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iLGM Conference 2024



### AND THE IMPACT OF EFFECTIVE

### **PROCUREMENT, DESIGN, EXECUTION AND MAINTENANCE.**



## iLGM 2024 Conference

### ATTRACTIVE TOWNS AND CITIES: MAKING A DIFFERENCE



19 & 20 September 2024 Southern Sun Elangeni & Maharani, KZN

### CONSULTING ENGINEERS SOUTH AFRICA (CESA)

- >>> Voluntary association
- >>> CESA is the custodian of the well-being of the industry
- >>> Representing over 580 consulting engineering firms across the country, employing approximately 19,000 people.
- Member of the International Federation of Consulting Engineers, known as FIDIC.
- >>> CESA hold members to uphold the integrity of the industry

### INTRODUCTION

- >>> Consulting engineers are pivotal to the successful completion of infrastructure projects.
- >>> Their expertise ensures that projects are designed, executed, and maintained to the highest standards.
- >>> Appointing and keeping the right people as technical leaders and managers ensure effective processes and service delivery
- Selecting the right construction companies with the appropriate capacity is crucial for the success of any project.



### CONTENTS

- 1. Role of clients in the infrastructure projects ecosystem
- 2. Role of engineering consultants
- 3. Procurement of consulting engineering services
- 4. Importance of Engineering Services
- 5. References.



### THE ROLE OF CLIENTS

>>>> Define the scope of the project – terms of reference

- Pro Forma/Template Request for Proposals (RFP) document for Consulting Engineering Services.
- >>>> Structuring the project
- >>> Preparing a preliminary estimate
- **>>>** Choosing a selection method:
  - Determine suitable process direct appointment or open tender
  - Conduct suitable procurement process
  - Manage contract/relationship
  - Manage termination/transition

### THE ROLE OF CLIENTS

### For the successful management of public projects:

- **>>>** Right people for the right roles
  - Professionalisation of the state
  - Identification of Engineering Work (IDoEW)
- Solution Structure Book Structure Water Structure Str



- Provide specialised knowledge and skills essential the planning, design, and implementation of projects.
- >>>> Offer guidance on best practices
- >>>> Ensure compliance with regulations
- >>>> Help mitigate risks
- >>>> Enable more efficient and cost-effective solutions





- >>>> Consultative, advisory, investigative and predesign services
- >>> Project management services
- >>>> Detailed design services
- >>>> Contract administration and general review during construction
- >>>> Resident services during construction
- >>> Additional services
- Construction management services
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# Scope of consulting engineering services on projects by ECSA:

- >>>> Planning, studies, investigations services
- >>> Normal services (depicted in 6 stages, from inception to close-out)
- » Additional services:
  - Additional stages pertaining to all stages
  - Construction Monitoring (Levels 1 to 4)
  - Occupational Health & Safety Act
  - Quality Assurance System
  - Lead Consulting Engineer / Principal Agent of the Client
  - Engineering Management Services
  - Mediation, Arbitration, Litigation & similar services



### SCOPE OF CONSULTING ENGINEERING SERVICES ON PROJECTS BY CIDB

	INFRASTRUCTURE DELIVERY CYCLE	Deliverable	Consulting Engineer's Inputs
[	1 Infrastructure planning	Infrastructure plan for MTEF period	Specialist inputs and cost advice
Support	2 Procurement planning	Procurement strategy	Specialist advice
services	3 Package preparation	Strategic brief	Specialist inputs and cost advice
	4 Package definition	Concept report	Develop solutions and report
	5 Design development	Design development report	Develop design and report
Contract related services	_6 Design documentation	Production information (drawings and specifications)	Produce production information
	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

#### **CIDB Practice Note 22b**

### **PROCUREMENT OF CONSULTING ENGINEERS** CONSEQUENCES OF POOR PROCUREMENT PRACTICES

>>>> Leads to the selection of subpar materials and services:

- >>> Resulting in increased costs
- >>> Project delays
- » Incomplete projects.
- >>>> Cause legal disputes and reputational damage



### **PROCUREMENT OF CONSULTING ENGINEERS** EFFECTIVE PROCUREMENT

>>> Appoint the RIGHT consulting engineering firm

- Such a firm should employ professional engineering practitionerswith relevant/sector skills
- >>> Sufficient experience for their chosen field of expertise
- » A firm with professional affiliation with an engineering associations



### PROCUREMENT OF CONSULTING ENGINEERS UNINTENDED CONSEQUENCES OF POOR PROCUREMENT PRACTICES

### TOGETHER we must advocate for procurement policies, which will:

- Projects are executed on time, within budget and according to specific standards
- >>>> Ensure sustainable transformation and jobs
- >>> Enable a better life for all

### **Procurement Act – Regulations**



**PROCUREMENT OF CONSULTING ENGINEERS** CHOOSING THE RIGHT CONSULTING ENGINEERING FIRM AND CONSTRUCTION Company

Best value-for-money in professional engineering services can only be achieved using quality-based selection system (QBS) or QCBS (Price + Quality + Preferencing/redress).

Least cost selection has a lot of unintended consequences

#### Cheap design is expensive

If you deal with the lowest bidder, it is well to add something for the risk you run. And if you do that you'll have enough to pay for something better ....John Ruskin

### IMPORTANCE OF CONSULTING ENGINEERING SERVICES

The most important stage in every project is the first major phase/stage.



## Whether it's called **IDENTIFICATION**, **DEFINITION**, **FEASIBILITY**, **CONCEPT AND VIABILITY**, **INCEPTION**, **PLANNING**.



All the important decisions happen in their initial stages - many of these decisions will have a great influence over the project's success.



Point where we have maximum opportunity to influence any aspect of the project to sow the seeds of success.

### **IMPORTANCE OF CONSULTING ENGINEERING SERVICES**

Breakdown of Costs over the Lifespan of Infrastructure



### **IMPORTANCE OF CONSULTING ENGINEERING SERVICES**

Breakdown of Costs over construction of larger project



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### REFERENCES

- 1. FIDPM, Instruction 03 of 2019/2020 <u>Link</u>
- 2. LGFIDPM, Circular No. 106 of 01 October 2020 Link
- ECSA Guideline Scope of Services and Tariff of Fees for Persons

   <u>Link</u>
- 4. National Treasury: Supply Chain Management Office: Practice Note Number 3 of 2003: <u>Link</u>
- 5. CESA Guidelines Link
- Best Practice Procurement of Consulting Engineering Services (PCES)
- CESA Pro Forma/Template Request for Proposals (RFP) document for Consulting Engineering Services

### CONCLUSION

### **#TOGETHER**

- **Right** environment
- **Right** professionals
- Right Consulting Engineers
- Right Contractors

Ensures that the project is completed on time, within budget, and to the required quality standards.







### **THANK YOU**

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