

CRITERIA FOR EVALUATION OF CONSULTANTS' PROPOSALS IN THE CONSTRUCTION INDUSTRY

by

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1.0 Introduction

In the construction industry, most of the time, services of consultants are obtained to carry out work, such as Feasibility Studies, Site Investigations, Designs, Project/Construction Management and Supervision etc. One Consultant may be employed to provide one or more of such services or more than one consultant may be employed to cover all services in a project.

The standard of services provided by a consultant, not only depends on factors such as methods and techniques employed by him, but also on expertise, experience, judgement, innovation and imagination of the consultant. The Guidelines on use of consultants for World Bank borrowers states that there is no requirement for competitive bidding, with the award being made to the lowest evaluated bid when borrowers obtain consulting services for Bank-financed Project. Nevertheless, depending on the type of service and also considering the budgetary limitations, it may be difficult for the client to totally ignore the financial terms during the process of the selection of a consultant.

The most prevalent method in the building sector is to identify a Consultant based on his general reputation and recognition in the Industry. The Consultant thus identified is given a brief upon which a comprehensive proposal is developed. The Consultant would generally have regular interaction with the client during this design development stage. The fee structure for such consultancies are based on a standard percentage of the estimated/actual cost of the project.

The fee structure is also broken down

into several stages of the consultancy service, and is subject to proportional reduction to account for repetitive work etc.

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The major as well as the difficult task for the client is, to establish guidelines to be used in evaluating consultants proposal. This task requires considerable professional input. The purpose of this paper is to discuss the options available and the basic principles involved in evaluation techniques used in practice for consultancy proposals. Special reference has been made to World Bank practices and also an application of one of the techniques is illustrated.

An adequate 'Pre-qualification Procedure' and a complete 'Request for Proposal' are the prerequisites to implement a proper evaluation procedure. Therefore, essential elements to be considered in 'Pre-qualifications' and 'Request for Proposal' are also being briefly discussed in the first two sections of this paper.

2.0 Pre-qualification

Pre-qualifications of consultants will enable a short-list to be made of firms who have the capacity and willingness to provide required services. Pre-qualification is advisable for any consultancy service, to ensure, in advance of bidding, that invitations to bid are extended only to those who are capable. The short-list should not contain more than 5-6 consultants who appear best qualified for the project on the basis of:

- a. Experience and past performance on similar work.
- b. Capability with respect to competence of personnel and other resources.
- c. Financial position.
- d. Present commitments.

The World Bank guidelines recommend, that the pre-qualified list should not be extended to more than six (recommended lower limit is three) due to the following reasons:

- a. Evaluating a large number of proposals is time consuming and hence it may lead to an inadequate evaluation.

- b. Extended list may discourage better firms to submit proposals.
- c. Extended list may discourage firms to put adequate effort into their proposals.
- d. Extended list increases the aggregate cost to firms of unsuccessful proposals - a cost which must eventually be recovered from the successful ones.

3.0 Request for Proposal

Request for proposal (Invitation to Tender) should furnish all information necessary for a pre-qualified consultant to prepare a responsive proposal for the services to be provided. The details of the information will vary with the monetary value of the project and the nature of the service. In general, they should include; Scope of work, Scope of Consultancy Service, Instruction to bidders, Work Plan, Technical and Cost Proposals, Requirements of bonds, Details of Services and facilities to be provided by the client etc. Furthermore, a clear indication of the selection procedure, and evaluation method which the client proposes to use has to be included in the Request for Proposal. This will help the client at the evaluation stage to compare the tender proposals on a common basis. However, the preparation of the formats and presentation may vary from one evaluation method to another method.

4.0 Evaluation Process

Generally, the evaluation of proposals is done by a committee consisting of 3-4 members. Before any proposals are opened, the committee should agree on the method of evaluation and the points system (if any) to be used in the evaluation. The method agreed should be consistent with the evaluation method indicated in the letter of invitation.

4.1 Evaluation Systems in Practice

4.1.1 'Two-Stage' Procedure

The basic principle involved in this system is that proposals are evaluated in

two stages, where a technical evaluation is completed before the cost proposals are evaluated.

In other words, in this procedure, technical evaluation will be done independently and completely free from the influence of the price.

When proposals are invited, the bidders will be asked to submit their technical and cost proposals separately in sealed envelopes.

Prior to evaluating the proposals, the committee will decide on the weightage to be given to the technical and cost proposals separately. All technical proposals will then be opened and evaluated using the predetermined scoring system. After ranking the technical proposal, the cost proposal will be evaluated and then using the predetermined weightages, combined proposals are ranked.

4.1.2 'Two - Envelope' System

Similar to the 'Two-stage' procedure, this system also requires bidders to submit their technical and financial proposals separately in sealed envelopes, but unlike in 'Two-stage' procedure, cost proposals will not be compared. First of all, the technical proposals are evaluated using a predetermined scoring system and then the envelope containing the cost proposal of the best technically - ranked, bidder is opened. The price will thereafter be negotiated with the firm as necessary. If this negotiation is successful, all other cost proposals are returned unopened. If the contract cannot be concluded with the firm having the best technical proposal then the 'price' envelope of the second-highest technically ranked firm is opened and negotiated with as before.

To facilitate negotiations for the prices, the owner has to have a predetermined budget or cost with him worked out on the basis of scope of work, specifications required, the duration and other considerations.

4.1.3 'Single-Package' System

In this system, both proposals, technical and cost, will be opened together and they will be evaluated according to a predetermined points system to rank the proposals.

4.1.4 Design Competition

Specially in building construction, when selecting a consultant some clients prefer to use the 'Design Competition' method where the client organises a design competition among short-listed consultants, requesting each consultant to develop a schematic design conforming to a given brief. The client will offer a suitable award/fee to each consultant to cover the cost of developing the schematic design. The client will then pick the design he prefers and engage the consultant, without any obligation in respect of other offers received. The final fee will be negotiated with the selected consultant.

The 'Design Competition' method provides a better opportunity to the client to compare five or six different options developed by different consultants using the same brief. Therefore, the money offered to consultants for the design competition can be considered as well spent. At the same time the consultants who are not being selected gets their expenditures reimbursed. Therefore, it is a fair deal.

4.2 Selection of the Evaluation System

Evaluation method shall ensure and demonstrate that all pre-qualified consultants are treated in an equitable manner.

When evaluating technical proposals, whatever points system is used, it is difficult to eliminate the subjective judgement totally. What can be done is to select a system, in such a way that the subjective element in the decision is minimized.

In general, when selecting an evaluation method, it is necessary to consider whether:

- a. It is compatible with the Letter of Invitation.
- b. All requirements are being considered.
- c. All bidders are treated in an equitable manner.
- d. It is easy to apply.
- e. It is easy to understand and justify.
- f. The method is simple.
- g. Subjective decision making is minimal.
- h. Cost effective.
- i. Less time consuming.

Where price is taken into consideration the most widely recommended evaluation technique is the 'Two - stage' procedure. The following sections explain the application of this technique.

5.0 Application of 'Two-stage' Procedure

5.1 Technical Proposals

In practice, most of the time, proposals are evaluated under three principal categories:

1. Experience and capability of the Firm (Consultant)

- a. Overall professional experience of the firm.
- b. Summaries of the various projects undertaken by the firm, whose technical content could be compared with that of the anticipated project proposal.
- c. General reputation of the firm and their relationship with previous and current clients. (considering misunderstandings arising out of past work, if there are any).
- d. Overall current work commitments.

II. Work Plan and Methodology

- a. Overall understanding and/or interpretation of the Terms of Reference (TOR)
- b. Completeness of the proposal i.e. no

omissions; no misinterpretations etc.

- c. Quality of the methodology i.e. clarity of the methodology and how it matches with the requirements of the TOR.
- d. Quality of the proposal i.e. presentation, details of organization, project and financial controls.
- e. Innovativeness i.e. Alternative approaches to facilitate the project activities, special cost and time savings, attributes, quality assurance methods etc.
- f. Work Plan; Co-ordinations and timing of various stages, work flow chart clearly identifying all activities, avoiding bottle-necks etc.
- g. Man-Months; manning schedule and its compatibility with work activities and comparison with estimated man-months proposed by the client.
- h. Commitment to technology transfer i.e. training of the client's staff.
- i. Availability of facilities i.e. additional office space, transportation, computers, telex etc.

III. Personnel to be assigned

One of the key areas where closest-scrutiny received in a technical proposal is the quality of the personnel who will be assigned to the project. (For engineering design, greater weight might be given to experience of the firm and less to the personnel. Same way, for construction supervision greater weight might be given to key personnel). The team leader will be allocated more points and the balance will be distributed among other personnel depending on the importance of their positions to overall performance of the project. The percentage weights applied to each position would normally depend on the following factors:

- a. General Qualifications
- b. Experience related to the project and the position
- c. Other factors
 - Professional qualifications
 - Overseas similar experience
 - Research work
 - Publications etc.

5.2 Example

5.2.1 Assumed Data

- Type of consultancy service:
Construction Supervision

- Number of proposals: 4 (A,B,C, & D)

- Evaluation Committee members:
3 (1, 2 & 3)

- Agreed Point Systems:

1. Experience & Capability Max. Wt. (total 100) (see section 5.1)

a. Overall professional experience of the firm	10
b. Experience in similar projects	60
c. Reputation & Relationship with clients	20
d. Present work commitments	10
	<u>100</u>

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II. Work Plan and Methodology Max. Wt. (total 400)

a. Understanding and interpretation of TOR	80
b. Completeness of the proposal	40
c. Quality of the Methodology	40
d. Quality of the proposal	40
e. Innovativeness	20
f. Work Plan	60
g. Man Months	50
h. Technology Transfer	40
i. Availability of facilities	30

400

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III. Personnel (total 100) Max. Wt.

a. General Qualifications	30
b. Experience related to project	60
c. Other factors	10

100

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IV. Positions (500)

Max. Wt.

a. Project Leader	200
b. Resident Engineer	100
c. Planning & Scheduling Engineer	100
d. Materials Engineer	50
e. Quantity Surveyor	50
	<u>500</u>

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- In this example, it is decided to give 70% weight to the technical proposal and 30% to the price. (If the assignment is technically complex 90% may be given to the technical proposal with 10% given to the price).

5.2.2 Evaluation steps for the Committee Members

I. After agreeing with the above mentioned points system, (see section 5.2.1) first of all, technical proposals should be opened. The most convenient way to do the evaluation is to carry out individual evaluation.

II. Table I represents the personnel sheet prepared by a committee member for the firm A. Similarly, each member can prepare a separate sheet for the each firm separately.

III. Table II represents the summary of the evaluation done by a member for all four firms.

IV. Table III represents the summary of the technical evaluation done by all 3 members for all four firms. (During this stage, it is advisable, if there is any major differences of the points given by members, then discuss those differences to investigate reasons for such differences and make appropriate corrections on individual scores.

V. Calculate the average of the points given by the individual members as shown in Table III and take those averages to the final evaluation sheet (Table IV).

VI. After finalising the table III, financial proposals shall be opened.

PERSONNEL EVALUATION SHEET

Table 1

Position	Max. Wt.	NAME	Age *	Gen. Qualification ...30. %		Experience Related to Project ...60....%		Other Factors ...10...%		Overall	
				Rating	Rating combine with% (1)	Rating	Rating com- bine with% (2)	Rating	Rating Com- bine with% (3)	Rating 1+2+3	Wt.
Project Leader	200	R. Perera	55	80	24	85	51	55	5.5	80.5	161.00
Resident Engineer	100	P. Peter	35	60	18	60	36	60	6.0	60.0	60.00
Planning & Scheduling Engineer	100	K. Paul	40	65	19.5	75	45	75	7.5	72.0	72.00
Materials Engineer	50	L. Fernando	45	68	20.4	60	36	65	6.0	62.4	31.20
Quantity Surveyor	50	A. Silva	38	75	22.5	65	39	70	7.0	68.5	34.25
											358.45

Rating : Excellent : 100
 Good : 80
 Adequate : 60
 Marginal : 0

$$Wt. = \frac{\text{Rating (1+2+3)}}{100} \times \text{MAX.WT.}$$

* Under other factors, age may also be considered as appropriate.

Table 2

SUMMARY EVALUATION SHEET
PREPARED BY A COMMITTEE MEMBER

Member .1...

Evaluated Items	Max Wt	Firm 'A'		Firm 'B'		Firm 'C'		Firm 'D'	
		Rating	Wt	Rating	Wt	Rating	Wt	Rating	Wt
I. Experience & Capability of Proposer (100)									
a. Overall professional experience	10	70	7.0	85	8.5	65	6.5	70	7.0
b. Experience in similar projects	60	65	39.0	70	42.0	60	36.0	70	42.0
c. Reputation and relationship with clients	20	70	14.0	80	16.0	60	12.0	60	12.0
d. Present work commitments	10	60	6.0	70	7.0	70	7.0	60	6.0
TOTAL	100		66.0		73.5		61.5		67.0
II. Work Plan & Methodology (400)									
a. Understanding and Interpretation of TOR	80	70	56.0	80	64.0	70	56.0	75	60.0
b. Completeness of the proposal	40	75	30.0	70	28.0	60	24.0	70	28.0
c. Quality of the methodology	40	60	24.0	70	28.0	65	26.0	65	26.0
d. Quality of the proposal	40	65	26.0	80	32.0	65	26.0	70	28.0
e. Innovativeness	20	60	12.0	60	12.0	60	12.0	50	10.0
f. Work plan	60	70	42.0	75	45.0	70	42.0	50	30.0
g. Man-months	50	68	34.0	70	35.0	50	25.0	60	30.0
h. Technology transfer	40	60	24.0	65	26.0	65	26.0	50	20.0
i. Availability of facilities	30	70	21.0	70	21.0	55	16.5	60	18.0
TOTAL	400		269.0		291.0		253.5		250.0
III. Personnel (500)									
a. Project Leader	200	80	160.0	85	170.0	65	130.0	70	140.0
b. Resident Engineer	100	60	60.0	70	70.0	62	62.0	72	72.0
c. Planning and Scheduling Engineer	100	72	72.0	65	65.00	70	70.0	66	66.0
d. Materials Engineer	50	62	31.0	65	32.5	65	32.5	64	32.0
e. Quantity Surveyor	50	68	34.0	70	35.0	70	35.0	75	37.5
TOTAL	500		357.0		372.5		329.5		347.5

Rating : Excellent 90-100
Very Good 80-89
Average 60-79
Below Average 40-59

$$\text{Weight} = \frac{\text{RATING}}{100} \times \text{MAX. WT.}$$

Table 3

TECHNICAL EVALUATION SUMMARY SHEET

Evaluated Categories	Offer No. Evaluation Com. Number	A				B				C				D			
		1	2	3	Avg	1	2	3	Avg	1	2	3	Avg	1	2	3	Avg
Experience of the Firm	(100)	66	64	70	66.67	73.5	70	66	69.83	61.5	59	65	61.83	67	61	58	62.00
Work plan and Methodology	(400)	269	290	285	281.33	291.0	310	280	293.67	253.5	280	263	265.5	250	220	210	226.67
Personnel	(500)	357	380	300	345.67	372.5	360	320	350.83	329.5	315	310	318.17	347.5	305	275	309.17
TOTALS	(1000)				693.67				714.33				645.50				597.84

VII. Check the arithmetics of the price proposals.

VIII. As shown in Table IV combine the technical score with the price and rank the proposals.

IX. Note :

1. It must be noted that submissions of bonds/guaranties and validity of signatures etc. shall be checked at the initial stage of the evaluation of the proposals.
2. Depending on the type of contract, the evaluation committee may decide to interview the senior key personnel proposed by the bidders at the evaluation stage. If this is so, it must be clearly stated in the invitation to tender.

6.0 Conclusion

The selection of the consultants to obtain consultancy services shall not be done on the basis of lowest bid. The competenance and experience of the firm and the personnel to be assigned, quality of the proposals are the principal factors in choosing a consultancy firm.

Financial Terms can be considered as a secondary requirement. Evaluation of proposals is a major task and requires considerable professional input. The method of evaluation shall be thought of during the preparation stage of the documents for 'Request for Proposal' and a clear indication of the evaluation procedure shall be incorporated with the letter of invitation.

Evaluation Committee members shall agree with the evaluation method and scoring system prior to opening any of the proposals. Technical evaluation shall be done with no influence of the price proposal.

References

1. 'Guidelines, Use of Consultants by World Bank Borrowers and by The World bank as Executing Agency' 1981. The World Bank, 1818 H Street, N.W. Washington, U.S.A.
2. 'Guidelines, Procurement, under IBRD Loans and IDA Credits, 1985. The World Bank, 1818 H. Street, Washington U.S.A.
3. 'Guidelines for Tender Procedures - Sri Lanka' ICTAD Publications No.SCA/2, 1986, Ministry of Local Government, Housing and Construction.

Table 4

COMBINING OF TECHNICAL AND FINANCIAL EVALUATIONS

Offer	T Technical Score (out of 1000)	$T1 = \frac{70}{100} \times T \times \frac{100}{1000}$	Corrected [*] offer	F = Lowest Price X 100 Offer	$F1 = F \times \frac{30}{100}$	Final Score = $T1 + F1$	Rank
A	693.67	48.56	7,545,368	89.94	26.98	75.54	1
B	714.33	50.00	9,567,400	70.93	21.28	71.28	3
C	645.50	45.18	11,541,203	58.80	17.64	62.82	4
D	597.84	41.85	6,786,506	100.00	30.00	71.85	2

* After checking arithmetical errors.

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