



CESA

Consulting Engineers South Africa

The Voice of Consulting Engineering

Technical Briefing: Procurement of Consulting Engineering Services

Godfrey Ramalisa

Wally Mayne

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Introduction

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Shared Vision

Create a conducive sustainable procurement environment - by sharing best practice – in order to enhance infrastructure delivery, in terms of speed, time and cost (quality outcome).

Ensure that *the right firm(s) are appointed for the right job*

Appointment at a fair and reasonable level of compensation

Ensure continued existence and development of firm(s) and industry

Serve the best interests of public

Truth Commission

Identifying the challenges – by CESA

Industry and Society under distress

The lack of technical management capacity	Bribery and corruption (un-reasonable bribe)
Delayed payment	Inexperienced officials and consultants
Few work opportunities (unspent budget)	Poorly defined scope of works and services
Lower margins	Poor procurement practices (deviations)
Lack of infrastructure maintenance	Inappropriate construction procurement models

Truth Commission

Barriers to Construction Quality - cidb

Design

- Inadequate details and specification
- Poor design coordination

Procurement

- Emphasis on time and budget
- Shortened project periods
- Lack of prequalification
- Competitive tendering
- Awards of contracts primarily on price

Construction

- Skills shortage
- Insufficient workforce training
- Lack of management commitment
- Lack of strict quality control

Corruption

- Corruption
- Corruption
- Corruption
- Corruption
- (bribery, extortion and fraud)

courtesy: cidb discussion document : Construction Quality in South Africa; A client perspective

Truth Commission

Auditor General Findings

Poor procurement practices (deviations)

• Standard bidding documentation utilised not updated	• No policy prescribing the extension and/or variations to contracts
• Bids advertised for a shorter period < 21 days	• Appointment of companies with lower CIDB grading than required
• Deviation from the prescribed SCM prescripts – opening & recording of bids	• Not advertising bids on the CIDB website
• Competitive bidding processes not followed – threshold values set NT	• Not complying to the PPPFA – 80/20 and 90/10
• Deviations not recorded and approved by Accounting Officer	• Not performing proper costing prior to going out on tender
• Bid evaluation committees not cross-functional	• Evaluation criterion changed after the closing of bids
• Bids not evaluated according to specified criteria	• Inconsistent & inaccurate scoring and awarding

Best Interest of the Public



Fair and Reasonable priced services / infrastructure



Cost effective - Money spent on projects once, no rebuilding



Safe, User friendly and Reliable Infrastructure



Appropriate Infrastructure / accessible

Scope of Presentation

Outline - CESA Guideline Manual/Briefing

Chapter 1.	Project Life-cycle
Chapter 2.	Consulting Engineering Services
Chapter 3.	Procurement of Consulting Services
Chapter 4.	Scope - <i>expanded description of elements of scope</i>
Chapter 5.	Tender Documentation for CES
Chapter 6.	Value – Added Services – <i>value of additional CES</i>
Chapter 7.	Evaluation of tenders
Chapter 8.	Performance monitoring – <i>Suggested framework for CPE.</i>



“... a house becomes a bridge”



“... delivers a unusable, useless bridge / house ”



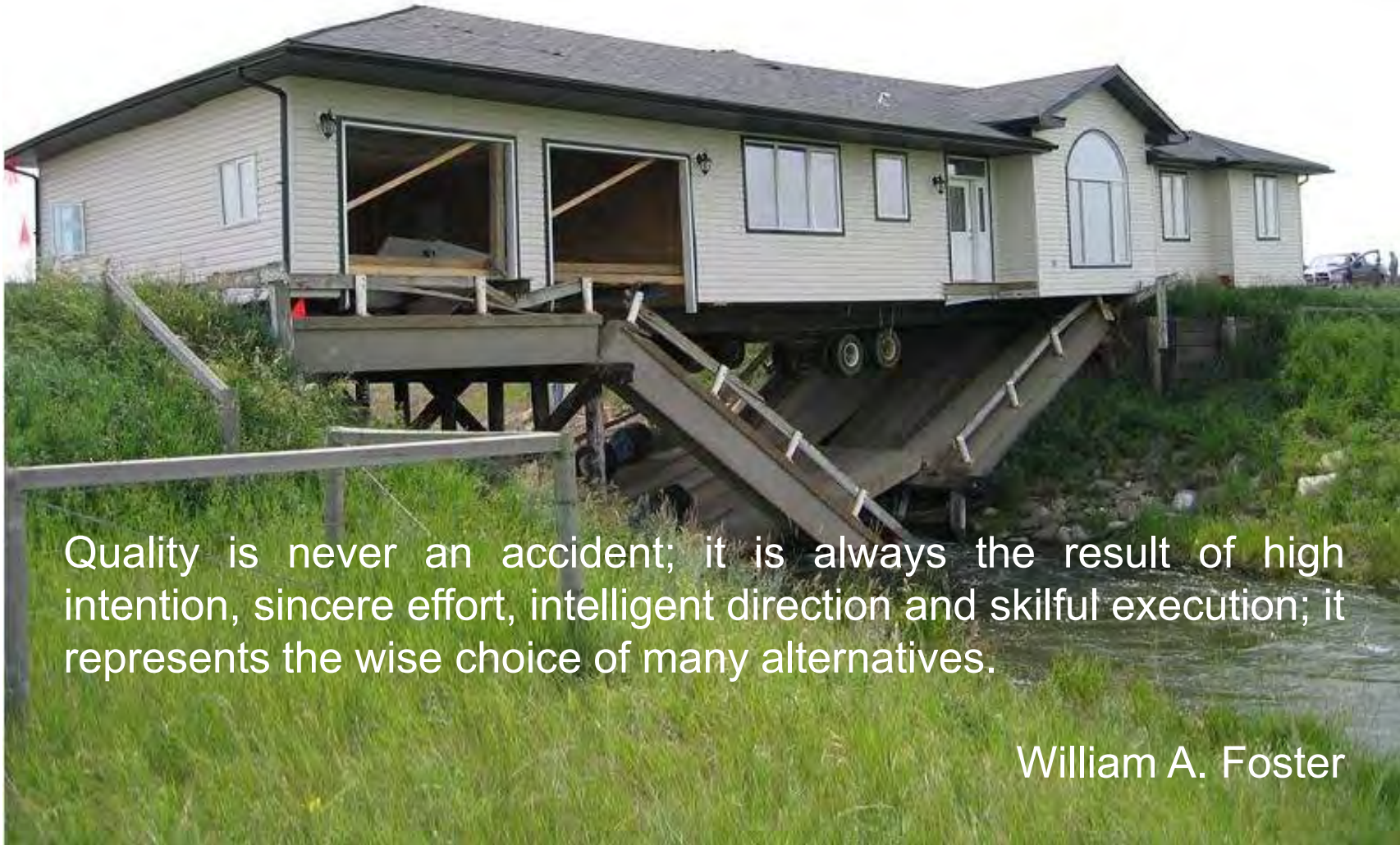
Appointment of unqualified firms is hugely costly

Nov09: “40 000 defective RDP houses to be flattened and rebuilt at a cost > R1-billion”.

Feb2011: rebuild about 50000 low-cost houses - thousands more than expected.

Aug2012: DHS rebuild to cost R50-billion





Quality is never an accident; it is always the result of high intention, sincere effort, intelligent direction and skilful execution; it represents the wise choice of many alternatives.

William A. Foster



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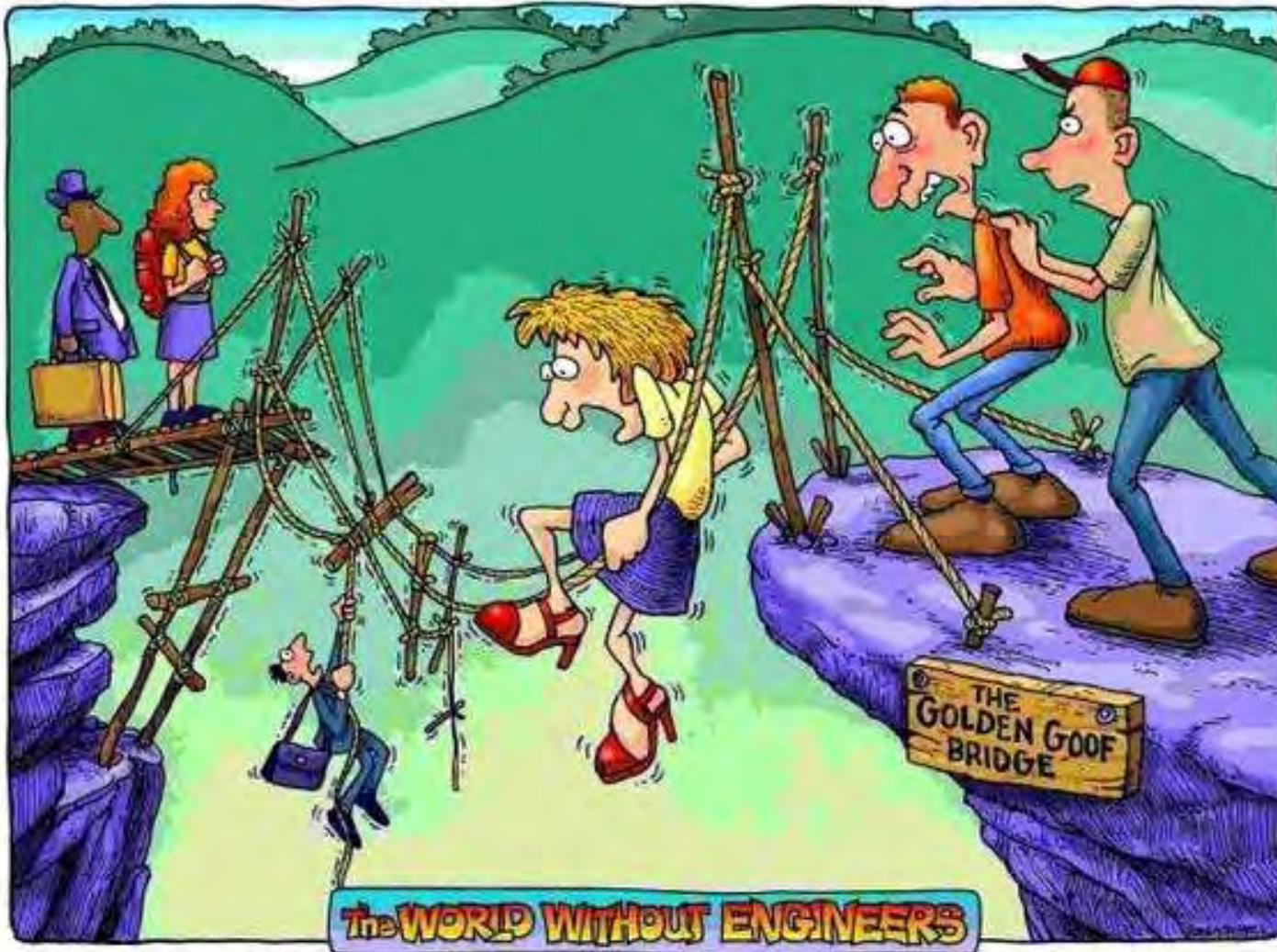
Scope of Session 1

- 1.1 Engineering Journey
- 1.2 Consulting Engineers South Africa
- 1.3 Construction Industry Developer & Regulator
- 1.4 The Project Life-Cycle
- 1.5 Value of Services

Engineering Journey

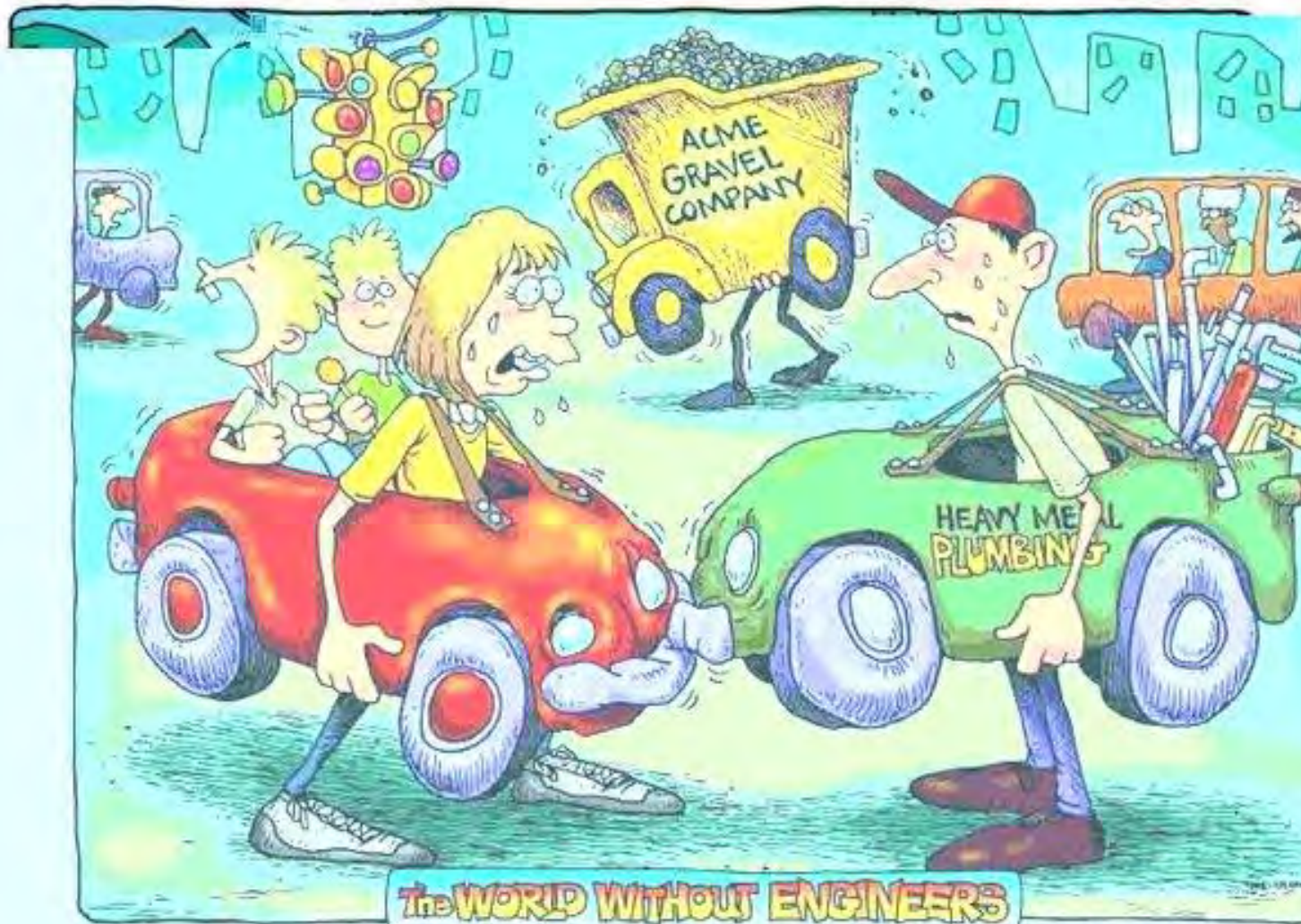
1.1 Engineering Journey (see page 5)

- 'Engineer' first appeared in 15th Century - in the military
- 'Non-military engineers' in civilian capacity– hence 'civil engineers'
- Associations formed to exchange experiences – improve status
- Engineering formalised as profession
 - safeguard health & welfare of public
 - prevent unqualified people from selling engineering services
- Sanitation voted greatest medical advance since 1840 – BMJ
- Engineers make it happen – shape your world



Agilent Technologies

<http://www.educatorscorner.com>



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1.2 Consulting Engineers South Africa (CESA)

History (see page 1)

- South African Association of Consulting Engineers (SAACE) founded in 1952
- Original membership 30 individuals
- August 2008 - SAACE transformed to Consulting Engineers South Africa (CESA)
- Consists of 480 multidisciplinary consulting engineering and management private firms
- Employing more than 22 000 people

was – 1952 - 2008



1.2 Consulting Engineers South Africa (CESA)

CESA promote interests of Members and Clients by:

1. Regular **liaison** meetings and **collaboration** with clients and other organisations
2. Publication of documents relating to the profession including **practice notes, best practice guidelines and case studies**
3. Publication of **the Directory of Firms** and maintenance of pre-screened database of consulting engineering firms.
4. CPD accredited **seminars and workshops** through the “School of Consulting Engineering”
5. An **Annual Convention** and **Engineering Excellence Awards**
6. **FIDIC** (International Federation of Consulting Engineers Associations)
7. FIDIC’s Group of Africa Member Associations (GAMA).

1.2 Consulting Engineers South Africa (CESA)

Professionalism and Integrity of Members:

1. In general:

- ECSA registers professional individual engineers, technologists etc
- CESA 'registers' professional Consulting Engineering Firms

2. Credibility of applicants

- In business > 12 months
- Nominated & Seconded by CESA member firms

3. Ongoing requirements

- Subject to CESA Code of Conduct (includes QMS & BIMS)
- Ownership/principals > 50% Pr Engrs/Techno's
- Primary work (Consulting Engineering)
- Developing Integrity Pact (see **Appendix A**)

1.3 The Construction Industry Development Board

Established by and gets its mandate from the CIDB Act (38 of 2000)



Aims:

- **Promote sustainable growth** - construction industry - sustainable participation of emerging sector
- **Promote improved performance & best practice** - public and private sector clients, contractors and other participants
- Promote - procurement & delivery management - **uniform application of policy** - all spheres of government - **uniform and ethical standards** - guided by a **Code of Conduct**
- mandated, among others, to Establish:
 - Register of Contractors(RoC)
 - Register of Projects (RoP)
 - **may** Register of Prof Service Providers (RoPSP)

1.3 The Construction Industry Development Board

CIDB Code of Conduct

establishes certain standards of behaviour...

- Behave equitably, honestly and transparently.
- Discharge duties and obligations timeously and with integrity.
- Comply with all applicable legislation and associated regulations
- Satisfy all requirements established in procurement documents
- Avoid conflict of interest
- Not maliciously injure/ attempt to injure the reputation of 3rd party



1.3 The Construction Industry Development Board

Monitoring role - CIDB can:

- Conduct investigations
- Sanction offenders
- Suspend offenders from the CIDB RoC
- **Issue fines to Employers up to R100 000**
- Intergovernmental Relations Framework Act – liaises with:
 - Treasury
 - Public Protector
 - Auditor General



CIDB documentation/prescripts

- Construction Procurement Best Practices
- Prescripts of the CIDB - Standard of Uniformity (SFU)

(see **Appendix I** – useful websites)

1.3 The Construction Industry Development Board



MOMERANDUM OF UNDERSTANDING **for monitoring of compliance in public sector** **procurement:**

Entered into between :

Construction Industry Development Board
(“CIDB”)

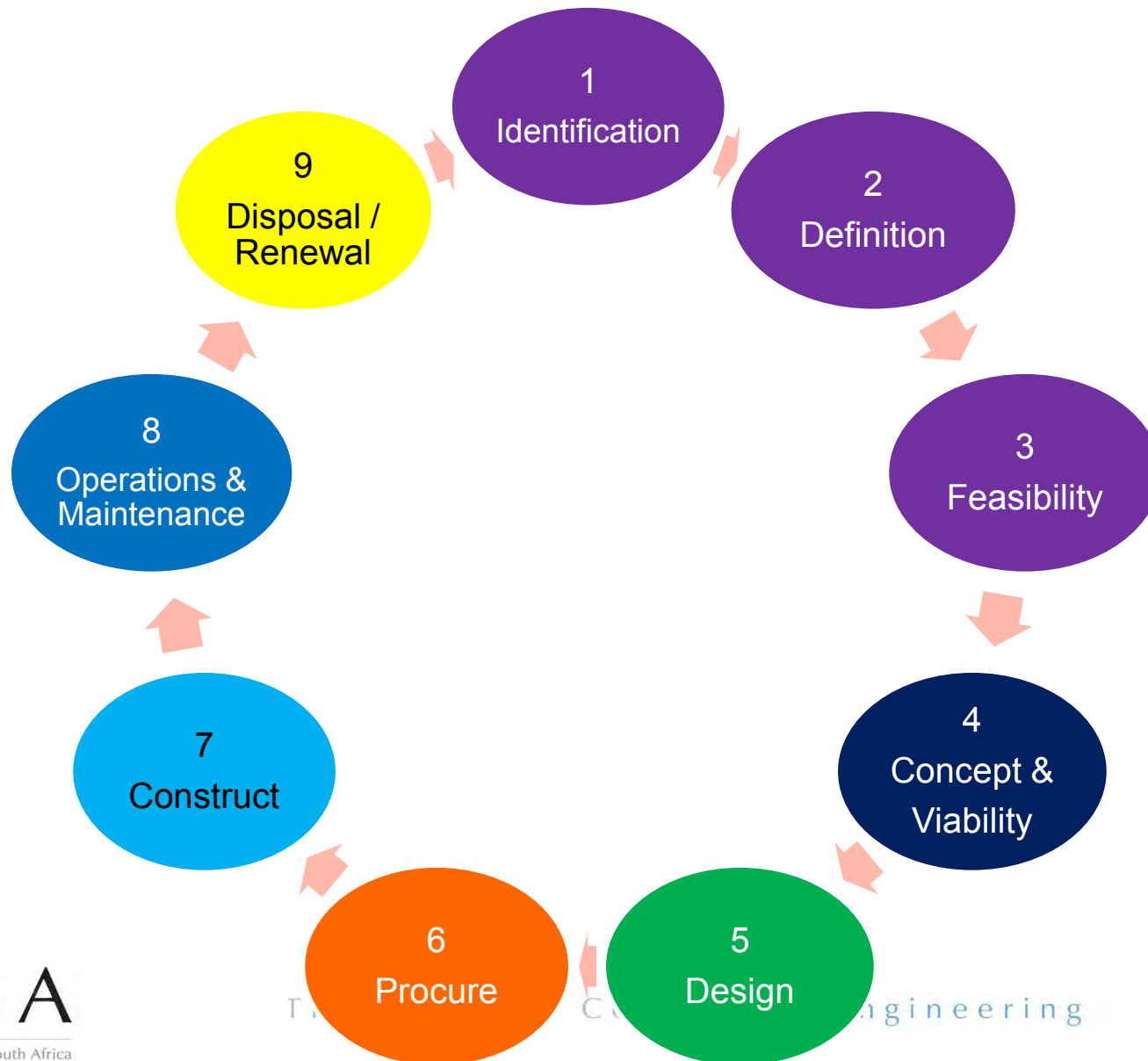
and

Consulting Engineers South Africa
(“CESA”)

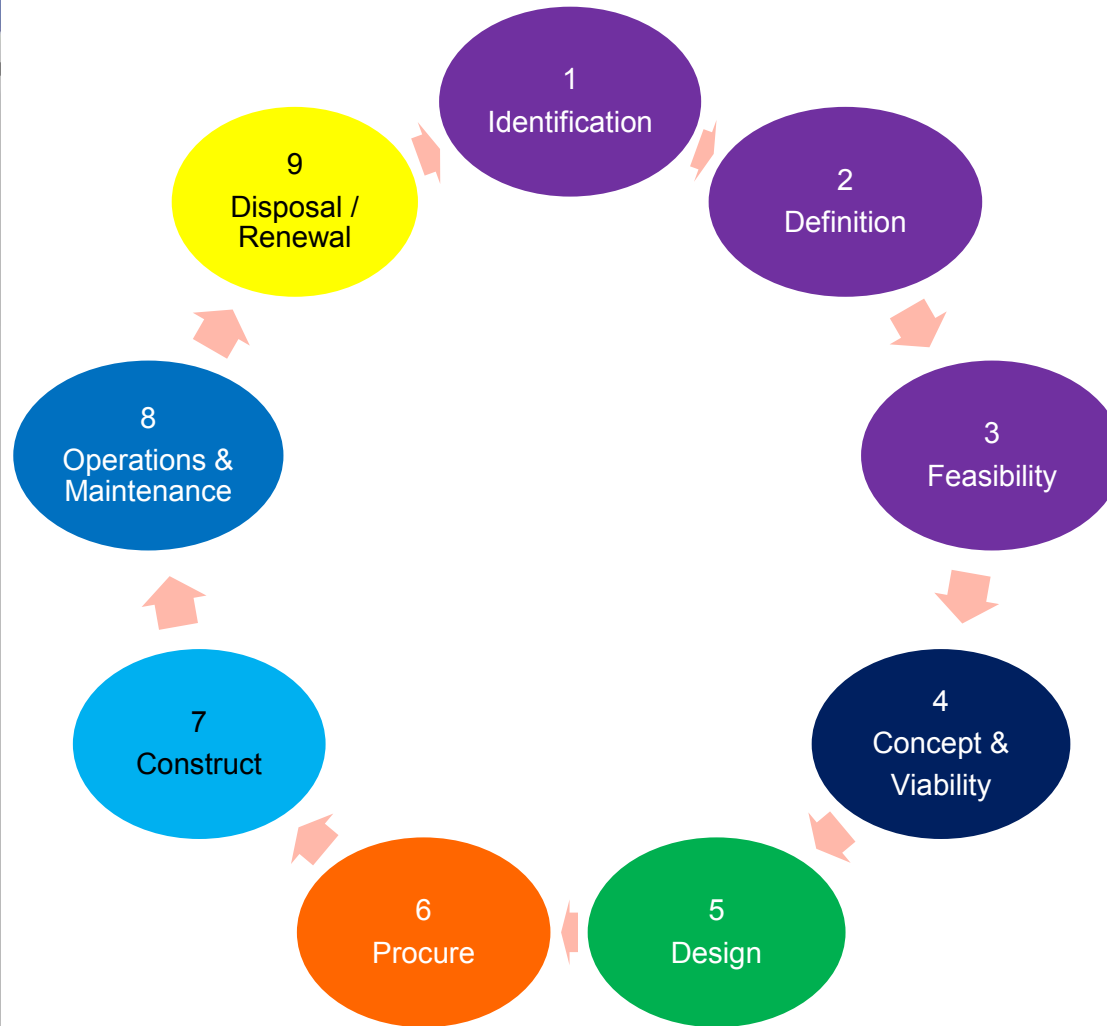
1.4 The Project Life Cycle

INFRASTRUCTURE DELIVERY CYCLE		Deliverable	Consulting Engineer's Inputs
Support services	1 Infrastructure planning	Infrastructure plan for MTEF period	Specialist inputs and cost advice
	2 Procurement planning	Procurement strategy	Specialist advice
	3 Package preparation	Strategic brief	Specialist inputs and cost advice
Design services	4 Package definition	Concept report	Develop solutions and report
	5 Design development	Design development report	Develop design and report
	6 Design documentation	Production information (drawings and specifications)	Produce production information
Contract related services	7 Works	Works in accordance with contract	Administer contract and confirm design intent is met
	8 Hand over	Record information	Produce record information
	9a Asset data	Updated asset register	Provide data
	9b Package completion	Completed contract	Close out contract

1.4 The Conventional Project Life Cycle



1.4 The Conventional Project Life Cycle

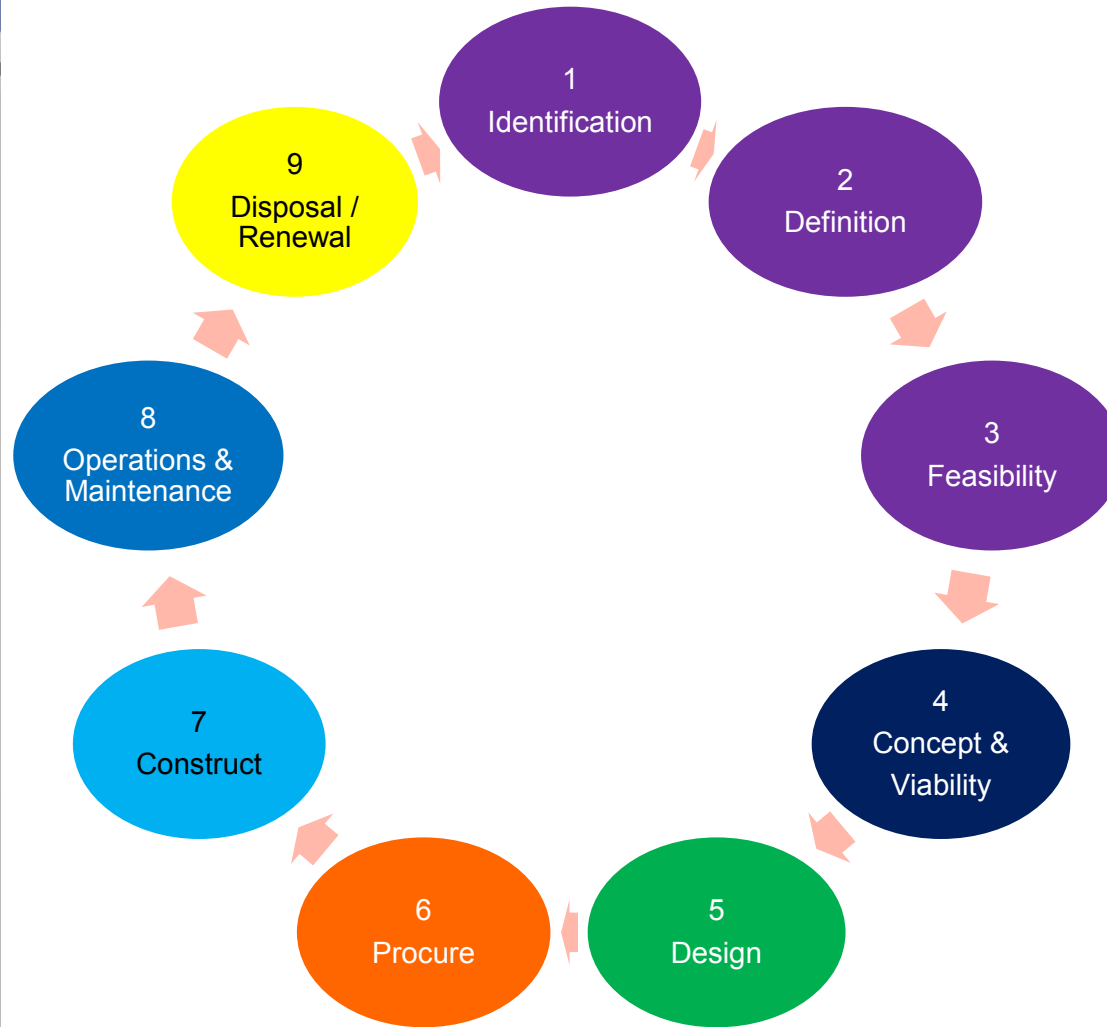


Steps 1 to 3 :

Identification, Definition, Feasibility

- Identifying the potential project – often by Owner, Specialist assistance
- And defining the best project to meet the need
- Reject unsuitable solutions, shortlist suitable alternatives
- Select the best project, based on technical and financial feasibility
- Asset management planning

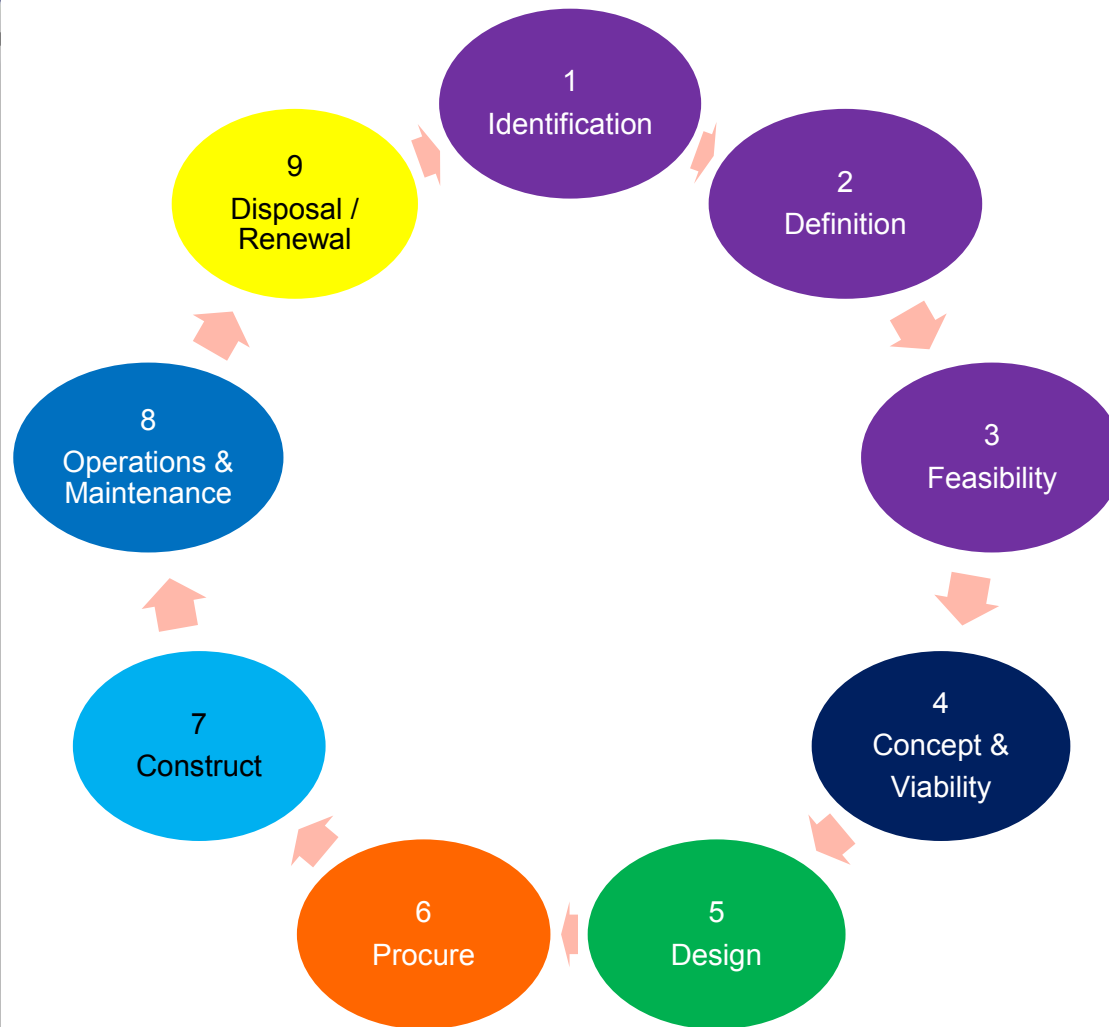
The Conventional Project Life Cycle



Steps 4, 5, 6 : Concept & Viability, Design, Procure

- Developing the project through all concept and viability stages, confirm viability
- Detail design of the project to procure construction
- Design can be a maintenance or operation assignment
- Procuring a contractor to construct – proper tender/contract documents, proper evaluation of tenders

1.4 The Conventional Project Life Cycle



Steps 7, 8, 9: Construct, Operate and Maintain, Disposal/ Renew

• Construction:

➤ From site handover to when Owner takes possession of the constructed project

➤ Final handover after Defects Liability Period expired and defects rectified

• Operation and Maintenance:

➤ Usually by Owner - According to manuals and own procedures

➤ O & M - May be contracted out

• Disposal/Renewal:

➤ Actions at end of Operations & Maintenance period

➤ Close down or renew facility etc for another period

1.4 Required Expertise and Value over Project Life Cycle

Step in Project Life Cycle	Required expertise and potential for value
Identification	Strategic concepts and lateral thinking to identify appropriate options including asset management planning
Definition	Operational and value options to define projects that are likely to be feasible and cost-effective.
Feasibility	Identification and elaboration of possible alternatives and cost-effectiveness.
Concept and Viability	Project optimisation subject to budget and environmental constraints.
Design	Quick and effective design detailing and incorporation of latest appropriate technological developments.
Procurement	Good contract documentation, accurate schedule of quantities and appropriate procurement options
Construction	Conscientious construction administration and monitoring and effective handling of contractual issues
Operations and Maintenance	Asset management and preventative maintenance
Disposal or Renewal	Environmentally complaint, dismantling/ demolition or rehabilitation or reconstructing for further use

1.5 Value of Services – by project stages

1. Early project stages:

- Engineering Services deliver most value
- Functionality & quality of the proposed service more important than Cost (**Steps 1 to 3 - Identification, Definition, Feasibility**)

2. After project is well defined:

- Services are easier to determine
- Role of high level expertise reduces as project develops
- Efficient more routine tasks more important
- Correct/comprehensive contract documentation is vital



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Procurement of Consulting Engineering Services

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Procurement of Consulting Engineering Services

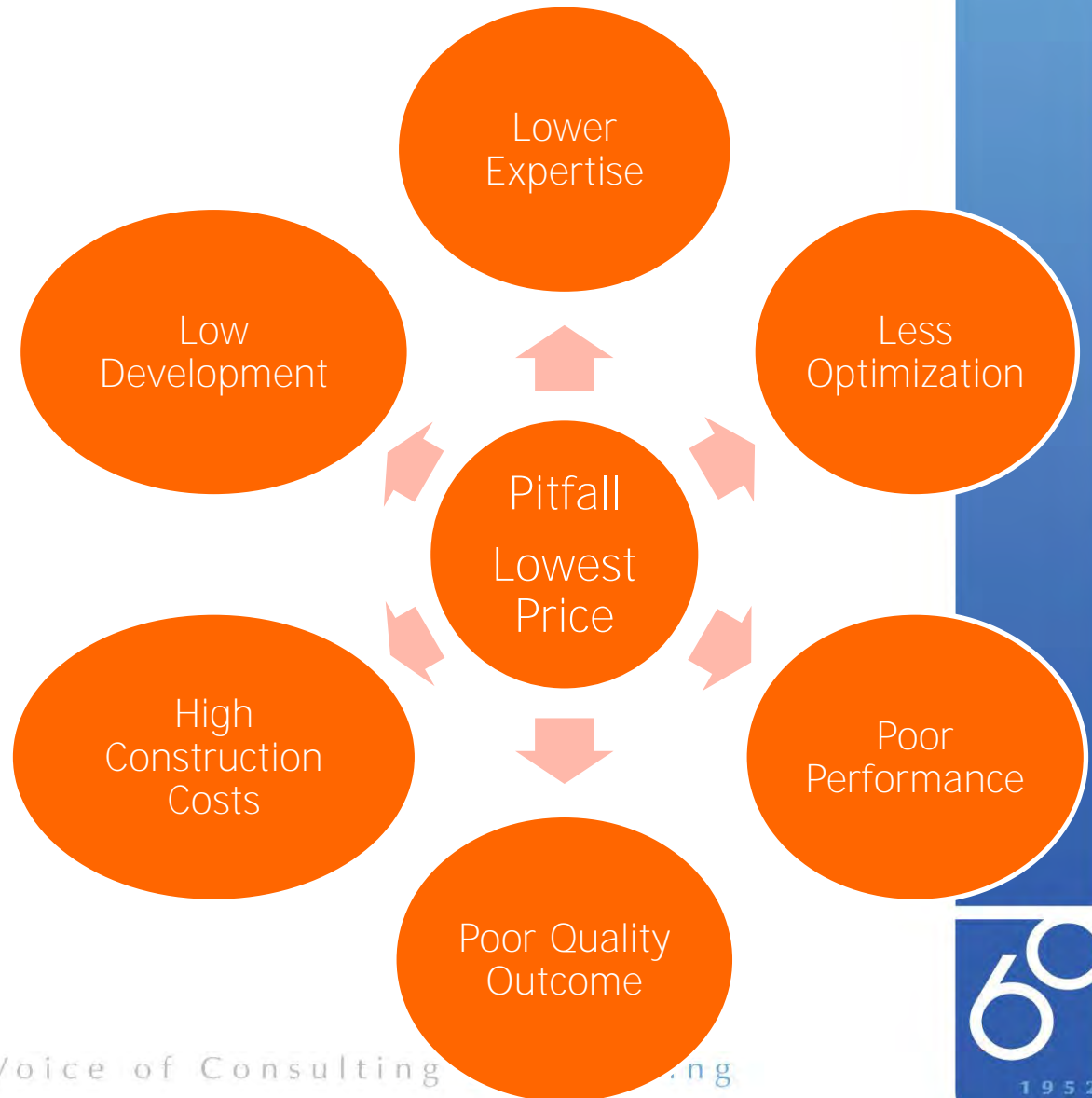
Procurement \approx Tendering

To Note:

Tendering of professional engineering services is unique

Services cannot be awarded based on price/lowest/highest discount price only

Superior qualifications and experience forms the paramount basis for selecting CE



Procurement of Consulting Engineering Services

Important that Government recognises:

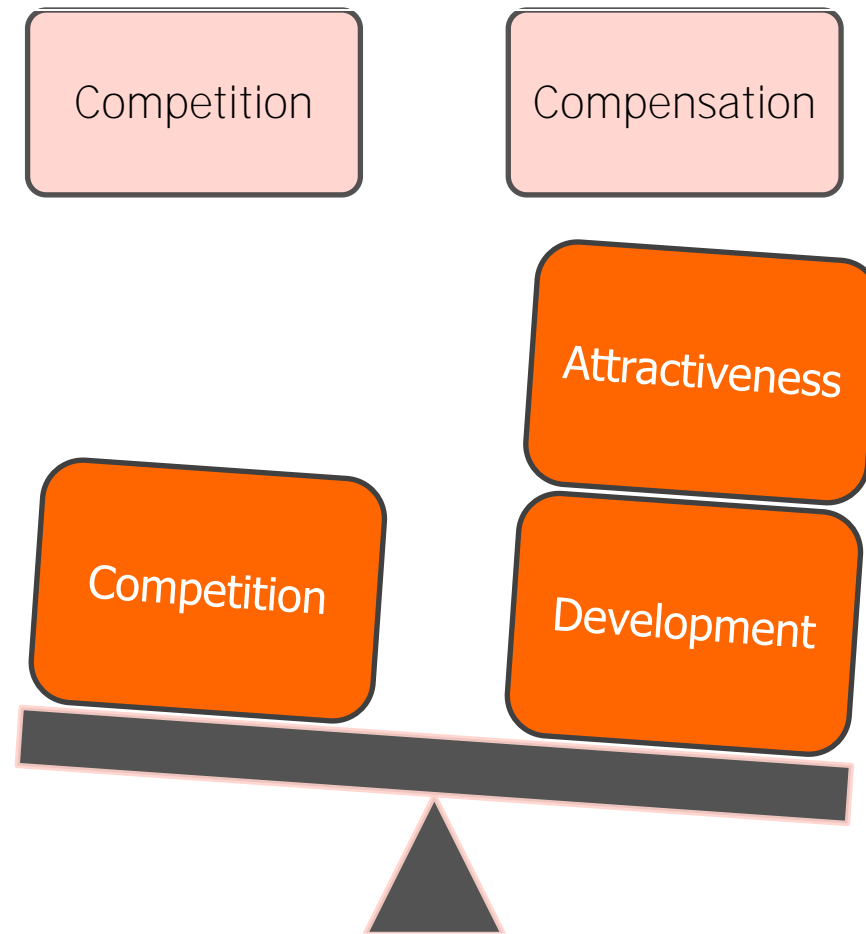
- CE's are an important pool of expertise & skilled resources
- High standard of engineering & Infrastructure dev vital for growth
- National Treasury policy statement:
“It is necessary that certain minimum standards of quality and efficiency be achieved when appointing consultants”
- Need to maintain a basic policy of competitive selection

Legal Environment for consulting engineering services:

- Constitution of South Africa
- System is to be **Fair, Equitable, Transparent, Competitive, Cost effective**
- Adopted by ISO in ISO 10845 series for construction procurement

Procurement of Consulting Engineering Services

Procurement - Need to maintain a reasonable Balance between Competition & Compensation



Pillars of Procurement

System requirement	Qualitative description of requirement
Fair	The process of offer and acceptance is conducted impartially without bias, and provides participating parties simultaneous and timely access to the same information. Terms and conditions for performing the work do not unfairly prejudice the interests of the parties.
Equitable	The only grounds for not awarding a contract to a tenderer who complies with all requirements are restrictions from doing business with the organization, lack of capability or capacity, legal impediments and conflicts of interest.
Transparent	The procurement process and criteria upon which decisions are to be made shall be publicized. Decisions (award and intermediate) are made publicly available together with reasons for those decisions. It is possible to verify that criteria were applied. The requirements of procurement documents are presented in a clear, unambiguous, comprehensive and understandable manner.
Competitive	The system provides for appropriate levels of competition to ensure cost-effective and best value outcomes.
Cost- effective	The processes, procedures and methods are standardized with sufficient flexibility to attain best value outcomes in respect of quality, timing and price, and the least resources to effectively manage and control procurement processes.
Promotion of other objectives	The system may incorporate measures to promote objectives associated with a secondary procurement policy subject to qualified tenderers not being excluded and deliverables or preferencing criteria being measurable, quantifiable and monitored for compliance.

Procurement of Consulting Engineering Services

Primary Legislation Regulating Procurement - Refer to Table 3.2, page 11

Constitution of the Republic of South Africa (Act No. 108 of 1996) - Section 217 states that government procurement systems must be Fair, Equitable, Transparent, Competitive and Cost Effective

Fair, Transparent, Competitive, Cost Effective			Equitable	
Public Finance Management Act (Act No. 1 of 1999)	Municipal Finance Management Act (Act No. 56 of 2003)	Construction Industry Development Board Act (Act No. 38 of 2000)	Preferential Procurement Policy Framework Act (Act No. 5 of 2000)	Broad Based Black Economic Empowerment Act (Act No. 53 of 2004)
PFMA	MFMA	CIDB	PPPFA	BBBEE
Public Sector Clients	Public Sector Clients	Public and Private Sector Clients	Public Sector Clients	Public and Private Sector Clients

Compliance with CIDB's "Standard for Uniformity in Construction Procurement" (SFU) – compulsory for organs of state

Procurement of Consulting Engineering Services

Objectives of Procurement

- Procurement - engaging skilled professionals – not a commodity
- Aim of competitiveness - **ensure long-term value** not short-term low-cost design
- Transparency – encourage skills development & maintenance

CIDB: Methods of Procurement

1. Financial Offer
 2. **Financial Offer plus Preference**
 3. Financial Offer plus Quality (Functionality)
 4. **Financial Offer plus Quality plus Preference**
- Services must provide cost-effective & value-added performance
 - Depends on innovativeness, expertise and competence
 - Inclusion of Quality is **essential**

Procurement of Consulting Engineering Services

FIDIC: Recommends – Quality Based selection

- **Qualifications** are evaluated
- The scope, schedule and appropriate fee are negotiated with the highest ranking firm
- **QBS is the law in the United States**

CIDB: Recommends – Quality-Cost-Based selection (Method 4)

- Firm scoring the highest points is awarded [**Price + Quality + B-BBEE**]

NT: Recommends – Lowest Cost-Based selection (Method 2)

- Quality is evaluated for pre-selection/hurdle – **minimum = 60%**
- Firm scoring the highest points is awarded [**Price + B-BBEE**]

Procurement of Consulting Engineering Services

‘Spanner in the Works’ (see Appendix B)

- the KwaZulu Natal High Court, case no 10878/2009 ruled that Quality score cannot be combined with Price & Preference
- **relegates functionality/ Quality to a pre-qualification criteria** (using a minimum threshold).
- Thus, rendering ‘CIDB Method 4’ to be invalid.
- The incorporation of quality-based principles in the execution of projects is essential to the achievement of the stated goal.
 - **A reversal of the trend of diminished quality outcomes on projects.**
 - This reversal can be accomplished by reverting to Best Procurement Principles – Quality Based Selection.

Procurement of Consulting Engineering Services

3. STANDARD PROCUREMENT PROCEDURES

PP2A (Nominated procedure)	Tenders are selected from a rotating electronic database to submit tender (closed competition)
PP2B (Open procedure)	Open tender
PP2C (Qualified procedure)	A call of expressions of interests, the selected to submit tender
PP2D (Quotation procedure)	Tender offers are solicited from not less than three tenders (< R200K or R500k)
PP2E (Proposal Procedure)	Tenders submit technical and financial proposals in two envelopes
PP2F (Proposal procedure)	A two staged system: non-financial proposal are called for. Call for tenders or negotiate with the highest scoring tenderer
PP2G (Shopping procedure)	Offers are solicited in respect of readily available supplies from three sources

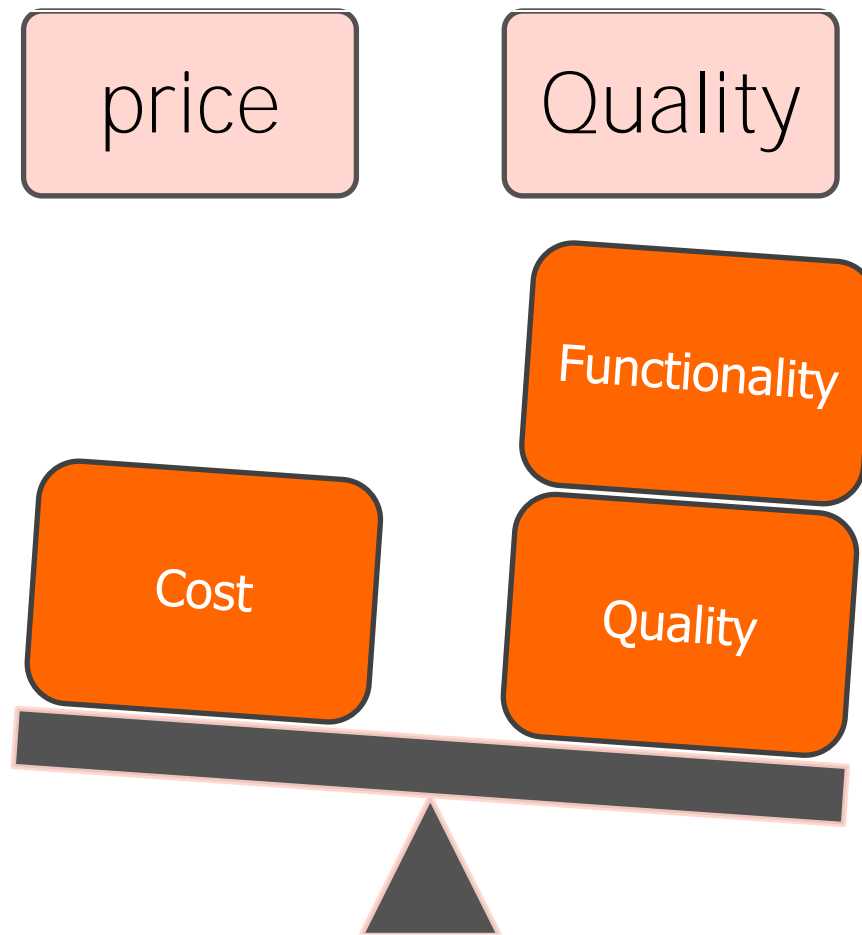
Procurement of Consulting Engineering Services

- 1. Quoting from CIDB Best Practice Guideline A7** - Procurement of professional services should be undertaken on:
 - demonstrated competence & qualifications (for services required)
 - capacity & capability (to provide the quality of the service)
 - fair & reasonable Financial Offers (not only least cost)
- 2. Constitution requires procurement to be cost effective & have best value outcomes in terms of:**
 - quality,
 - downstream & life cycle costs,
 - timing
 - financial Offer
 - least resources to manage & control procurement process.
- 3. Selection on basis of quality – does not necessarily mean the best quality available but quality appropriate for the assignment.**

Procurement of Consulting Engineering Services

Procurement

- Need to maintain a reasonable Balance between Price & Quality



Procurement of Consulting Engineering Services

4. Calling for/ preparation of Tenders:

- **Scope of Work and Services (SOWS):**

- fully describe SOWS - comparable tenders are received
- fully describe SOWS - reduce time & effort for tender preparation

- **Total Input Cost:**

- can be considerable - small projects can be > potential fee & jeopardise
 - ✓ finances of the service provider
 - ✓ overall economy of the project.

- **Guideline:**

- CE's potential fee should be 20 times > cost of preparing tender
- alternatively, cost to prepare tender should not > 5% of potential CE fee
- potential CE fee has to cover - Staff costs, overheads, expenses and profit
- tenders should not be solicited for small projects,

Procurement of Consulting Engineering Services

4. Calling for/ preparation of Tenders (cont'd):

The following procedure should preferably adopted by client or CE (as agent of client)

- Consider grouping small projects together to reduce number of contractual relationships and complexity (see **Appendix C** – framework agreements)
- Request proposals for term contracts - where consulting engineer can support the client on a partnership basis for all small to medium projects over a longer period (see **Appendix C** – term contracts)

(see **Appendix D** - useful procurement cycle checklist)

(see also **Appendix E** – good comparison of international best practice)

Procurement of Consulting Engineering Services

Preference Points System:

Preferential Procurement Regulations has been revised to align with the aims of the Broad-based Economic Empowerment Act and its associated Codes of Good Practice.

Previously bidders scored a maximum 80 or 90 for price and 20 or 10 for black ownership and for promoting specified RDP goals

Bidders will now score up to 20 or 10 points for their B-BBEE status level of contribution.

Previously, the threshold value for distinction between the 80/20 and 90/10 preference point system was R500k

This is now revised to R1 million

The new regs become effective from 7 December 2011



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Scope of Services and Scope of works

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Scope of Services

Procurement cycle – Appendix D



Scope of Services

Definition

- **Scope of Services** = “Services which a CE must provide in relation to scope of Work”
- Recommended listing **deliverables** to be produced by the Consulting engineer,
i.e. products of his work (studies, reports, designs, drawings, etc)
- **Must** be clearly defined to ensure proper pricing and clear and unambiguous understanding by tenderer
- In many instances this is **lacking** – uncertainty and unrealistic pricing results

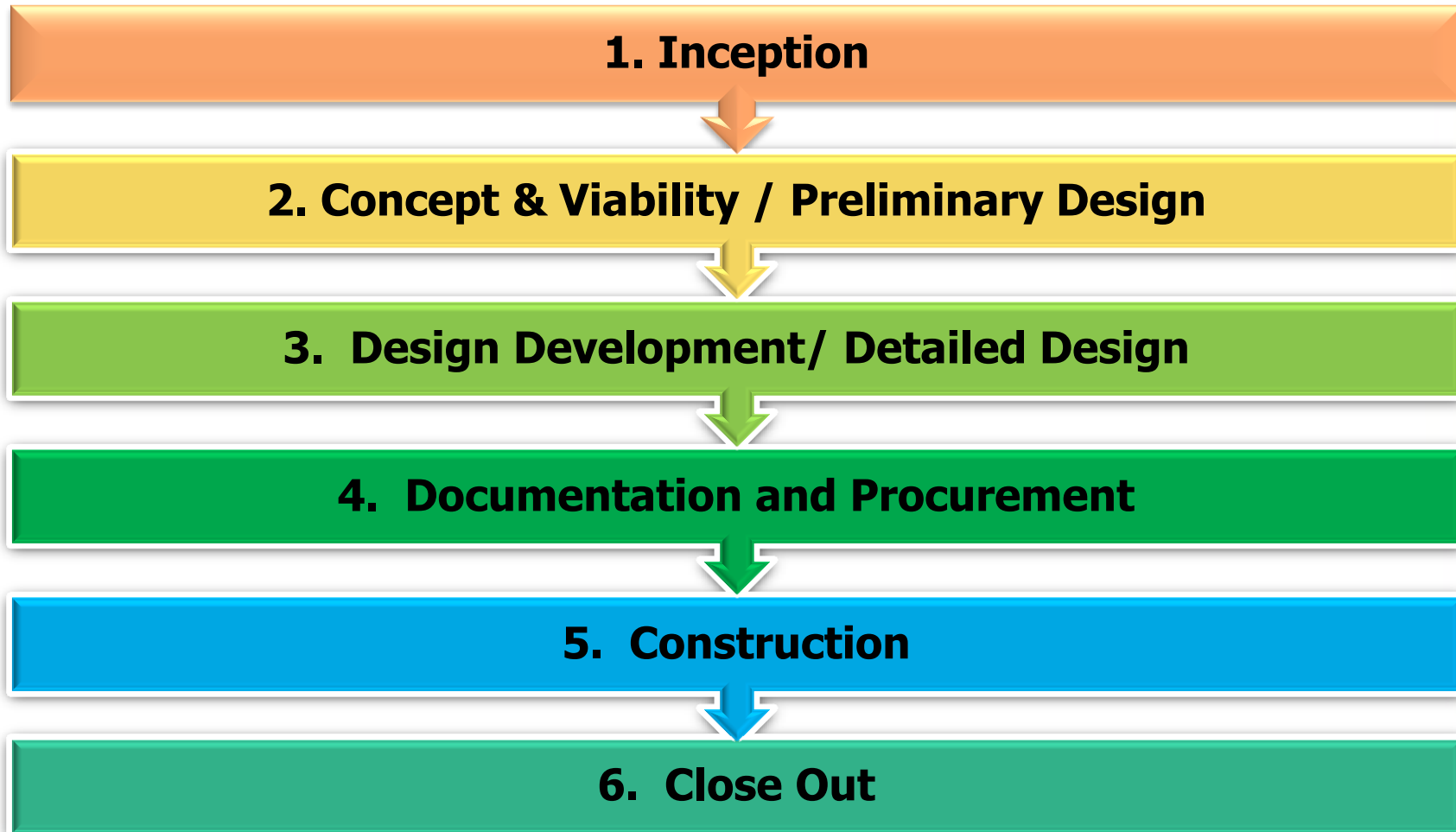
Scope of Services

Scope of Services: **Planning Studies, Investigations and Assessments**

- (i) Consultation with the client or client's authorized representative.
- (ii) Inspection of the site of the project.
- (iii) Preliminary investigation, route location, planning and a level of design appropriate to allow decisions on feasibility.
- (iv) Consultation with authorities having rights or powers of sanction as well as consultation with the public and stakeholder groups.
- (v) Advice to the client as to regulatory and statutory requirements, including environmental management and the need for surveys, analyses, tests and site or other investigations, as well as approvals, where such are required for the completion of the report, and arranging for these to be carried out at the client's expense.
- (vi) Searching for, obtaining, investigating and collating available data, drawings and plans relating to the works.
- (vii) Investigating financial and economic implications relating to the proposals or feasibility studies.

Scope of Services

Scope of Services: **Normal Project Delivery Stages**



Scope of Services

Scope of Services: **Additional Services as Principal Consultant**

- Refer to **Appendix F**, Additional Services to Normal Services
- Includes Activities/Deliverables
- Recommended as a **reference or checklist per stage**

Detailed examples (see **Appendix F**)

- Refer to **Appendix F**, Numerous Normal Services tasks under Stages 1 - 6
- Includes Activities/Deliverables
- Recommended as a **reference or checklist per stage**

Scope of Services

Key Factors common to every scope, in Developing the Scope of Services

- Obligations of the Parties
- Health and Safety
- Sustainability
- Information available

Note: Scope **must** reflect Client's intentions to enable tenderers to identify tasks and estimate times to be spent by personnel, and hence to quantify and price the tender

Failure to prepare Scope of Services in sufficient detail

- Tenderer has to make assumptions
- Misinterpret Client's requirements
- Price unnecessarily for Risks
- Resultant prices too low or too high
- Fails the interests of Client, Consulting Engineer and Project

Scope of Services

Key Factors in Developing Scope Services

Obligations of the parties	The tasks required and listed by the Client should clearly all fall within the obligations of the Consulting Engineer (the successful tenderer) . If a listed task falls within the Client's obligations but requires a Consulting Engineer to perform it, it should be described as being "on behalf of the Client" to avoid implying it is solely the Consulting Engineer's obligation and accord with the obligations of the parties as stated in the intended contract for the services
Health and Safety	Legislation such as the OHS Act lays down comprehensive actions to be taken by parties responsible for safety. This includes the Client, who may wish to delegate specific actions or tasks to an OHS practitioner. The previous practice where the Client simply nominated the Consulting Engineer as the Safety Agent is no longer permitted due to conflict of interest.
Sustainability	Environmentally sustainable design and energy efficiency are becoming a common underlying requirement in every project, with obligations on the Client and consulting engineer . The Client's sustainability policy should be made known to the consulting engineer, who in turn should be tasked with advising the Client on the project sustainability and/or assisting to set sustainability targets.
Information available	The execution of the assignment will be based on information available at its commencement, which may have to be augmented in order to perform the services required. It is important that the extent of information available to the consulting engineer, and information yet to be obtained by him, be clearly identified at the outset, to avoid any misconceptions. Where the client is unable to define the scope accurately, for example if the assignment is an investigation or study whose nature and extent are unknown, then it is important to tell the tenderers what the client has allowed for, by way of budget or estimate of manhours

Scope of Work

Definition

- Not the same as Scope of Services of the Consulting Engineer
- **Scope of Work** = portion of the Works for which the Consulting Engineer is engaged or the document which specifies and describes the supplies, services engineering and construction works to be provided (by the Contractor) including special requirements, constraints etc.

Example

Refer to Page 21 (4.3 – The Scope of Work of a Casino)

In this case the scope of services can be defined as set out in **Appendix F** while the scope of work may only involve the Parking Area. Some thought will have to go into preparing the scope of work as it interfaces with other works such as stormwater runoff from the building and the interface with the access road and gate house.

Scope of Work

Points to Note

- The **scope of work for each service provider** should be carefully determined to ensure that no overlaps and duplication in terms of scope of work exist.
- In some cases the consulting engineer will be required to **appoint specialist sub-consultants** in which case the consulting engineer will ensure that no duplication in terms of scope occurs.

Examples: Scope of Work

Buildings	The work in respect of site boundaries and fencing, foundations, electrical, air conditioning, wet services, fire protection, structural, roofing, waterproofing, stormwater, etc should be clearly allocated. If the design is to be undertaken by a multidisciplinary professional team (Architect, Quantity Surveyor, Engineer, etc.) the responsibilities of the consulting engineer in such a team must be clearly indicated.
Roads	The beginning & end of the road should be indicated, whether the scope includes structures, hydrological analysis and drainage, stormwater, roadside furniture, pavement layerworks, traffic analyses, selection of borrow pits, road marking, signage etc. It should also be indicated who will be responsible for liaison with interested and affected parties and for ensuring public participation.
Structures	The scope of work should be clearly indicated in respect of site investigations, foundations, interaction with other structures and facilities, design review, and similar.
Electrical	The scope of work should be clear in respect of bulk services provision, power lines, substations, power connections and liaison with utilities, back up power, earthing, lightning protection, security services, access control, data and telephony, lighting, electrical reticulation and switchboards, etc.

Examples: Scope of Work

Mechanical	Clarify, if air conditioning, wet services, pumps, lifts, escalators, fire protection etc. are to be performed by one or more specialist engineers.
Dams	The Scope of Services and Scope of Work should be described, in detail to enable tendering consultants to identify the level of accreditation of design staff to be identified. The Scope of Work should be clear in respect of geological and hydrological investigations to be undertaken prior to preliminary and detail design, plus the extent of design to be undertaken by contractors, and likewise the Scope of Work in the electrical and mechanical disciplines.
Municipal Services	The Scope of Services and Scope of Work should be clearly described for the consulting engineer to accurately identify the range of services to be designed by him (e.g. Roads, Stormwater Drainage, Sewerage, Water Supply, etc.) and which are to be designed by others, including the extent of simultaneous working and coordination required. The extent of construction to be undertaken by emerging contractors or using labour-based methods should also be clear.

Framework Agreement

The Framework Agreement is designed to allow the client to invite tenders from consulting engineers to carry out work on an “as instructed” basis over a set term. Generally The Framework Agreement is between two parties that establishes their terms for services over a set period of time, within **a broad scope of work**, without guaranteeing any quantum of services. The rationale behind using such agreements is that it saves the client from having to procure from the market each time a service, covered by the Framework Agreement, is required.

Framework Agreements are only entered into with consulting engineers **who have the resources and capability** to carry out the services envisaged and must include the means by which the consulting engineer is remunerated for the instructed work. Hence the evaluation of tenders for Framework Agreements must be based on quality as well as price – and not price alone.

Tender Documentation

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Tender Documentation

Purpose

- In line with principles and documentation of the CIDB
- To achieve uniformity, in interests of a more efficient industry

Model for Uniformity

- CIDB's "Construction Procurement Toolbox"
- Process of Offer and Acceptance
- Tenderers provide inputs to complete their submissions (offers)
- These = inputs to the contract to be concluded after acceptance of offer
- Separation of component documents
- Complete enquiry documentation = critical to project's success

CIDB tables to assist compiling documentation – see **Appendix G**

Tender Documentation

CIDB Documents relating to the Tender (Appendix G)

Table B-1

T1 Tendering procedures	
T1.1 Tender Notice and invitation to Tender	Alerts tenderers to the nature of services required by the client; should contain sufficient information to enable an appropriate response.
T1.2 Tender Data	States applicable conditions of tender and establishes the rules applying from the time tenders are invited to the time a tender is awarded.
T2. Returnable documents	
T2.1 List of Returnable documents	Ensures that everything the client requires a tenderer to submit with his tender is included in his tender submission.
T2.2 Returnable Schedules	Contains documents the tenderer is requested to complete for the purpose of evaluating tenders and other schedules which upon acceptance become part of the subsequent contract.

Tender Documentation

Documents relating to the Form of Agreement/Contract

Table B-2

C1. Agreements and Contract Data	
C1.1 Form of Offer and Acceptance	Formalises the legal process of offer and acceptance
C1.2 Contract Data	States applicable conditions of contract and associated contract specific data, which collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for administration of the contract. For consulting engineering services this would be an Agreement, as opposed to General Conditions of Contract used for construction services.
C2. Pricing Data	
C2.1 Pricing Instructions	Provides criteria and assumptions, which it will be assumed (in the contract) the tenderer has taken into account in developing his Financial Offers.
C2.2 Activity Schedule or Schedule of Tasks	Records the Financial Offers to provide the services, which are described elsewhere - in the Scope section.
C3. Scope of Services and Scope of Work	
C4. Site Information	
This is generally not required in procurement of consulting engineering services, being applicable to construction services contracts only. However to ensure uniformity in tendering, available information on prior studies, existing services etc should be included.	

Tender Documentation

Standard Coloured Pages/Dividers

- T1.1 Tender Notice and Invitation to Tender White
- T1.2 Tender Data Pink
- T2.1 List of Returnable Documents Yellow
- T2.2 Returnable Schedules Yellow
- C1.1 Form of Offer and Acceptance Yellow
- C1.2 Contract Data Yellow
- C1.3 Form of Guarantee/Securities White
- C1.4 Adjudicator's contract White
- C2.1 Pricing Data/Instructions Yellow
- C2.2 Activity/Work Schedule Yellow
- C3 Scope of Services and Scope of Work Blue
- C4 Site inspection Green

Tender Documentation

Procurement References – see Appendix I

- Revised Standard for Uniformity in Construction Procurement (SFU)
- CIDB Construction Procurement Best Practice Guideline C3 – Adjudication
- **Services contracts:**
 - CIDB Professional Services Contract
 - FIDIC Client/ Consultant Model Services Agreement
 - Standard Professional Services Contract by NEC
- **Other – private sector:**
 - PROCSA Form of Agreement
 - CESA Short Form of Agreement



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Value-Added Services

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Value-added Services

Value, Financial Offer, Quality

- Acceptance of lowest price denies opportunity to assess value
- Consulting Engineers are accustomed to tendering competitively
- Professional services, unlike products, are not well defined
- Requires careful descriptions in Scope of Services, Scope of Work
- Still a tendency to rely on price, ignore quality (Treasury: Functionality)
- Remuneration should reward desirable performance

What performance is achieved from the lowest price? (examples.....)

- Typically, the cost of engineering consultancy services for larger projects is less than 10% of total construction costs
- And less than 2% of the project's lifetime cost (Construction + Operations + Maintenance)

Value-added Services

Representation of typical Life Cycle Cost and Impact on Project Success

- ❖ The procurement of consulting engineering services **has the greatest impact on the life-cycle cost of the project**, **yet it is the least costly component**

Life-Cycle Cost



Impact on Project Success



Engineering



Construction

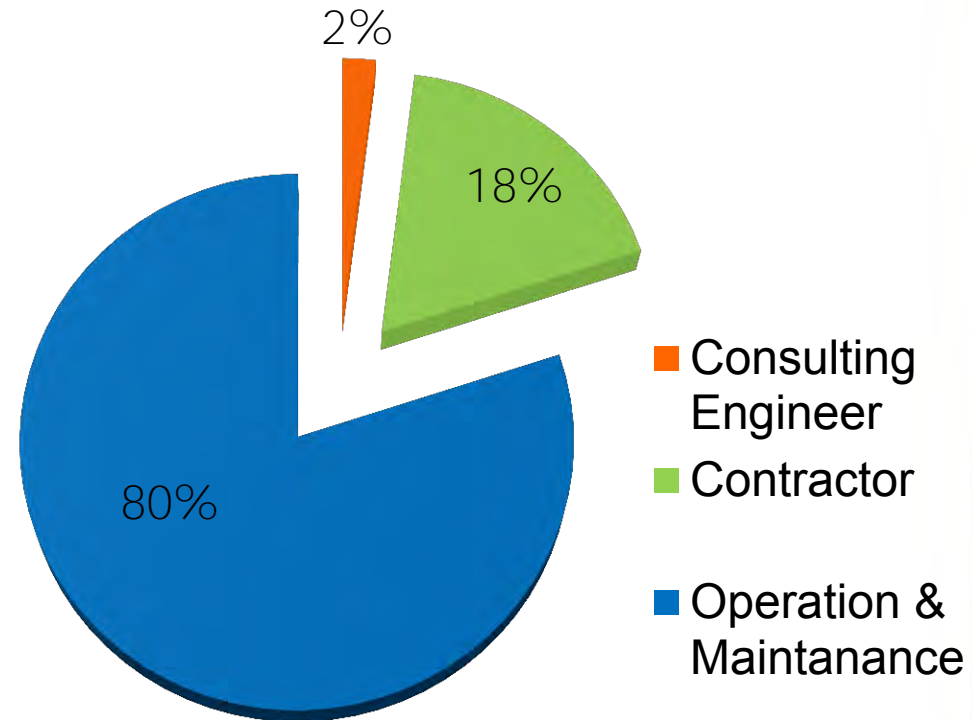


Operations & Maintenance

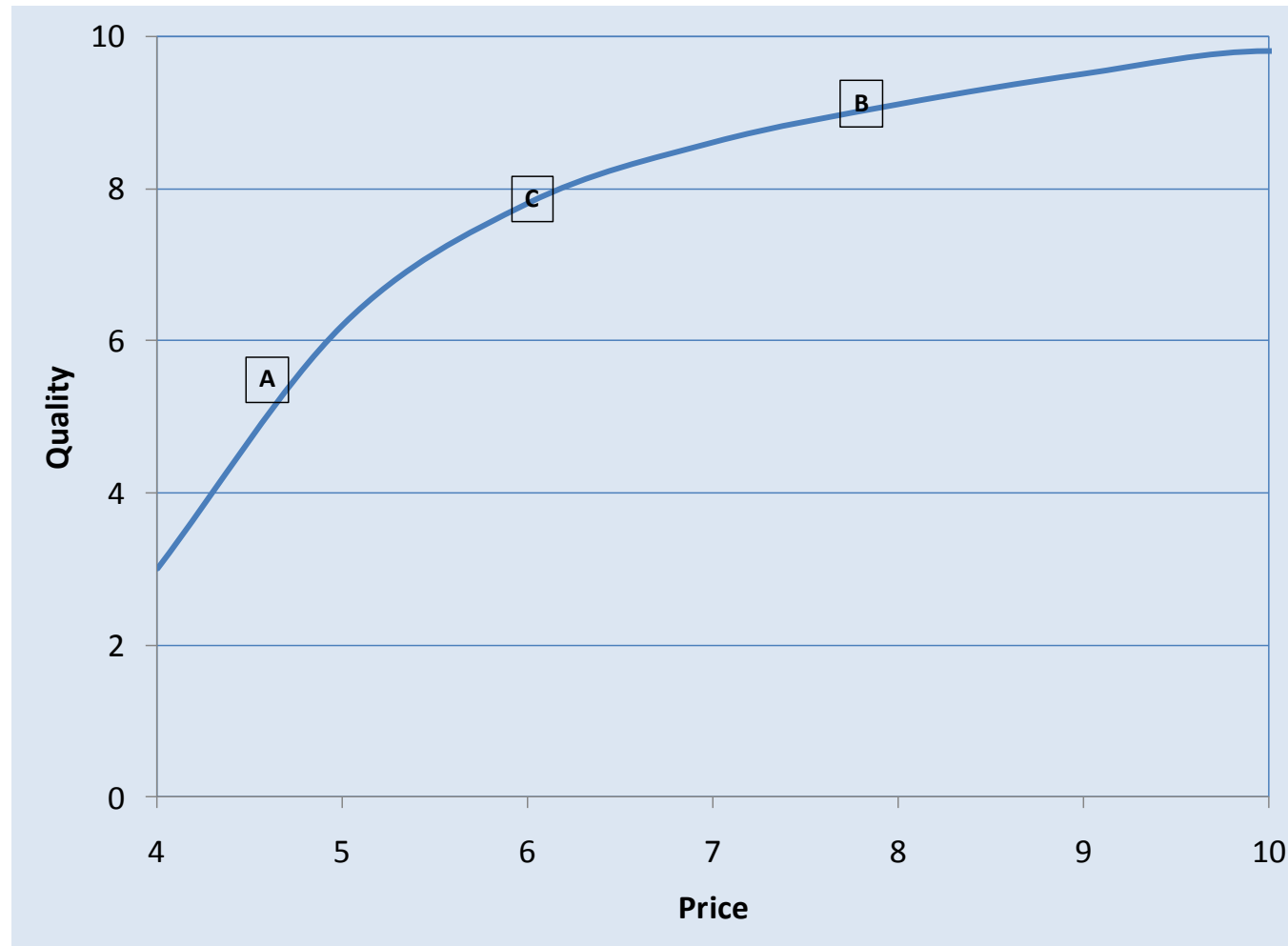
Value-added Services

Engineering Services to Life-cycle costs

- ✓ “engineering design” typically represent less than 2 % of overall lifecycle costs
- ✓ construction 6 to18 %
- ✓ 80 to 93% representing operation; annual and capital maintenance ;and decommissioning



Value-added Services



Appropriate level of Quality

Value-added Services

The Concept of “Value”

“Value” should

- secure for the client value-for-money services
- achieve minimum life-cycle costs (long term value for money)
- ensure the project will fulfill its intended purpose

The tender process must allow the tenderer to show that

- value-for-money services are offered
- minimum life-cycle costs are critical to the project's success
- the Financial Offer will demonstrate the value of inputs offered
- take Client's quality evaluation criteria into account

Quantifying “Value”

- Needs to be a factor in considering tenders
- Include in determination of tender score
- Assess Preference, Quality, and Financial Offer (Price) individually
- Consulting Engineer to tender accordingly

Value-added Services

Guidelines for Pricing of Tenders – the “Golden Rules”

- Project success relies on acceptance by client of the Consulting Engineer's financial offer and conditions or conditions of exclusions
- Consulting Engineer needs to have his interests protected
- Client needs to be comfortable with contract financial arrangements
- “Golden Rules” apply to preparation of the financial offer

Golden Rule No. 1 – Know the project requirements

- No two projects the same – offer
- Must be a clear and unambiguous Scope – clarify if necessary
- Determine methodology, inc. innovation, value-adding procedures
- Take Client's quality evaluation criteria into account

Value-added Services

Golden Rule No.2 – Know your costs involved

Unbillable hours		
Auditing & Accounting	Company Overheads	
Marketing		
Transport	equals	Company Overheads
Interest & Finance charges		
Head office charges	Multiple of Staff Cost,	plus
Maintenance & Depreciation		
Rates, Elec Water etc.	added to Staff Costs	Staff Cost
Insurances		
Rentals & Leases		i.e, Total Costs
Skills levies		
Allow ances	Staff Cost	divided by billable hours
Overtime		
Subscriptions	equals	gives Rate / hour
Co. Contrbns. Med-aid		
Co. Contrbns. Pension	"Cost to Company", or,	Add for Profit
UIF		
Leave pay	"Total Cost of Employment"	gives Charge-out Rate / hour
Bonuses		
Basic Salary		

Value-added Services

Golden Rule No. 3 – Know the Client's situation

1. Able to produce and adhere to a clear and sufficient scope
2. Ability to fund or timeously secure funding for the project
3. Adequate resources to administer the contract
4. History of fees paid on time
5. Sufficient technical capability for reviews and approvals
6. Need for development (training, mentoring, etc)
7. Experience in using consulting engineering services
8. Able to responsibly evaluate & award consulting/construction contracts

Finalising the Tender Price

- ✓ Feedback from Golden Rule No 3 is to be considered where aspects within Client's ambit must be examined, for influence on level of the financial offer

Value-added Services

Adjustments from Golden Rule No 3

- Profit mark up
- Pricing for contingencies or risk
- Pricing work not called for but necessary (if not done by Client)
- Pricing for unrealistically tight or slack deadlines
- Pricing for work assumed but not required
- Adding a margin in lieu of qualifying the tender
- Provision for productivity delays to be expected in executing the work for the client

Price Benchmarks

- Important to test pricing against a norm and indicate adequacy of price
- Appropriate Benchmark: ECSA Guideline Tariff of Fees
- Percentage of Project Cost (sliding scale) x Factor for Stage and Type
- Also ECSA recommended hourly rates – arrive at “Benchmark Fee”
- Adjust up or down for project concerned, with a Benchmark Multiplier, to get an “Adjusted Benchmark Fee” considering specific circumstances

Value-added Services

Benchmark Multipliers

<u>Multiplier</u>	<u>Circumstances</u>
0.6 – 1.0	“Favourable”
1.0	“Normal” or “Reasonable”
1.0 – 1.6	“Negative”

Specific circumstances

1. Is scope complete and clear?
2. Is Client well versed in procuring consulting services?
3. Does Client have adequate resources for competent tender evaluation?
4. Does Consulting Engineer have a successful project record with the Client?
5. Can hours be saved from earlier similar work, or previous experience?
6. Is staff proposed well priced, ideally suited and competent for the project?

Value-added Services

Specific circumstances (cont'd)

7. Is the Consulting Engineer better placed than most for specialist services?
8. Is project location advantageous for the Consulting Engineer?
9. Will the risks perceived be easy or difficult to handle?
10. Is level of complexity of the project normal or will it be very complex?
11. Does the Consulting Engineer have a low order book and need the work?
12. Will start date and duration require price adjustment, if no escalation?

Value-added Services

Specific circumstances	Benchmark Multipliers		
[Favourable (0.6 – 1.0)/ Reasonable (1.0) / Negative (1.0 – 1.6)]	F	R	N
Is scope complete and clear?		1.0	
Informed client	0.9		
Previous appointments			1.2
Savings – Previous experience	0.6		
Project location		1.0	
Staff – cost, suited & competent	0.8		
risks perceived be easy or difficult to handle?			1.3
level of complexity of the project normal or will it be very complex?		1.0	
Does the Consulting Engineer have a low order book and need the work?	0.7		
AVERAGE (this example)	0.94		

Value-added Services

Adjusted Benchmark (“Yardstick”) Fee

- Average of the sum of all the particular fees used
- Still based of ECSA recommended fee scales

There is no such thing as a “discounted” fee

Warning:

Firms that consistently quote large discounts on the ECSA fee guidelines have a high risk of inferior work and a high number of PI claims – rendering them uninsurable



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Evaluation of Tenders

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Evaluation of Tenders

References

- CIDB Best Practice Guideline No. A4 : Evaluating Quality in Tender Submissions (guidelines)
- CIDB Inform Practice Note No. 9 ; Evaluation of Quality in tender Submissions (overview)

Evaluation of Tenders

- Quality criteria is an essential part of the evaluation process – should apply to the vast majority of tenders for Consulting Engineering services
- Procurement Method 4 generally appropriate for Consulting Engineering services (Quality and Cost-Based Selection)

Evaluation of Tenders

Method 2 – Financial Offer + Preference

- Score Quality, rejecting all offers that fail to score minimum points for Quality, stated in Tender Data
- Score tender evaluation points for Financial Offer
- Confirm tenders eligible for preferences claimed and if so score tender evaluation points for preferencing
- Calculate total tender points = **Price + B-BBEE**
- Rank tenders from highest number of tender evaluation points to lowest
- Recommend Tender with highest tender evaluation points for award, unless compelling reasons not to do so

Evaluation of Tenders – Quality Criteria

This table shows an example of Quality Criteria and Points Scale for small and large projects, using a Quality plus Financial Offer / Preference ratio 80:20 or 90:10.

Note that the more complex the project, the higher the threshold points for Quality. Also, of the 9 Quality Criteria, it is recommended that **not more than 6 criteria**, suited to the project type, be selected to avoid double counting from overlap between the 9 criteria. Within the 6 selected criteria, the allocation of points can be varied as shown to give the client's weighting to each criterion, but **always totalling 100 Points for Quality**. Applicable to **METHOD 2**.

Quality Criteria	Feasibility studies & investigations	Innovative Projects	Complex Projects	Straight-forward Projects	Repeat Projects
Maximum points for Quality	100	100	100	100	100
Minimum points for Quality (Threshold)	80	80	75	60	60
1. Adequacy of proposed work plan and methodology	15	15	15	10	10
2. Qualifications & Competence of key staff in relation to the scope of work	30	30	30	20	20
3. Demonstrated experience (past performance) in comparable projects	15	15	15	15	15
4. Approach proposed to attain the employer's stated objectives	15	15	15	10	10
5. Demonstrated experience with respect to specific aspects of the project	15	15	15	10	10
6. Sound knowledge of the employer's policies or work procedures (or both)				15	15
7. QA systems which ensure compliance with employer's stated requirements	10	10	10	10	10
8. Organisation, logistics and support resources				10	
9. Demonstrable managerial ability appropriate to size & nature of the work					10

Evaluation of Tenders

Method 4 – Financial Offer + Quality + Preference

- Score Quality, rejecting all offers that fail to score minimum points for Quality, stated in Tender Data
- Score tender evaluation points for Financial Offer
- Confirm tenders eligible for preferences claimed and if so score tender evaluation points for preferencing
- Calculate total tender points = **Price + Quality + B-BBEE**
- Rank tenders from highest number of tender evaluation points to lowest
- Recommend Tender with highest tender evaluation points for award, unless compelling reasons not to do so

Evaluation of Tenders

Tender Data

- Essential that tender documents state evaluation criteria and scoring systems to be used in tender adjudication
- If a criterion is stated, clarity required how the criterion will be adjudicated and weighted, relative to other criteria

CIDB SFU Sect. 4.4.3 calls for specific Tender Data:

- Method to be used in evaluation
- Weighting between Financial Offer (W1), Quality (W2), and Preference (W3)
- Quantified descriptions of preferences – use *Construction Scorecard* (Construction Sector Charter, Govt Gazette: Board Notice 862 of 2009)
- Details of Quality Criteria and Sub-criteria and manner of scoring

Evaluation of Tenders

To ensure a Fair, Equitable, Transparent, Cost-effective **procurement system**

- Quality of outputs/deliverables to satisfy client requirements
- Service with reasonable skill and care of professionals
- Advice independent of any affiliation causing conflict of interest

Select Quality Criteria according to **project type**

- Repeat/straight forward projects : Cost-effective design important
- Feasibilities, Complex projects : experience, expertise important
- Weighting, Quality / Financial Offer is less for repeat type projects

All tenders to have a **minimum number of Quality points**, to proceed

Ratio Quality / Financial Offer + Preferences depends on **project value**

- Assignments up to a Rand value of R1 million value, Ratio 80:20
- For higher value – above R1 million - assignments, Ratio 90:10
- According to the Preferential Procurement Policy Framework Act

Evaluation of Tenders

Recommended Detail Procedure

1. Score Quality with 3 Quality reviewers, adjust if major scoring differences
2. Reject tenders not attaining minimum Quality score, inform them in writing
3. Inform tenderers of time & date for opening Financial Offers and announce these at the meeting
4. Calculate Final Evaluation Scores according to SFU
5. Apply Definitions and formulae (see next slide)
6. Mutually exclusive criteria recommended, to limit duplication
7. Black persons are addressed in allocating Preferences (B-BBEE)
8. Reviewers need to be experienced. If not available in the Client, then specialists or Consulting Engineers (unconnected with the tender) should be retained by the Client to assist with evaluations
9. See recommended Tables and Examples

Evaluation of Tenders

Definitions & formulae for Public Sector (Organs of State)

Scoring financial offers

$$N_{FO} = W_1 \times A \quad \text{where,}$$

N_{FO} = the percentage score achieved for financial offer,

W_1 = The percentage score given to financial offer and equals : (refer to Table 7-2 or 7-3 for level of project percentage score according to the nature of projects)

$$A = P_m / P$$

P_m = the comparative offer of the most favourable tender offer

P = the comparative offer of the tender offer under consideration.

Scoring Quality (functionality)

$$W_Q = W_2 \times S_o / 100 \quad \text{where,}$$

W_Q = the percentage score achieved for quality,

W_2 = the percentage score for quality, equals $(100 - W_1)$

S_o = the score for quality allocated to the submission under consideration.

Evaluation of Tenders

Definitions & formulae for Public Sector (Organs of State)

Scoring preferences

$N_p = NOP \times EP/100$ where,

NP = number of preference points achieved,

NOP = maximum tender evaluation points provided for in the Regulations pertaining to the Preferential Procurement Policy Framework Act (Act 5 of 2000) (100 -W₃ evaluation points),

EP = the percentage of equity ownership by HDIs within the business enterprise.

Note: Points must be awarded to a tenderer for attaining the **B-BBEE status level**

Evaluation of Tenders

Definitions & formulae for Public Sector (Organs of State)

Total score

$$N_T = W_C + N_P \quad \text{where,}$$

N_T = Total score awarded to the tenderer under consideration (max 100).
 W_C = Score for Quality and financial offer (max 90/80).
 N_P = Score for Preferencing (max 10/20).

$$W_C = W_3 \times \left[1 + \frac{(S - S_m)}{S_m} \right]$$

W_3 = the number of tender evaluation points available for quality and financial offer and equals 90/80,

S = the sum of percentage scores for quality and financial offer of the submission under consideration.

S_m = the sum of percentage scores for quality and financial offer of the submission scoring the highest number of points.

Evaluation of Tenders

Impact of the “KZN” Judgement (Organs of State)

In October 2009, a court in KZN ruled that when evaluating tenders, the points awarded for Quality could not be added to the points awarded for Price and Preference to arrive at Total Points awarded for the tender.

The ruling effectively said that the PPPF Act takes precedence over the PPPFA regulations (which define price = quality + price)

National Treasury issued a circular on 13 September 2010 saying that Quality can be used only as a “hurdle” and thereafter tender should be considered on Price + B-BBEE criteria.

Evaluation of Tenders

Impact of the “KZN” Judgement (Organs of State)

For example tenders must achieve a Quality rating of say 70% before their Price and Preference points are added together and the tender is awarded to the tenderer with the highest points.

In the interim clients and consulting engineers will have to implement NT's ruling to the effect that:

Quality must be used a “hurdle” which tenders must first overcome before their tenders are considered under the Price and B-BBEE criteria .

Evaluation of Tenders

Table 7-2 Quality Criteria and Points Scale for small projects

1. Quality plus Financial Offer/Preference ratio 80:20 (i.e.. 20 points for B-BBEE)
2. Maximum points shown for five Project Types from Table 7-1 for B-BBEE, Quality and Financial Offer, Financial Offer and Quality
3. Higher points used for Quality in more complex projects and lower points for Financial Offer
4. Nine Quality Criteria listed, from Adequacy of work plan to Demonstrable managerial ability
5. Quality maximum points from (2) allocated to nine Quality criteria; allocation to six of the nine Quality Criteria should suffice

CIDB Method 4 – Financial Offer + Quality + B-BBEE

Evaluation of Tenders

Table 7-3 Quality Criteria and Points Scale for large projects

1. Quality plus Financial Offer/Preference ratio 90:10 (i.e.. 10 points for B-BBEE)
2. Maximum points shown for Five Project Types from Table 7-1 for B-BBEE, Quality and Financial Offer, Financial Offer and Quality
3. Higher points used for Quality in more complex projects and lower points for Financial Offer
4. 9 Quality Criteria listed, from Adequacy of work plan to Demonstrable managerial ability
5. Quality maximum points from (2) allocated to 9 Quality criteria; allocation to 6 of the 9 Quality Criteria should suffice
6. Operation similar to Table 7-2

CIDB Method 4 – Financial Offer + Quality + Preference

Evaluation of Tenders

Table 7-4 : Indicators - scoring tenderers on Quality Criteria

- ☐ CESA Ratings - very good/good/satisfactory/poor (100 / 70 / 50 / 0) with descriptors, listed for 9 x Quality Criteria

CIDB Ratings – 100 / 90 / 70 / 40

- ☐ Note “poor” scores zero – criteria are unacceptable for Consulting Engineering services (see descriptors)
- ☐ Ratings for 9 x Quality Criteria are common to all Project types

Evaluation of Tenders

Table 7-5 -“Qualification and Competence of Key Staff”

1. To be completed by **Client**_when issuing tenders
2. Shows 6 x typical staff posts – Project Leader, Design Engineer, Materials Engineer, Contracts Engineer, Resident Engineer and Assistant Resident Engineer
3. Shows 5 x Project types (Table 7-1) for each post
4. Lists 6 x attributes for each post (qualification, experience thereafter , registration, experience thereafter, involvement on comparable projects (past 10 years), project values (past 6 years)
5. Client able to list preferred and minimum attributes, Tenderer fills in the Offer column
6. Although Titles of Job posts state “Engineer”, Client may choose to use Registered Engineering Technologist, depending on nature of project

Tables for Evaluation of Tenders

Table 7-6 Assessment example

1. Shows a worked example for a complex project in the 90:10 points system range with 5 of 9 x Quality Criteria addressed
2. Weight assigned to each Quality Criterion addressed. Total = maximum points for Quality
3. Rating indicators from Table 7-4 applied to each Quality Criterion by 3 reviewers to give Reviewers' scores and average scores
4. Weights applied to average scores to give points for Quality, with Total = Points for Quality for tender under consideration
5. Table shows 2 x sets of points for Quality results :
 - 1st set : 2 outliers,
 - 2nd set : no outliers,after a repeat review by the reviewers



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Performance Monitoring

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Performance Monitoring

Introduction

- ❖ Performance Evaluation of CE's is crucial in upholding & advancing the standards of service from Consultants
- ❖ Benefits of performance evaluation.
 - ☐ The client will know the level of service being delivered or delivered
 - ☐ Allows CE to be exonerated wrongful blame
 - ☐ The client will get an indication as to whether his choice for consultant was correct
 - ☐ Ensures integrity of the QCBS process
 - ☐ Assist in the pre-selection and bid evaluation
 - ☐ Raise the standard of consulting engineering industry

Performance Monitoring

Introduction (cont'd)

- ❖ Other uses (by Client Body, CIDB, ECSA, NT, CESA, etc)
 - ☐ Disciplinary action – warning
 - ☐ Suspension of firm(s) registration
 - ☐ Cancellation of registration
 - ☐ Black listing the firm
 - ☐ Black listing the professional

Performance Monitoring

- ❖ Quality Management System ISO 9001 : 2008 QMS or of similar levels (a condition of CESA membership) **produces Quality Outcome**
- ❖ Firms with QMS are “in control” of all its major areas – “key processes”
 - ❖ They employ the following QMS tools
 1. Document Control
 2. Audits
 3. Non-conformance Tracking
 4. CAPA (Corrective Action and Preventative Action)
 5. Management Review
- ❖ Firms are committed to continual improvement
- ❖ Being “in control” reduces variation, which improves quality and customer satisfaction

Performance Monitoring

Good Quality Outcomes: Use Quality Principles



government

- Improved quality of diverse services to it's "Customer-Citizens"



Consulting Engineers/Contractors

- Business processes are improved
- Better Quality Projects are created



Citizens

- Lower Life Cycle Cost - Savings to Tax Payer's funds
- Efficient and reliable service and infrastructure
- **in** less waste, inappropriate or rejected **work** and fewer complaints

Performance Monitoring

Poor Quality Outcomes: Not using Quality Principles



- High maintenance costs
- Projects fail, e.g. RDP Housing collapse
- Cost and time overruns
- Disputation and litigation
- Contractors default and do not complete projects

✓ **Quality Outcomes are more likely achieved when using Quality-Based principles**

Performance Monitoring

Business Integrity Management System

- ❑ **Corruption undermines the achievement of a quality outcome,**
 1. resulting in projects which are unnecessary, unreliable, dangerous, and over-priced.
 2. And also resulting in tendering uncertainty, wasted tender expenses, increased project costs, economic damage, reduced project opportunities.
 3. This can lead to loss of life, poverty, economic damage and underdevelopment.
- ❑ CE have adopted the principles of a BIMS, Part of CESA members Code of conduct
- ❑ The practice of business integrity is crucial to fighting corruption and guaranteeing a high level quality outcome for the project.

Performance Monitoring

Evaluation of CE's Performance process

- ☐ **NT assigns PM to CFO – suggest done with Project Manager or Town Engineer**
- ☐ The process must commence from the time of appointment and must continue until final completion of the project.

Points to note:

- The client must set a standard for performance and discuss the evaluation process, as well as describing the method of reporting required.
- ☐ **Client should provide feedback, so that the consultant could improve if necessary**

Performance Monitoring

Principles of Performance Monitoring

- ❖ Criteria must be relevant and clearly defined to allow consistent application
- ❖ Conducted in rigorous and objective manner
- ❖ Conducted according to the **Pillars of procurement** and
 - ❖ **Fair, Transparent (yet Confidential)**, Competitive, Cost Effective and equitable
- ❖ CIDB's **Code of Conduct**
 - ❖ Must not maliciously injure/ attempt to injure the reputation of 3rd party

Performance Monitoring

Guide for Scoring – Engineering Consultant's Performance –

Customer Satisfaction Scorecard

Consulting Engineering Performance Scorecard

Performance Monitoring

Points to Note

❖ Attributes – choosing engineering consultants

1. Technical competence
2. Managerial ability
3. Experience on similar projects
4. Dedicated personnel available for the project's duration
5. PROVEN PERFORMANCE
6. Local and/or local knowledge
7. Professional independence & integrity

Consulting Engineers Performance

⌘ Clients should establish a formal performance review



Conclusion - Turn to page 48



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