authority to represent the Purchaser on all day-to-day matters relating to the system or arising from the contract. It is the project manager that normally gives and receives notices on behalf of the Purchaser

Case study: project manager not competent

Situation:

A Purchaser contracted the development of a bespoke MIS system. The Purchaser had one Systems Analyst who was government staff. The Purchaser appointed this person as the project manager. He was not trained, had insufficient experience to manage such a complex contract and had little expertise on this type of system. In addition, he had other routine work and day-to-day responsibilities. The developer took advantage of this. There were inordinate delays, few variation orders, and the base source code was not handed over at the end of the systems development.

Lessons learned:

1. a qualified ICT expert should review the bidding documents and advise on the level of expertise, training and experience that will be required for the project manager.
2. A suitably qualified and experienced project manager should be identified and, if possible, involved in the procurement at an early stage (involved in Bid/Proposal evaluation, supplier selection, contract development and the development of the CMP;
3. The project manager should dedicate sufficient time to properly manage the contract the person should be relieved of other commitments to allow sufficient time to properly manage the project;

Box XII – Case study: pirate licenses

15.4 Systems requirements

Issue: As part of the detailed design, the supplier was to prepare a System Requirement Specification (SRS). This is the most important document for the development of a successful system.

During preparation of the SRS, the supplier normally needs to have significant consultations and information gathering with the Purchaser, relevant stakeholders and end users. In most cases, stakeholders and end users provide limited time and information. This could result in the supplier not getting the information that it needs to design a system that is fit-for-purpose. It could also result in delays as the supplier makes efforts to try to reach the stakeholders and end users to get answers.

The Purchaser should review the final SRS and satisfy itself that there has been a sufficient level of stakeholder and end user engagement. If not, the Purchaser should take the initiative to source the appropriate information so that it can provide constructive comments on the SRS. Generally, this does not happen. As a result, there are significant design and engineering changes during contract execution. This translates into cost and time overruns and risks developing a system that is not fit-for-purpose.

Relevant contract condition: The Conditions of Contract should include a provision on “Design & Engineering” stating that the supplier shall execute the basic and detailed design and the implementation activities necessary for successful installation of the system in compliance with the provisions of the contract.

Case study: insufficient consultation

Situation:

A Purchaser was developing a comprehensive MIS system following bespoke software development. After some consultation with the stakeholders and end users the developer submitted the SRS for Purchaser's approval. The Purchaser did not have enough expertise in its team and approved the SRS with minimal comments. During final stage of implementation, it was found many of the required features were not working as expected, but that the design was consistent with the approved SRS. The Purchaser had to approve change orders and time extensions, resulting in delays and increased costs.

Lessons learned:

1. identify the relevant stakeholders and end users and fully inform them of the proposed systems development and set expectations in terms of developer consultation;
2. select representatives from the stakeholders and end users to actively engage with the developer during the development of the SRS, provide constructive feedback on the draft SRS and act as a sounding board during systems development;
3. facilitate the consultation and ensure adequate dissemination of information;
4. establish a qualified subject manager team to review the feedback from stakeholders and end users and check that all design factors have been included and are properly stated;
5. involve the stakeholders and end users in reviewing and testing the final proposed product.

Box XV – Case study: insufficient stakeholder and end user consultation

15.5 Quality of product

Independent testing

Issue: Some IT products provide warranties for long periods (5 or more years). It is sometimes difficult to judge, on inspection, if these products will last till the expiry of the warranty.

Relevant contract condition: The relevant provision of the contract is on "Inspection and Testing".

Case study: durability of national ID cards

Situation:

A Purchaser wanted to procure "smart" national ID cards for all the adult citizens of the country. As per the strategy, the Purchaser wanted 10 years' durability of the cards. Through conventional pre-shipment inspection or ISO certification, it was not possible to ensure 10 years' durability. This was a major investment and the Purchaser wanted to make sure that it received a quality product with appropriate durability. After detailed market analysis, it was found that a certain specific test arranged by an independent firm could ensure the durability of the card. It took almost 10 months to get to this point. The Purchaser incorporated the test for each batch of cards supplied. The condition agreed was, if the test result was "negative" then the supplier will replace the whole batch. An extended performance guarantee was agreed to cover an additional 10 months after delivery.

Lessons learned:

1. incorporate, as appropriate, independent testing to ensure that the technical specifications and performance are consistent with the contract requirements;
2. Payments may be linked with the results of the independent tests.

Box XVI – Case study: durability of national ID cards

Case study: durability of national ID cards

Situation:

A Purchaser wanted to procure "smart" national ID cards for all the adult citizens of the country. As per the strategy, the Purchaser wanted 10 years' durability of the cards. Through conventional pre-shipment inspection or ISO certification, it was not possible to ensure 10 years' durability. This was a major investment and the Purchaser wanted to make sure that it received a quality product with appropriate durability. After detailed market analysis, it was found that a certain specific test arranged by an independent firm could ensure the durability of the card. It took almost 10 months to get to this point. The Purchaser incorporated the test for each batch of cards supplied. The condition agreed was, if the test result was "negative" then the supplier will replace the whole batch. An extended performance guarantee was agreed to cover an additional 10 months after delivery.

Lessons learned:

1. incorporate, as appropriate, independent testing to ensure that the technical specifications and performance are consistent with the contract requirements;
2. Payments may be linked with the results of the independent tests.

Box XVI – Case study: durability of national ID cards

15.6 Delivery acceptance testing:

Issue: The testing mechanism needs to be appropriate to the nature of the Goods.
Relevant contract condition: The relevant provision of the contract is on "Inspection and Testing"

Case study: brand and performance requirements not met

Situation:

A Purchaser awarded a contract for the supply of desktop computers. The supplier offered the latest model of a known brand and delivered the desktop computers. The Purchaser distributed the desktops and all were working in different work stations. As part of procurement post review exercise, the Bank's team reviewed the contract and found that the computers were not the claimed brand and the processer speed was much less than stated in the contract specification. The computer body had apparently specifications consistent with the contract.

Lessons learned:

1. incorporate testing, as appropriate, on delivery to ensure that the technical specifications and performance are consistent with the contract requirements;
2. payments may be linked, as appropriate, to satisfactory quality assurance testing;
3. clearly mention in the contract that the product will be in the name of the Purchaser's relevant agency and the manufacturer must issue certificates in this name mentioning the model and serial number of each product;
4. the Purchaser should verify with the manufacturer the authenticity of the products.

Box XVII– Case study: brand and performance requirements not met

15.7 Upgrades and discontinued products

Issue: IT procurement is subject to relatively rapid technological advances. The offered model may have become obsolete or close to obsolete. By purchasing such a product, the Purchaser loses value for money with the added difficulty of getting repairs and spare parts.

Relevant contract condition: The condition of contract should include a provision on "Product Upgrades" stating that at any point during performance of the contract, should technological advances be introduced by the supplier for Information Technologies originally offered by the supplier in its bid, and still to be delivered, the supplier shall be obligated to offer to the Purchaser the latest versions of the available Information Technologies having equal or better performance or functionality at the same or lesser unit prices.

Similarly, the mentioned condition of contract should add that at any point during performance of the contract, for Information Technologies still to be delivered, the supplier will pass on to the Purchaser any cost reductions and additional and/or improved support and facilities that it offers to other clients of the supplier in the Purchaser's country.

Case study: upgrades and discontinued products

Situation:

A Purchaser initiated a process to procure 4,000 desktops for its whole organization as part of a full atomization process. The bid evaluation and contract award process took nearly 7 months due to a complaint and other evaluation issues. When the Purchaser issued the purchase order, it was found that the cost of the specific model was 30% cheaper in the market. In addition, the new series of this model has been launched by the manufacturer. After 1.5 years of service the Purchaser had difficulties in getting spare parts as the supplier had discontinued production of this model. This is a classic example of significant monitory and efficiency loss in IT procurement.

Lessons learned:

1. Purchasers should be aware of relevant contract clauses (such as GCC 23.1 and 23.2) and take benefit from these provisions;
2. it would be helpful to highlight for bidders' attention (for example in the Bid Data Sheet) the contractual provision on product upgrade;
3. during contract execution, the Purchaser should enforce this requirement, by for example asking the supplier to provide updated information on monthly basis;
4. the Purchaser should check the product price and new release/upgrade information monthly. Generally, this information is available on the manufacturer's website.

Box XVIII – Case study: upgrades and discontinued products

15.8 Transfer of knowledge

Issue: The proper transfer of knowledge to run the IT system after hand- over can be an issue. This creates difficulties for the Purchaser in running the system. There are three ways to operate an ICT system:

1. by the Purchaser's own staff;
2. by the developer through a service agreement with the Purchaser;
3. by a third-party service agreement (where the third-party is selected competitively or by sole source).

As part of the CMP, the Purchaser should have a method of ensuring knowledge transfer to ensure the sustainability of the system. As part of this, the Purchaser should consider the costs of keeping the system up-to-date.

Relevant contract condition: The condition of contract for Information Systems should include a provision on "Project Plan" s to the effect that the transfer of knowledge is key in IT systems development contracts. A detailed approach to the transfer of knowledge should be part of Project Plan and which needs to be approved by the project engine*er.*

Case study: knowledge transfer and ongoing funding

Situation:

The Purchaser developed a contract management MIS for all contracts being managed by the Roads and Highway Department (RHD). The system was running well and the RHD discontinued the old manual entry process. The new system increased efficiency and transparency significantly. The system continued to run through donor funding support with an agreement with the developer. Three years later the donor pulled out of the transport sector. RHD had shortage of funds to continue to run the system with the developer. As a result, RHD tried to run the system on its own (using staff in the IT department) but their capacity was insufficient and there had been no knowledge transfer or training by the developer. Gradually the MIS system failed and the RHD abandoned it.

Lessons learned:

1. the Purchaser should prepare a strategy to run the IT system taking into account: HR resources, costs, technological resources etc.;
2. based on its strategy a transfer of knowledge program should be agreed with the developer and included in the contract. The transfer of knowledge must target the appropriate staff, and there should be a plan in place to continue to transfer knowledge with that team to support greater sustainability;
3. consider including the national IT department in developing the strategy and transfer of knowledge plan;
4. the developer's transfer of knowledge to the Purchaser's staff should be linked to contractual payments.

Box XIX – Case study knowledge transfer and ongoing funding

15.9 Value engineering

Issue: ICT technology is generally subject to rapid changes. During the bidding stage or contract implementation stage new technology may come on the market, often at a reduced cost. In ICT contracts the use of value engineering (VE) can be beneficial where solutions exist, or alternate technological may be developed.

Relevant contract condition: The relevant condition of contract is the provision on "Value Engineering". The supplier/developer can give a VE proposal to the Purchaser at any time during the performance of the contract. The Purchaser may accept the VE proposal if the proposal demonstrates benefits that:

1. accelerate the delivery period;
2. reduces the contract price or the life cycle costs; or
3. improves the quality, efficiency, safety or sustainability of the system.

Case study: data center VE

Situation:

For a nationwide IT system, a Purchaser designed a data center and backup data center with full redundancy. Both data centers had the same capacity servers and storage, so that if the main data center failed then the backup data center will take over. The design was based on an active–passive mode (meaning that the main data center worked continuously whilst the back-up data center remained idle). The backup center only worked when the main data center failed. During the contract implementation stage, the supplier identified that the main data center and backup data center were within 3 km distance of each other and it was possible to work in an active-active mode (meaning both the data centers could work simultaneously). In such a scenario, the server and storage size can be reduced by 30% and the system still capable of working on one data center if other one fails. By implementing this change the total contract savings was 25% of the contract price.

Lessons learned:

1. the Purchaser should encourage VE with a suitable $% supplier incentive included;
2. suitably qualified experts should review the VE proposal to make sure the proposed alternate solution demonstrates the stated benefits.

Box XX – Case study: data center VE

Section 16 - Special Considerations: Consulting Services contracts

16.1 Supervision

The Beneficiary is responsible for supervising Bank financed consultant assignments. The Beneficiary must monitor the progress of work, the timely completion of deliverables, the staff months and funds expended (for time-based contracts), and determine where, within the contract, changes in the scope of work might be appropriate. The contract normally requires that the consultants submit regular progress reports and that the Beneficiary provides comments in a timely manner.

The Beneficiary should designate a counterpart contract manager with adequate technical qualifications, managerial experience, and authority. In certain instances, involving large and complex projects, a steering committee composed of high-level representatives of the Beneficiary and the consultant may be formed to exercise arm's length supervision over the assignment through the counterpart project manager and the consultant's team leader. The steering committee can be particularly useful when the Beneficiary's executing agency and the consultant have to coordinate their work with other agencies of the Beneficiary. The opportunity to report on a regular basis to such a committee can facilitate collaboration and understanding between the Beneficiary and the consultant and avoid disputes over technical or other issues.

16.2 Contract management

The Beneficiary must ensure that there is sufficient time spent planning the implementation of the contract. Some of the internal arrangements that the Beneficiary may need to make include:

1. assign specific and detailed contract management tasks to the individuals or the team responsible for contract implementation. The tasks assigned should be precise and realistic (taking into account the specific experience, expertise and workload of each individual;
2. ensure that counterpart staff are made available, in timely manner, in accordance with the contract;
3. ensure that facilities to be provided by the Beneficiary are made available, in a timely manner, in accordance with the contract;
4. establish sufficient internal procedures (hierarchy, communication, levels of authority, flow of documents, reporting, verification and acceptance procedures, payment procedures, internal audit etc.);
5. monitor and evaluate contract implementation risks and ensure effective management and mitigation measures are taken, including assigning responsibility for their enforcement;
6. oordinate arrangements with third parties (other agencies, end users, beneficiaries etc.), especially when the consulting services are contracted on behalf of end users (e.g. training).

Kick-off meeting

A kick-off meeting with the consultant is critical at the start of the consulting assignment. The Beneficiary's contract manager and other staff involved in supervision of the consulting assignment should be present. It is also good practice to involve end users of the assignment, if any, at this stage.

The kick-off meeting should at least cover the following:

1. introducing the parties, their roles and responsibilities;
2. establishing the communication and reporting procedures;
3. review of contract documents to ensure everyone understands the key provisions, the priority and inter-correlation of contract documents; conditions of contract; Terms of Reference; payment schedules and

covenants; implementation milestones (deliverables, reports etc.);
4. review the consultant's quality plan, if required;
5. review applicable legislation and any obligations deriving in connection to the execution of the contract in the client's country (e.g. applicable tax regime, reporting obligations, if any, to other agencies etc.);
6. define escalation procedures to unblock critical situations or bottlenecks (delays in performance or in obtaining permits and approvals, abuses of power from the Beneficiary's Coordinator, non-performance of consultants etc.);
7. establish clear reporting procedures (level, frequency, templates, minimum information etc.);
8. for supervision of civil works contracts, ensure that the consultant has a clear understanding of its responsibilities to manage ESHS risks, ESHS reporting requirements and implementation of the ESHS Code of Conduct;
9. ensure that all parties involved in the contract implementation share the same understanding of their obligations, roles and responsibilities derived from the contract, as well as each other's expectations of the timeframe and any particular constraints in the implementation.

Non-compliant deliverables

One of the features of consulting contracts is that the consultant usually is not required to provide a performance security. Given the intellectual nature of the deliverables, it would be a challenge to associate consulting services with a performance security.

In the absence of performance security, the main remedy (short of suspending payments and termination) available to the Beneficiary is the non-acceptance of the deliverables and/or reports submitted by the consultant, the latter when the deliverables fail to meet the requirements of the contract.

Case study: unacceptable deliverables

Situation:

For a sectoral study on Water Supply system involving improvement of revenue collection and water loss reduction the inception report produced by the Consultant is not satisfactory to the client and reveals that the consultant does not have the same understanding of the mission's objectives as the client's. Although the selection process was conducted as per the Consultant's Guidelines, the client had not felt it necessary to thoroughly discuss the Terms of Reference (ToRs) and the Consultant's proposal prior to contract signing. The contract was a time based remuneration contract.

Eventually, the situation was corrected after high level consultations between the client and the consultant

Lessons learned:

1. formal contract negotiations are necessary prior to contract signing, especially on the basis of the ToRs and the selected consultant's proposal to ensure alignment of the consultant's proposed methodology and work plan with the client's expectations;
2. it might have been lore difficult to resolve the issue under a lump sum contract.
3. although this did not occur in this case, early contract termination may be necessary in case the consultant does not appear to deliver as per the client's expectations; however, this might result in litigation unless amicable termination may be agreed between the parties.

Box XX – Case study: data center VE

Unsatisfactory performance

Poor performance may involve one or more staff of the consultants' team, or the whole team. Based on the provisions of the contract, the Beneficiary would need to advise the consultants to take the necessary measures to rectify the poor performance.

Poor performance should not be tolerated, and the consultants are expected to act quickly to comply with a reasonable request to improve the performance of the team or to replace any staff member who is not performing adequately. If the consultant fails to take adequate corrective actions, the Beneficiary may take appropriate further remedial actions in accordance with the contract

Case study: unsatisfactory performance

Situation:

Under a road rehabilitation supervision contract (time based remuneration) the client realizes that the geological engineer is not carrying out his duties as expected in the Consultant/Engineer's team of key experts. This expert appears to have health problems and is often unable to carry out on site duties.

After several informal attempts by the client at suggesting to the Resident Engineer that this expert should be replaced (and following the submission of a formal claim by the contractor due to undue delays in obtaining the Engineer's approval for use of materials from a borrow pit), the client decides to formally request a replacement of the geological engineer on the Engineer's team.

The replacement is eventually effected, after prolonged discussions between the client and the Consultant/ Engineer on who should bear the cost of the replacement – eventually the costs were absorbed by the Consultant.

Lessons learned:

1. the client must closely monitor the Consultant's performance and openly/promptly discuss any lapses with the Resident Engineer and/or the Consultant' representative;
2. unsatisfactory performance should not be let to linger and is better resolved if promptly addressed.

Box XXII – Case study: unsatisfactory performance

Approving payments

Lump sum contracts are paid on the basis of acceptance of deliverables, with no actual verification of the inputs used by the consultants. Conversely, payments under time-based contracts are made after due verification of all supporting documents (reports, timesheets, invoices, receipts etc.).

The following aspects are important in the process of verification of payment applications:

1. establish internal control mechanisms for the verification and approval of payment applications, such as internal audits, double checking etc.;
2. verify professional rates, actual time spent (for remuneration and per diems), unit prices and quantities (for reimbursable expenditures);
3. verify supporting documents in time-based contracts (timesheets, reports, invoices, receipts etc.);
4. ensure that the appropriate recovery of the advance payment has been deducted from the payment (in time-based contracts);

5. check that the requested amounts have not been already paid;
6. verify invoices;
7. check if the payment request fits the payment schedule/milestones in the contract.

Time control

The Beneficiary should monitor implementation against the agreed schedule of work. The following time control checks should be made:

1. check compliance with the contract milestone dates (submission of deliverables, reports etc.);
2. consider actions to speed up progress and ensure compliance with contractual time for completion of the assignment.

16.3 Key risks

There are some specific risks associated with consulting contracts.

General

In general, the following aspects should be looked for:

1. consultants usually work on multiple assignments for different clients, so they might end up with more work than they can handle;
2. frequent requests for replacement of staff;
3. some consultants may take excessive time to fully understand the needs of the Beneficiary, the scope of assignment and the constraints;
4. the consultants may not actually transfer knowledge and capacity building as required by the contract.

Time based contracts

In general, the following aspects should be looked for:

1. because of the flexible nature of the contract, consultants may have the tendency to slow down the progress of the assignment and seek additional time;
2. the consultant may be over-charging, especially the “home/office” time;
3. the consultant tries to reallocate time from field to home/office activities;
4. payments are not related to actual deliverables;
5. tendency of front-loading: claiming more days at the start of the assignment and delay completion once most of the money has been paid;
6. use of less senior consultants in the home office that originally agreed in the contract;
7. same consultant charging the same professional time (same days) in two or more consulting assignments.

Case study: dispute over payment for expert time

Situation:

Under a contract for a feasibility study (time based remuneration) the client questions an invoice submitted by the Consultant for several weeks spent on the study by an expert. Although the client was aware of the activity of this expert on the task and had agreed to it, the client disputes the actual expert's time charged.

Eventually agreement was reached between the parties on the specific invoice and for future activities it was agreed on submission of time sheets justifying all experts' activities on the task.

Lessons learned:

1. time based remuneration contracts may result in situations where the client is not comfortable with the invoices submitted by the consultant; during contract negotiations, the parties should openly discuss and agree on the procedures for time sheets, supporting documentation, etc.
2. certain tasks may be suitable for lump sum remuneration; a Consultant contract may be hybrid, including lump sum payment tasks and time based remuneration tasks; however such situation may become highly problematic when the client cannot readily identify who does what or when an expert is working on a LS task or a TB task; such hybrid contracts are more suitable when the two types of tasks (LS vs TB) are to be carried out in sequence and clearly separated chronologically, such as detailed design (generally carried out under LS remuneration) and supervision of works (generally carried out under Time based remuneration.

Box XXII – Case study: unsatisfactory performance

Lump sum contracts

In general, the following aspects should be looked for:

1. due to the inflexible nature of the contract, the scope of assignment cannot be easily modified or adapted to fit the changing needs of the Beneficiary;
2. when negotiating additional tasks:

a. be aware that the consultant may overestimate the actual input;
b. ensure that the rates used to calculate any additional services are the unit rates included in the contract;
c. be aware that the consultants may attempt to create a need for more expensive extra expertise or additional expenses to use higher rates than those provided in the contract

Annex 1: Islamic Development Bank contracting modalities

Contracting modalities

The contracting modality selected for a contract defines the allocation of risks, responsibilities and relationship between the contracting parties.

Good practice is that there is a fair and balanced allocation of risks between the Beneficiary and the contractor. The following factors help determine what is fair and balanced. Which party:

1. can best foresee/identify the risk?

2. can best control the risk and its consequences?

3. can best bear the risk?

4. suffers the most if the risk materializes?

The Procurement Guidelines outline types of contracts that are normally used in Bank financed projects. The following table summarizes the different types of contracts.

Type of Contract	Type of Procurement						
	Goods	Works	Plant	Info. Systems	Non Consulting Services	Text Books	Consultants
Design and Build Contract		✓	✓	✓			
Engineering, Procurement and Construction		✓	✓	✓			
Performance Based Contracts		✓	✓	✓	✓		
Contract based on Unit Prices	✓	✓		✓	✓	✓	
Time-based Contracts					✓		✓
Reimbursable-cost Contracts		✓			✓		✓
Lump-Sum Contracts							✓

Table XII: Types of contracts

Comparison of different contracting modalities

1. Design and Build

The Design and Build (D&B) contract is a method of contracting where the supplier is responsible for both the design and building/construction/installation under a single contract. D&B contracts are normally used for Works, Plants and information systems. Payments are made on a lump

sum basis except for specific work items (e.g. foundation). Where the facilities are to be operated by the supplier for a specified period of time, the contracting arrangement becomes a Design, Build and Operate (DBO).

The pros and cons of D&B contracts with respect to contract management are summarized in the table below.

Pros	Cons
Single point of responsibility.	Risk of reduced quality of material and workmanship.
Potential for better design and construction coordination.	Beneficiary has less control over the design work.
Beneficiary is not responsible for any dispute between design and construction teams.	Beneficiary does not benefit from independent advice and input from design consultant. The design consultant works for the supplier.
Less risk to Beneficiary for errors and omissions.	There is a need to define the functional, esthetical and performance requirements upfront.
Could be less administrative burden to Beneficiary.	More risk to suppliers' design and build team.
Potential for cost saving.	
Potential for faster implementation.	

Table XIII: Pros and Cons of D&B contracts

Special contract management considerations for D&B contracts:

1. **Scope of Work**: both the Beneficiary and the supplier should have a clear understanding of their respective roles and responsibilities taking into consideration the supplier's responsibility for the design work;
2. **Insurance**: Beneficiaries should confirm that the supplier's insurance includes design professional liabilities;
3. **Expertise**: the need for professional expertise by the contractor to be able to design the works in accordance with the Beneficiaries requirements and the Beneficiary to be able to review the designs and confirm that they meet its requirement. There is no independent design engineer.

2. Lump-sum

Lump-sum payments (linked to milestones) are normally applied to D&B, DBO, Engineering Procurement and Construction (EPC) and noncomplex works (such as simple maintenance). However, lump-sum contracts within the context of Bank financed projects normally reference consulting services contracts.

Payments under lump-sum contracts are normally made upon successful delivery of a contractual milestone. Payment is usually a percentage of the total contract amount. Lump-sum contracts are appropriate when the deliverables of the consulting services can be clearly and accurately specified.

In managing lump-sum contracts, the key factors that the Beneficiary should focus on are:

1. have an effective quality assurance system in place;
2. monitor the performance of the contractor towards meeting the milestones in a timely manner;
3. ensure that the outputs are delivered in a timely manner to the level of quality required by the contract.

3. Time-based

In the context of Bank financed projects, time-based contracts are used for consulting services of an advisory or complex nature, or services (such as supervision of works) that are dependent on the activities of others. Time-based contracts need to be monitored very closely to ensure that the consultants are charging for the time actually spent on the assignment, that reimbursables are in accordance with the contract and that the quality of services are acceptable. If not managed closely, time-based contracts can be the source of huge time and cost overrun coupled with poor quality of services.

Case study: poor management of time-based contract

Situation: An international expert was employed for a period of two years by the Beneficiary under a technical assistance project. The TOR included structured training (classroom and on-the-job training) of the Beneficiary's staff in a specialized field.

Relevant Beneficiary staff attended the structured trainings. However, the Beneficiary's management kept the relevant staff busy with their operational tasks. The Beneficiary's relevant staff had little incentive to get the on-the-job training.

The consultant continued to give the structured training. When the consultant was asked why on-the-job training was not being carried out, the consultant complained that staff had been kept busy with their other work and had little incentive for on-the-job training. This coupled with the lack of a monitoring and evaluation mechanism to ensure the knowledge transfer outcomes resulted in the expiry of the two years with minimum practical knowledge transferred to the Beneficiary's staff.

Box XXIV– Case study: poor management of time-based contract

4. Performance-based

Performance-based contracts are result oriented and payments are made for measurable outputs that satisfy the Beneficiaries functional/performance requirements. Performance-based contracts may be appropriate for road maintenance and rehabilitation, non-consulting services,

operation of facilities or other similar contracts where satisfactory performance is the primary focus.

Key factors for successful performance-based contract execution include:

1. adequate skills and expertise within the Beneficiary's staff;
2. appropriate capability of the contracting and consulting industry;
3. facilitating an enabling contracting and partnering environment;
4. stable multi-year funding;
5. adapting the general principles to the local context of each country.

In managing performance-based contracts, the Beneficiary should have a performance assessment plan describing how the Beneficiary will assess the contractor's performance in accordance with the requirements in the contract. Several methods can be used to decide on the scope and timing of the assessment. This may include:

1. random sampling;
2. periodic sampling;
3. trend analysis;
4. customer feedback;
5. third party audit.

5. Admeasurement

Admeasurement can be used in a contract based on unit price. A unit price contract is based on estimated quantities of items included in the project and unit prices (hourly rates, rate per unit work, volume, etc.) In general, contractor's overhead and profit are included in the rate. The final price of the contract is dependent on the quantities needed to carry out and complete the work.

In a unit price contract, the risk of inaccurate estimation of uncertain quantities for some key tasks has been removed from the contractor. However, some contractors may submit an "unbalanced bid" when they discover discrepancies between their estimates and the Beneficiary's estimates of quantities.

The main focus of managing unit price contracts should be on:

1. ensuring that payments are made using the unit prices in the contract;
2. ensuring that the quantities are measured using the method of measurement applicable to the contract;
3. revisiting the unit prices when justified as per the contract.

6. Reimbursable cost contract

A reimbursable cost contract (or “cost-plus-fee”) may be conveniently used for works (including repair/rehabilitation), non-consulting services or consultant services under emergency circumstances when the Beneficiary needs an emergency solution to address disruptions to physical infrastructure or utility services in particular as a result of natural catastrophic or similar circumstances.

The Beneficiary may be able to select and mobilize a contractor or service provider rapidly, either through some form of competition (shopping) or direct contracting. The contract usually provides for reimbursement to the contractor/service provider of all direct costs incurred on the task (labour, materials and equipment) plus payment of overhead costs and profit in the form of either a percentage of the direct costs or a lump sum.

Such contract should have a time limit (say 6 to 9 months) with the understanding that in the meantime, the Beneficiary would have sufficient time to prepare suitable designs and bidding documents to undertake a regular procurement process for the works and services required in a second phase of the activities needed to rehabilitate the physical infrastructure or utility services.

Annex 2: Measuring performance

Monitoring of KPIs

Key performance indicators (KPIs) are helpful internal tool for the Beneficiary to facilitate monitoring contract performance and to ensure that successful outcomes are achieved. KPIs are only a monitoring tool and are not a substitute for the contract provisions.

Although the KPI may vary depending on the specific contract, the performance measures normally rotate around cost, time, quality, ESHS performance (for infrastructure contracts) and stakeholder (end users/ community) satisfaction. The contract performance target should be tangible and measurable. It should be kept in mind that monitoring performance using KPIs is not necessarily monitoring activities. The detailed contract execution activities are monitored/ supervised in accordance with the contract and relevant elements of the CMP (if there is one). The KPIs support these efforts by focusing on key indicators for successful performance.

If needed, the key performance indicators could include sub-indicators. A color system may be used to show the monitoring results of the indicators, to guide the focus of attention. The indicators could also be weighted (out of 100 for example) depending on the relevance to successful contract performance, and scores given based on the monitoring results. Caution needs to be taken so that such a weighting system does not end up being a mechanical exercise and thereby losing sight of the realities of the contract. As an example, % of actual physical completion vs. contractual physical completion over the period may score 9/10. On face value, this may seem that the contract is almost progressing as scheduled (which may as well be the case). However, it could as well be that a critical path in the program has just started to be affected and its effect is not yet apparent. If the Beneficiary loses sight because of the 9/10 performance in this indicator, the contract could soon start to suffer with significant consequences.

KPIs are only indicators and not an end by themselves. If a certain KPI is not met, the reasons should immediately be identified, discussed with the contractor as needed, and issues/bottlenecks addressed in a timely manner in accordance with the contract. As an example, % of actual physical completion vs. contractual physical completion over the period should be 100% if the contract is being implemented in accordance with the agreed programme. If this is below 100%, the reasons should be immediately investigated with focus on the causes. The delay is an effect and the underlying causes could be cascaded and therefore the need to address the underlying cause. In this example, the cause of the delay could be because the contractor has started to slow site operations. The underlying cause may be because the Beneficiary is delaying payments due and hence the contractor is facing cash flow issues. The real cause is the undue delay in payments and therefore should promptly be addressed.

Good practice would be that the Beneficiary:

1. includes the KPIs in the CMP;

2. communicates with the contractor to ensure understanding, and get inputs as appropriate;

3. monitors contract implementation against the KPIs;

4. tests the KPIs, reviews and updates them, as appropriate;

5. includes the KPIs in the items for discussion in progress meetings; and

6. uses the KPIs in post-contract review, and record lessons for future operations.

What tools are available to the Beneficiary to monitor KPIs? This may include:

1. Gantt chart;

2. CMP reports and updates;

3. procurement plan updates;

4. disbursement reports and withdrawal applications;

5. regular progress meeting minutes;

6. project management software.

Example KPIs Illustrative only (actual KPIs should be developed depending on the nature, size, risk and complexity of the subject contract)

Time

1. Measure of physical progress =

   % of actual physical completion vs. contractual physical completion over the period

2. Measure of final time over run =

   $$\frac{\text{actual contract period - contract period x 100 (\%)}}{\text{contract period}}$$

3. Measure of contractor's default: un-excusable delays percentage =

   $$\frac{\text{un-excusable delays x 100 (\%)}}{\text{total delays}}$$

4. Measure of Employer's default: Excusable delays percentage =

   $$\frac{\text{excusable delays x100 (\%)}}{\text{total delays}}$$

Cost

1. Measure of financial progress =

% of actual paid vs. contractual expected payment over the period

2. Financial progress vs. physical progress: (%).
3. Cost overrun =

$$\frac{\textbf{actual contract price x 100 (\%)}}{\textbf{original contract price}}$$

Quality

1. Number of defects identified during the period.
2. Performance guarantees: % met.
3. End user/ community satisfaction:
   a. number of community grievances during period;
   b. end user satisfaction survey.

ESHS

1. Lost time due to safety related incidents (%) =

$$\frac{\textbf{lost time x100 (\%)}}{\textbf{contract period}}$$

2. Number of environmental related breaches.
3. Number of GBV/SEA related breaches.

Box XXV: Example KPIs

Annex 3: Sample Template – Contract Management Plan

CONTRACT MANAGEMENT PLAN

Project Name: _____

Project ID Number: _____

Contract Name: _____

Contract Description: _____

CMP Prepared By: _____

Date: _____

Instructions for preparation of a Contract Management Plan (CMP).

This template should be customized to suit the specific needs of the contract implementation. Entries inserted in this sample template tables are examples and the Contract Management Plan (CMP) should therefore be prepared based on the needs and specifics of the contract.

A draft CMP should be prepared by the Beneficiary during the initial stages of the procurement process. The first version should be finalized promptly after a contract award decision has been made. It is good practice to share the CMP with the contractor, to ensure that there is a shared understanding of how the delivery of the Contract will be managed.

The CMP should be a living document that is updated on regular basis to ensure that it stays relevant and reflects the latest status of the Contract.

PROJECT DESCRIPTION

[Insert a brief description of the project under which the contract is being implemented]

GENERAL CONTRACT INFORMATION

Contract Title	
Contract Number:	
Contract Type:	
Location:	
Contract Start Date:	
Contract Duration:	
Contract end Date:	
Contract Amount and currency	
Name of Contractor and address	

PURPOSE OF THE CONTRACT MANAGEMENT PLAN

[Indicate the purpose of the CMP as it relates to the Contract under consideration. The information shall include the intended user, values and benefits].

The main objectives of the CMP are to ensure that there is a clear understanding of the roles and responsibilities of the Beneficiary and Contractor.

GOVERNANCE STRUCTURE

[Describe the governance structure relevant to the contract. Where possible include a diagram showing the key parties, the hierarchy, lines of reporting etc.]

RISK MANAGEMENT

Event	Risk	Impact	Likelihood	Risk Rating	Risk Mitigation Action	Timeline	Responsible	Remark
	[insert the identified potential risks.]							

KEY CONTACTS, ROLES AND RESPONSIBILITIES

Organization	Name and Title	Roles and Responsibilities	Contact Information (Email, Tel, Address)
Beneficiary	*Contract Manager*		

Contractor	*Contractor's representative:*		
Consultant	*Engineer*		

COMMUNICATION AND REPORTING PROCEDURE

Communication Procedures

Communication Type	Objective	Format	Frequency	Audience	Owner

Contractual Notices

Descriptions	Objective	Contract Reference	Frequency/ Timing	From	to	

Contractor's documents

Descriptions	Objective	Contract Reference				

Reporting Requirement and Procedure

No.	Contract Ref. Clause	Due date/ frequency	Recipients	Responsibilities	Required Action
[Progress Report]		*[Monthly]*			
[ESHS Progress reports]		*[Monthly]*			
[ESHS immediate reports]		*[immediately after occurrence of event]*			
Test results					

Issues Escalation Procedure

Nature of Issue	Level of review	Responsible body	Response time	Type of issue
Low or Routine				
Medium				
High				
Critical				

KEY CONTRACTUAL PROVISIONS

No.	Description	Contract reference	Responsible	Remark	Risks
1	*Care and Supply of Documents*		*Employer*	*2 copies issued to contractor*	
2	*Delayed Drawings or Instructions*		*Employer*		*Time extension cost compensation*
3	*Right of Access to the Site*		*Employer*	*Give right of access within time stated in data sheet.*	

CONTRACTUAL MILESTONES AND DELIVERABLES

Activity / Milestone	Responsible	Contract Reference	Start date	End date	Remark
Submit work schedule	*Contractor*				
Foundation work for section…	*Contractor*				Critical path
Complete structure for …	*Contractor*				
Pilot testing for….					

KEY PERFORMANCE INDICATORS (to MEASURE PERFORMANCE AND OUTCOMES)

No.	Deliverable	KPI	Performance target	Test	Verification	Remark
1						
2						
3						

UNDERPERFORMANCE/DEFAULT CONTRACTUAL ACTIONS

No.	Description of underperformance	Responsible	Applicable contractual provision/s	Actions to be taken	Remark
1					

CHANGE MANAGEMENT PROCESS

No.	Change initiated by	Type of change	Responsible	Required Action	Review/ Approval Process	Contract Amendment Requirement	Status
1	*Employer*	*Change in authority of the Engineer*	*Employer*	*Inform Contractor of any change*			
2	*Employer*	*Change in scope of work*	*Engineer*				

INSURANCE

No.	Type of Insurance	Contract Ref.	Amount / Limit of liability	Required date	Expiry date	Information Required
1						

GUARANTEES AND SECURITIES

No.	Type of Guarantee	Contract Ref.	Amount / Limit of liability	Required Date	Expiry date	Information Required
1	*[Advance Payment*					

	Guarantee]					
2	*[Performance Security]*					
3	*[ESHS Performance Security]*					
4	[Retention Guarantee]					

PAYMENT PLAN /PROCEDURES

No.	Type of Payment	When / frequency	Documents Required	Process time	Verification process	Approvals
1	*Advance payment*	*Once*	*Advance payment Guarantee*			
2	*Interim payments*	*Every month*	*Interim payment certificates, timesheets, proof of incurred expenditure, shipping documents etc.*			
3	*Interest payments*	*Delayed payments*				
4	Price adjustment					
5	Claims/ Compensation	As needed	Contractors			
6	Final Payment					

RECORDS MANAGEMENT

No.	Type of Record	Owner	Responsible	Action required	Remark
1	*[Contract documents and any amendments/]*				
2	*Insurance details*				
3	*[change orders]*				
4	*[notices]*				
5	*[Payment Documents, including documents on application of price adjustment if any]*				

6	*Minutes of contract related meetings*				
7	*[Progress Reports]*				
8	[*immediate Reports on ESHS, if applicable*]				
9	*[Test Results]*				
10	*[Guarantees, warranty/defect liability and Securities]*				
11	*Documents related to any suspension or termination*				

KEY STAKEHOLDERS ENGAGEMENT PLAN

No.	Stakeholder	Format	Frequency	Remark
1				
2				

CONTRACT CLOSURE PROCEDURES

No.	Activity	Responsible	Remark

PRICE ADJUSTMENT PROCEDURES

No.	Activity	Responsible	Remark
	e.g. verification of indices		

INTERFACE MANAGEMENT

No.	Activity	Responsible	Remark
1			

Annex 4: Template – Contract Mobilization Plan

Contract Mobilization Plan

(based on SPD Works)

USER INSTRUCTIONS: This template serves as an example and it is not a complete treatment of the subject (as the latter depends on the actual contract entered to by the parties). Where a mobilization plan is required this should be incorporated in the CMP.

Mobilisation	Action	Contractual Clause *[insert applicable contractual provision reference, as applicable]*	Timeline (period)	Responsible party/person
Commercial	• Ensure that all relevant parties have copies of the Contract			
	• Establish Contract information management system			
	• Establish a system to monitor expenditures and timelines for the Contract			
	• Obtain evidence of insurance and policies, advance payment and performance securities in accordance with the Contract	[ex: GCC 18, GCC 14.2, GCC 4.2 and their particular Conditions]		
	• Ensure that advance payment is made in accordance with the Contract			
	• Deliver to the Contractor reasonable evidence of the Employer's financial arrangements	Ex: GC 2.4		
	• Agree on Contractor's Representative (if already not named in the Contract)	Ex: GC 4.3		
	• Obtain planning, zoning and other permissions as required by the Contract	Ex: GC 1.13		

	• Give right of access to and possession of the Site as required by the Contract	GC 2.1		
ESHS	• ensure that appropriate measures are in place to address environmental, social, health and safety (ESHS) risks and impacts. • at a minimum, ensure that Management Strategies and Implementation Plans and Code of Conduct, submitted as part of the Bid/Proposal and agreed as part of the Contract are being applied.	GC4.1 (Particular Conditions)		
	• evidence of induction/training of Contractor's Personnel on ESHS			
	• Ensure health and safety risk assessments have been completed for the mobilization activities and necessary safety measures are in place.			
Operational/ Technical	• Ensure that the Engineer is in place and the Contractor is notified (if not already notified in the Contract)	GCC 3		
	• Establish key performance indicators (KPIs) for the Contract			
	• Check compliance with Employer's Requirements	Employer's Requirements section of the Contract		
	• Establish schedule for regular meetings, field visits, inspections, reviews and audits			
	• Ensure that the Contractor has instituted a quality assurance system relevant to mobilization	GCC 4.9		
	• Dispute Board appointed in accordance with the Contract	GCC and Contract Data-20.2		
	• notice of the intended date of the commencement of each	GCC 4.4		

	Subcontractor's work, and of the commencement of such work on the Site			
Contractual Relationship	• Establish reporting modalities	GCC 4.21 and Particular Conditions		
	• Notify to the Contractor Employer's Personnel i.e. the Engineer, employees of the Engineer and of the Employer; and any other personnel relevant to the Contract	GCC 1.1.2.6 and GCC 2.3		
	• Establish roles and responsibilities	Contractor: GCC 4.1 and other relevant provisions of the Contract, Employer:		
	• Establish modalities of communication			

Annex 5: Template –Risk Management Plan

Risk Assessment and Mitigation Plan

(based on Works - FIDIC Construction contract)

USER INSTRUCTIONS: This template serves as an example and it is not a complete treatment of the subject (as the latter depends on the actual contract entered to by the parties). Where a detailed risk management plan is required this should be incorporated in the CMP.

Nature of Risk	Examples of Risk	Risk mitigation measures with clear accountabilities and timelines as appropriate
Failure to meet KPIs	List KPIs	
Contract management capacity	• Failure to have sufficiently skilled and experienced staff • Lack of role clarity • contract management not considered as a key management function	
Contractor performance	• Failure to provide outputs to agreed quality standards • Cost over-run • Time over-run • Failure to comply with contractual obligations • Financial soundness risk • Fraud and Corruption	
Supervision arrangements	• Engineer (if any) role • Monitoring the Engineer (if any)	
Changes in circumstances and/or requirements	• changes in requirements • Employer's risks • managing Employer's risks and change orders/variations	
Stakeholder relationships	• Key stakeholder expectations • poor communications	
ESHS risks	• environmental risks • social risks • health risks • safety risks	

Timely access of Site	…..	
Timely review and approvals of Contractor's Documents	….	
Delay in effectiveness or commencement date	….	
Managing payments and payment certificates	….	
Managing price adjustment provisions (if applicable)	…	
Managing provisional sums	…	
Managing termination and suspension, as applicable	….	
Delay in taking over	….	
Manging tests and delay in tests and commissioning	….	
Managing defect liability period	…	
Managing dispute resolution	….	

Worked example

(based on one of the available methods of calculating ownership and operating costs in claims). This is a simplified example for illustration basis only. Note: agreeing on the calculation of ownership and/or operating costs, as applicable, is the responsibility of the contracting parties.)

Given:

- Acquisition cost (based on actual initial cost): USD 500,000
- Estimated economic life time: 20,000 hours
- Estimated annual use: 2000 hours
- Economic life: 10 years
- Assumed salvage value: 10%
- Replacement cost escalation (to offset inflation and machine price increase):5%
- Interest cost on investment (annual cost of capital invested in an equipment): 5%
- Insurance, property taxes, storage etc. cost: 6%
- Hourly repair and maintenance expenses: 0.001% of the acquisition costs

Calculated values:

- Salvage value: 10%= 0.1x 500,000= 50,000
- Acquisition cost- salvage value= 500,000-50,000= 450,000
- Annual depreciation (decline in market value due to age, wear, deterioration and obsolesce): 450,000/10/ 500,000= 9%

Annual ownership cost= 9+5+5+6= 25% of the acquisition cost

- Hourly ownership cost= 25% x500,000/2000 = 0.01% x 500,000= USD 62.50
- Hourly repair and maintenance expense= 0.001% 500,000= USD 5
- The contractor may claim for hourly equipment ownership cost in the order of: 62.50+5= USD 67.50.

Annex 6: Template –Contract Inventory Listing

Interim Unaudited Financial Report

Contract Inventory Listing

as of: _____

Project: _____

Project No: _____ Account No: _____

Ref.		Contractor	Effective Date	Expiry Date	Contract Value	Component/Sub component	Disbursement from previous period	Disbursement in the reporting period	Cumulative disbursement	Contract balance
1										
2										
3										
4										
5										

Prepared by_____ Signature _____ Date _____

Reviewed by _____ Signature _____ Date _____

Approved by _____ Signature _____ Date _____

Annex 7.1: Sample Interim Payment Certificate

Monday. 1st March , 2021

INTERIM PAYMENT CERTIFICATE NO:

PROJECT TITLE:

CONTRACT No.:

EMPLOYER:

ENGINEER/CONTRACT MANAGER:

CONTRACTOR:

INTENDED COMPLETION DATE :

WORK DONE AS AT:

Item	Description	Amount ($)
	Original Contract Sum ($)	10,000,000.00
	Add/~~Deduct~~ Variation Order ($)	450,000.00
	Revised Contract Sum ($)	10,450,000.00
	Work done as at: 28 February 2021	
1	Preliminaries & General	321,892.00
2	Detailed Scope Of work. Eg: Piling Works, Building Works, Drainage	6,523,154.53
3	Material at Site (75% Allow)	128,156.00
4	**Total Value Of work Done**	**6,973,202.53**
5	Less: Retention (10% of this payment Certificate up to total of 5% of Original Contract Sum)	500,000.00
6	Less : Previous Payment No.	4,281,536.79
	Amount Payable under this certificate	**2,191,665.74**

Total amount payable under this interim certificate No…. is US dollar Two Milion One Hundred and Ninety One Thousand and Six Hundred And Sixty Five and Cents Seventy Four Only. ($ 2,191,665.74)

Evaluation date :

Evaluated by: Agreed by:

Signature: Signature:

Name: Name:

Position: Position:

Annex 7.2: Sample Monitoring Spreadsheet for Contract Payments

CONTRACT NO: ……., CONTRACTOR:……., CONTRACT VALUE…….							
1.Serial	**2.Value of Works executed**	**3.Retention Money**	**4.Recovery of Advance Payment**	**5.Net payment**	**6.Payment No.**	**7.Payment Reference**	**8. D**
1				1,395,939.00	Advance payment(AP)		
2	731,668.97	36,583.45	348,984.50	346,101.02	IPC1		
3	731,668.97	36,583.45	348,984.50	346,101.02	IPC2		
4	1,241,962.34	62,098.12	348,984.50	830,879.72	IPC3		
5	731,668.97	36,583.45	348,984.50	346,101.02	IPC4		
6	537,158.90	26,857.95		510,300.96	IPC5		
7	1,167,731.00	58,386.55		1,109,344.45	IPC6		
8	1,100,659.41	55,032.97		1,045,626.44	IPC7		
9	308,180.00	15,409.00		292,771.00	IPC8		
10	109,714.00	5,485.70		104,228.30	IPC9		
11	222,800.00	11,140.00		211,660.00	IPC10		
12	267,294.00	13,364.70		253,929.30	IPC11		
13	1,353,803.00	67,690.15		1,286,112.85	IPC12		
14	265,000.00	13,250.00		251,750.00	IPC13		
15	255,324.00	12,766.20		242,557.80	IPC14		
16	650,701.00	32,535.05		618,165.95	IPC15		
17	145,020.00	7,251.00		137,769.00	IPC16		
18	150,870.00	7,543.50		143,326.50	IPC17		
19	159,387.00	7,969.35		151,417.65	IPC18		
				506,530.58	*Release of retention money*		
Total	**10,130,611.56**	**506,530.58**	**1,395,938.00**	**10,130,612.56**			

NB: at the closure of the Contract the total value of works executed (column 2) as measured in the final Bills of Quantities should be equal to the total net payments (column 5).

Annex 8: Sample Non-Conformance Report

NCR (1)

Site:
Right Bank/Concrete Faced Rockfill Dam

Location:
Area V/ face slab/ panel No. 32

Description and cause:

Cold joint and approximately 6 m3 of uncompacted concrete due to power failure and no standby generator available.
Violated clause:

Violated Particular Technical Specification (P.T.S)
2.12.1 (8):
The Contractor shall provide such personnel and equipment so that the performance of the concrete work is in a satisfactory manner. The transportation and placing equipment shall be clean and in good condition, adequate, and properly arranged to proceed with the placing without undue delays. The number and condition of vibrators for use and standby shall be able for the requirement during placement. The lighting system shall be sufficient to illuminate the inside of the forms when concrete is placed at night.

2.15.3 (4)
All concrete shall be placed in continuous approximately horizontal layers. Thickness of the layers shall not exceed 40 cm for mass concrete, and 50 cm for structural and all other concrete. Each layer shall be soft when a new layer is placed upon it so that no seams or planes of weakness within the section can form, and the two layers shall be made monolithic by penetration of vibrators.

Remedial proposed by Contractor:
The cold joint shall be chiseled and the rebar cleaned. Use of compressed air to clean the joint. The cold joint shall be treated

Proposal to avoid recurrence of non-conformance.
Standby generator shall be supplied during concreting.

Verification of the issue:

1. All defective concrete above cold joint should be chiseled and concrete adhering to rebars is to be clearly cleaned. The cold joint after treatment must be straight. Cold joint crossing section is shown on the drawing.

2. Compressed air jet shall be employed for cleaning the cold joint surface and the rebars

distributed above surface, as well as the foundation surface.

3. Twelve hours prior to casting, concrete at the cold joint surface and basal face shall be completely wetted. At first we pour long concrete against cold joint with grade one then to concrete with grade two. Concrete mix design will be supplied by laboratory.

4. In addition, slip formwork is to be used for continuous concreting.

5. Curing agent will be utilized to carry out the curing soon after the completion of concreting.

Acceptance and close of the NCR by Engineer:
The remedy was accepted by the Engineer and the NCR was closed.

For any additional information, Please see

www.isdb.org/procurement

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