

Task Force On Electronic Tendering
Working Paper No. 1
Methodology for Questionnaire Survey
on Construction Industry

1. Purpose

1.1. This paper seeks members' approval of the proposed methodology for conducting a questionnaire survey on the construction industry. The purpose of the survey is to gather the view of the industry on electronic tendering.

2. Related Papers

2.1. This paper should be read in conjunction with Discussion Paper 2/99 – Methodology and Work Programme.

3. Background Information

3.1. Discussion Paper 2/99, tabled during the 1st Plenary Meeting on 18 September 1999, suggests the scope and work programme for the Building Sub-Group (BSG), the Civil Sub-Group (CSG) and the Electrical and Mechanical Sub-Group (EMSG). The first stage of the programme is the assessment of the business case for electronic tendering. The paper further suggests conducting a questionnaire survey on the construction industry to gather the information for the assessment. The Plenary Meeting took notice of the discussion paper.

3.2. During their first series of meeting in late October/early November 1999, the Sub-Groups discussed and adopted the suggestions in Discussion Paper 2/99. The Sub-Groups also decided to proceed with the questionnaire survey on the construction industry.

3.3. After the first series of Sub-Group meetings, Works Bureau appointed HKPC as the consultants for the questionnaire survey. The scope of HKPC's service includes-

- (a) formulating the survey methodology;
- (b) conducting the survey; and
- (c) analyzing the survey results and presenting them to the Sub-Groups and Plenary Meeting.

4. Survey Methodology

- 4.1. The survey methodology proposed by HKPC is included in Annex 1. The questionnaire for the survey is included in Annex 2. (These annexes will be referred to collectively as the "Survey Methodology".) In addition to the questionnaire, Annex 2 also includes-
- (a) Works Bureau's covering letter for distributing the questionnaire; and
 - (b) Personal data collection statement (prepare in accordance with the provisions of the Personal Data (Privacy) Ordinance)

5. Consultation

- 5.1. The drafts of the Survey Methodology were submitted to the Sub-Groups for consideration during the two series of meetings in mid-November 1999 and late November/early December. We have incorporated the Sub-Groups' comments into the present version.

6. Advice Sought

- 6.1. Members are requested to-
- (a) take note of and give comments on the Survey Methodology; and
 - (b) endorse the Survey Methodology.

7. Publicity

- 7.1. WB has published articles on the task force and the questionnaire survey in the recent issues of the journals of professional institutions. We hope that this will promote the awareness of the task force and the survey. To further enhance the publicity and hence the rate of return, members are requested to publicize the survey within their organizations.

Works Bureau
HKSAR Government
3 December, 1999

Annex 1 – Methodology for Questionnaire Survey on the Construction Industry

Prepared by- Hong Kong Productivity Council (HKPC)

1. Introduction

1.1. The purpose of the survey is, to gather the information for assessing the business case of electronic tendering.

1.2. The objectives of the survey are to gather information on-

- (a) the industry's perception on the benefits and concerns of the initiative;
- (b) the industry's requirements and preferences for electronic tendering systems;
- (c) the industry's readiness for electronic tendering; and
- (d) the industry's willingness to participate.

2. Proposed Methodology

2.1. Population

2.1.1. The population for the survey will consist of the firms meeting one of the following criteria-

| Type of firm | Selection Criteria | Estimated number |
|-------------------------|---|-------------------------|
| Contractors | Works Bureau's approved list of public works contractors Housing Department's list of approved contractors | 600 |
| Engineering consultants | Consultants on the list of the Engineering and Associated Consultants Selection Board (EACSB) | 120 |
| Architects | List to be provided by HKIA | To be ascertained later |
| Quantity Surveyors | List to be provided by HKIS | 30 |
| | Total | < 1,000 |

2.1.2. We propose distributing questionnaires to all firms that meet the selection criteria.

2.2. Distribution and Submission of Questionnaires

2.2.1. The questionnaires will be distributed and returned through the following channels-

| Media | Distribution | | Return | | On-line submission |
|----------------------------------|---------------------|------------------------------|---------|--------|--------------------|
| | By post | Downloading from WB web site | By post | E-mail | |
| Hard copy | ✓ | | ✓ | | |
| Soft copy (in WinWord format) | ✓ (on diskettes) | ✓ | ✓ | ✓ | |
| Electronic form on WB's web site | | | | | ✓ |

2.3. Structure of Questionnaire

2.3.1. The questionnaire consists of two parts-

(a) Part 1 – Main Questionnaire

The main questionnaire gathers information on-

- (i) the nature and turnover of the respondent's business;
- (ii) his/her perception on the benefits of and concerns on electronic tendering;
- (iii) his/her preferred features and functions for an electronic tendering systems; and
- (iv) his/her willingness to participate in the initiative;

(b) Part 2 – IT Profile

This part gathers information on the respondent's IT facilities. The information will provide indications on the industry's readiness for electronic tendering.

2.3.2. The questionnaire will be issued with a preamble consisting of

- (a) Works Bureau's covering letter explaining the rationale behind the survey; and
- (b) Personal Information Collection Statement (prepared in accordance with the provisions of the Personal Data (Privacy) Ordinance)

2.4. Pilot Runs

- 2.4.1. We will finalize the questionnaire taking into account the views of the members of the Task Force. We will then conduct pilot runs for the questionnaire on a small number of potential respondents. The questionnaire will be fine tuned in accordance with their feedback.

2.5. Distribution of Questionnaire and Collection of Returns

- 2.5.1. The questionnaire will be distributed in accordance with the methods in paragraph 2.2 above. After the distribution, we will make phone call to the respondents to check whether they have received the questionnaire. The respondents will be required to return the completed questionnaires within two weeks.
- 2.5.2. After the collection of the responses, we will conduct face-to-face or telephone interviews to-
- (a) clarify irregularities in the responses; and
 - (b) obtain more returns for groups with low response rates.

2.6. Analysis of Result and Final Report

- 2.6.1. After the collection of the returns, we will analyze the results and prepare the final report for the survey. The final report will present the survey results in summary form and will discuss the inferences that may be drawn from the results.

3. Programme

- 3.1. The proposed programme for the survey is as follows-

| Activity | Programme | |
|---|---------------------|------------------------|
| | Start Date | Completion Date |
| Pilot run of questionnaire | early December 1999 | mid-December 1999 |
| Distribution of questionnaire | mid-December 1999 | |
| Analysis of results | early January 2000 | mid January 2000 |
| Submission of Final Report to Sub-Groups | early February 2000 | |
| Submission of Final Report to Plenary Meeting | mid-February 2000 | |

Annex 2 – Questionnaire

Covering letter
(to be printed on Works Bureau letterheads)

WB (CS) 1/5/52

Tel. no. 2848 1188 **Fax no.** 2523 5327
E-mail ss.lee@wb.gov.hk

7 December, 1999

[Address to be generated by mail merge.]

Dear Sir,

Task Force on Electronic Tendering
Questionnaire Survey on the Construction Industry

The local construction industry is now ready to make collaborative efforts in upgrading our services to meet new challenges in the digital era. With this shared initiative, I should be most grateful if you would take part in our concerted efforts by completing and returning the attached questionnaire on electronic tendering before ***(date to be inserted)***.

Background

Electronic tendering is one of the initiatives pursued by the construction industry to bolster its competitiveness. We feel that the best way to bring electronic tendering to fruition is to pool the resources of the public and private sectors of the construction industry.

Consequently the Task Force on Electronic Tendering was formed in July 1999 under the Contracts Committee of the Construction Advisory Board. It is tasked to formulate a strategy for implementing electronic tendering for public works contracts. The membership therefore includes members from Works Bureau, Works Departments and influential construction industry trade organizations and professional institutions.

To enable us to formulate a strategy that can best meet your needs, we wish to conduct a survey so that we can know your views, your perceived benefits, your concerns and in particular, your intention whether you will be

prepared to participate in the initiative. The survey would target to contractors, architectural firms, engineering consultants, and quantity surveyors.

Preliminary Framework For Electronic Tendering

We acknowledge that there are great variations in the perception of electronic tendering. Hence, we focus on two core aspects in the tendering process:-

- (a) the distribution of tender documents in electronic format; and
- (b) the submission of tender returns in electronic format.

Electronic distribution will involve distributing soft copies of tender documents through media (such as CD-ROM's) or through the Internet. Hence, tenderers may use the soft copies directly in the workflows for preparation of tenders.

Electronic submission will involve submitting soft copies of tender returns, probably through use of computer-aided tools. The clients may feed the soft copies into computer-aided tender processing systems. Also, desktop computers with Internet connections now commonly used in the local construction industry would be adequate in dealing with electronic tendering.

It is understandable that there will be concerns as to whether electronic tendering will affect the business opportunities of firms who do not wish to participate in the initiative. If Works Bureau decides to proceed with electronic tendering, there will be a reasonable transitional period during which the existing system and the electronic system will operate in parallel. The parallel operation will enable the industry to migrate to electronic tendering at a comfortable pace.

I wish to reiterate my appeal for your company to complete and return the questionnaire. Your view will be most valuable to us in formulating an electronic tendering strategy that will garner wide industrial acceptance.

Electronic tendering is only the first step in implementing electronic services delivery (ESD) for works projects. We will build on the technical infrastructure for electronic tendering and extend ESD to other parts of the project life cycle. The possible extensions include electronic exchange of project planning information and conducting contract correspondences through e-mail.

The Hong Kong Productivity Council (HKPC) is appointed by the Task Force to undertake the survey. If you have any questions on the

questionnaire, would you please contact Miss Yeung of HKPC at tel. no. 2788 5566 or fax no. 2788 5567, or through e-mail messages to cadcentre@hkpc.org.

We will publish from time to time information about the Task Force on Works Bureau's web site (address <http://www.wb.gov.hk/etender>). You are welcomed to visit this web site to obtain further information. Lastly, thanks for your cooperation in advance.

Yours Faithfully,

(S. S. Lee)
for Secretary for Works

Personal Information Collection Statement

1. The questionnaire survey is conducted by the Hong Kong Productivity Council (HKPC) on behalf of the Works Bureau of the HKSAR Government. The purpose of the survey is to assess the business case for electronic tendering. The information collected will not be used for any other purposes.
2. HKPC will maintain confidentiality of information on individual returns and will destroy all returned questionnaires upon completing the survey. HKPC may disclose the results of the survey to Works Bureau and other parties who have a genuine interest in electronic tendering. The disclosure will be made in summary form only, without disclosing the information on individual returns.
3. Under the Personal Data (Privacy) Ordinance, a respondent may request HKPC to-
 - (a) advise on whether it holds any of his/her personal data;
 - (b) provide access to the person data held by HKPC about him/her; and
 - (c) correct any inaccurate personal data.
4. HKPC reserves the right to charge reasonable fees for the processing the requests listed in paragraph 3. These requests should be made in writing to-

The Data Protection Officer
Hong Kong Productivity Council
HKPC Building,
78 Tat Chee Avenue
Kowloon Tong

ELECTRONIC TENDERING

QUESTIONNAIRE SURVEY ON CONSTRUCTION INDUSTRY"

- This questionnaire consists of two parts-
 - (a) Part 1 – Main Questionnaire

This part gathers information on the nature of the respondents' business and his/her view on electronic tendering;
 - (b) Part 2 – IT Profile

This part gathers information on the respondent's existing IT facilities.
- In addition to returning hard copy, you may complete the questionnaire using the WinWord file on the attached diskette and return the completed file by using the return envelop or by e-mail (to cadcentre@hkpc.org). You may also submit your return on line at the following web site-

<http://www.wb.gov.hk/etender/questionnaire>
- If you need any assistance in completing the questionnaire, please do not hesitate to contact Miss Yeung at tel. no. 2788-5566, fax. no. 2788-5567 or by email: cadcentre@hkpc.org.

For Office Use Only

Please check if the information is correct. If the Questionnaire is sent incorrectly to your organization, please contact Miss Yeung at 2788-5566.

Organization Name

Organization ID No.

Categories

Registered Address

Main Tel No.

Fax No.

PART 1 - MAIN QUESTIONNAIRE

CONTACT INFORMATION

1. Contact Person

Name Tel Fax.

Email address (if any)

BUSINESS INFORMATION

2. What is the nature of your business (Please tick the appropriate box. You may tick more than one box.)-

| Type of firm | Works discipline | | | | |
|-------------------------|--------------------------|--------------------------|--------------------------|---|--------------------------|
| | Building | Civil | Building Services | Electrical and Mechanical (non-building services) | Others |
| Architects | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Engineering Consultants | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Quantity Surveyors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Contractors | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If your business covers more than one cell in the above classification matrix, you may choose to complete a separate return for each classification. This is, however, not mandatory.

3. Average **annual** turnover (estimate) of your firm for the past 3 years. (millions HK\$)

0-5 5-10 10-50 50-100

100-500 500-1000 1000-5000 > 5000

4. Average percentage of turnover (estimate) that was generated by Government contracts¹.

0-5 % 6-10 % 11-20 % 21-40 %

41-60 % 61-80 % 81-100 %

5. What is your average **annual** expenditure (estimate) for preparing and responding to tenders for Government contracts in the past 3 years (including both successful and unsuccessful tenders)? (millions HK\$)

0-0.2 0.2-0.5 0.5-1 1-2

2-5 5-10 10-50 > 50

¹ Including Housing Authority contracts but EXCLUDING contracts of any other statutory organizations such as KCRC or MTRC

BENEFITS AND CONCERNS ON ELECTRONIC TENDERING

Please go to Question 7 if you are a CONTRACTOR.

- 6** What will be the effect of electronic tendering on the cost and benefit of the following operations in the tendering workflow? **(This question is intended for architects, engineering consultants and quantity surveyors.)**

| Operation | Cost comparison with existing paper based tendering procedures | | | Benefits ² |
|--|--|--------------------------|--------------------------|--------------------------|
| | No change in cost/NA | Decrease cost | Increase cost | |
| Tender documentation by clients | | | | |
| (a) Consolidating input from business partners into the tender documents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Production of tender documents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Printing and distribution of tender documentation | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Preparation of tender addendum | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Assessment of tenders (post tendering) | | | | |
| (e) Receipt and opening of tender | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Assessment of tender prices | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) Assessment of design submissions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) Assessment of other parts of tender submission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) Tender clarification | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (j) Preparation of tender reports | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other items (Please specify) | | | | |
| (k) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (l) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (m) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please go to Question 8.

² Please tick this column if you perceive that electronic tendering will benefit the operation in question.

7. What will be the effect of electronic tendering on the cost and benefit of the following operations in the tendering workflow? **(This question is intended for contractors.)**

| Operation | Cost comparison with existing paper based tendering procedures | | | Benefits ³ |
|--|--|--------------------------|--------------------------|--------------------------|
| | No change in cost/NA | Decrease cost | Increase cost | |
| Preparation of tender submissions | | | | |
| (a) Receipt of tender document | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Conversion of hard copy tender documents into electronic format | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Preparation and production of tender documents for sub-contractors and suppliers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Printing and distribution of tender documents to sub-contractors and suppliers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Consolidation of returns from sub-contractors and suppliers | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Tender query | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) Processing tender addendum | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) Preparing design submissions | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) Tender pricing | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (j) Preparing other parts of tender submission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (k) Submitting tender | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other items (Please specify) | | | | |
| (l) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (m) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (n) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

³ Please tick this column if you perceive that electronic tendering will benefit the operation in question.

8. Do you have any concerns on electronic tendering? If so, please indicate your degrees of concerns in the following table.

| Issues | Degree of Concern | | |
|---|--------------------------|--------------------------|--------------------------|
| | Not concerned | Minor | Major |
| (a) Legal issues | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Security and confidentiality of tender returns | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Authenticating tender documents and tender submission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Leaking of Restricted Information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Virus Attack | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) High initial outlay on electronic tendering systems | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) High operating cost | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) Investment in keeping pace with the changing technology | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) Software and system compatibility | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (j) Lack of local professionals (who have both industry knowledge and IT) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (k) Lack of experience in electronic tendering | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other (Please specify) | | | |
| (l) | | <input type="checkbox"/> | <input type="checkbox"/> |
| (m) _____ | | <input type="checkbox"/> | <input type="checkbox"/> |
| (n) _____ | | <input type="checkbox"/> | <input type="checkbox"/> |

9. Do you think electronic tendering will save or increase your operational expenditure?

(a) Save Increase No Change

Percentage of change

(b) 0-10 % 11-20 % 21-30 % > 31 %

REQUIREMENTS AND PREFERENCES FOR ELECTRONIC TENDERING

10. What are the features that you would like to see in an Electronic Tendering system?

| Feature | Preference | | |
|---|--------------------------|--------------------------|--------------------------|
| | Essential | Desirable | Don't care |
| (a) Distribution of the tender documents in electronic format | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Use of common industrial standard data format for tender documents | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Use of common industrial standard data format for tender returns | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Bill of quantities/schedule of rates submission | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Automatic computational facilities for bill of quantities/schedule of rates | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Design submission (including designs required under the terms of the tender and alternative designs) in electronic format | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other features (Please specify) | | | |
| (g) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (h) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (i) _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

11. What do you think are the actions that government should take to help the industry adopt electronic tendering?

| | Preference | | |
|--|--------------------------|--------------------------|--------------------------|
| | Essential | Desirable | Don't care |
| (a) Promoting awareness of electronic tendering through introductory seminars on legal, administrative and technical aspects | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Providing guidance on legal, administrative and technical aspects of electronic tendering | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

12. Please indicate your preferences on the data format and media for distribution of tender documents and submission of tender returns: -

| | Tender documents | Tender returns |
|---|--------------------------|--------------------------|
| (a) Media for tender documents and tender submissions | | |
| CD-ROM | <input type="checkbox"/> | <input type="checkbox"/> |
| Internet | <input type="checkbox"/> | <input type="checkbox"/> |
| Others (Pls. specify _____) | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Data format for drawings files | | |
| Editable CAD files (such as dwg or dgn) | <input type="checkbox"/> | <input type="checkbox"/> |
| Non-editable format (such as cgm) | <input type="checkbox"/> | <input type="checkbox"/> |
| Others (Pls. specify _____) | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Data format for textural parts of tender documents | | |
| Plain text | <input type="checkbox"/> | <input type="checkbox"/> |
| Word format | <input type="checkbox"/> | <input type="checkbox"/> |
| Adobe Acrobat format | <input type="checkbox"/> | <input type="checkbox"/> |
| Others (Pls. specify _____) | <input type="checkbox"/> | <input type="checkbox"/> |

PARTICIPATE IN E-TENDERING

13. Do you think electronic tendering will enhance the productivity of your firm?

(a) Yes No

Please briefly explain the reasons for your answer?

(b) _____

14. If electronic tendering is implemented, will you participate in the initiative?

| | |
|--|--------------------------|
| "YES." We wish to participate in electronic tendering (please go to question 15) | <input type="checkbox"/> |
| "NO." We do not wish to participate in electronic tendering (please go to question 16) | <input type="checkbox"/> |

15. We wish to participate, because of-

| | (Please tick if the reason is material to your decision.) |
|--|---|
| i. Cost saving in preparing tenders | <input type="checkbox"/> |
| ii. Cost saving in preparing tender returns | <input type="checkbox"/> |
| iii. Cost saving in checking tenders | <input type="checkbox"/> |
| iv. Time saving in preparing tenders | <input type="checkbox"/> |
| v. Time saving in preparing tender returns | <input type="checkbox"/> |
| vi. Time saving in checking tenders | <input type="checkbox"/> |
| vii. Improved collaboration with business partners | <input type="checkbox"/> |
| viii. Improved productivity | <input type="checkbox"/> |
| ix. Improved competitiveness | <input type="checkbox"/> |
| x. Improve business opportunity | <input type="checkbox"/> |
| Others (Please specify) | |
| xi. _____ | |
| xii. _____ | |
| xiii. _____ | |

16. We do not wish to participate, because of

| | (Please tick if the reason is material to your decision.) |
|--|---|
| i. Initial capital outlay | <input type="checkbox"/> |
| ii. Recurrent cost for operating and upgrading system | <input type="checkbox"/> |
| iii. Lack of experience in implementing and operating electronic tendering system | <input type="checkbox"/> |
| iv. The existing hard copy based system is adequate for the firm's business requirements | <input type="checkbox"/> |
| v. Business partners not ready for electronic tendering | <input type="checkbox"/> |
| Others (Please specify) | |
| vi. _____ | |
| vii. _____ | |
| viii. _____ | |

17. Any Other Comment

PART 2 - IT PROFILE

You may need the help of your IT personnel in completing this part of the questionnaire.

18. Do you own the following IT facilities? (You may select more than 1 choice.)

| | Please tick if yes. |
|---|--------------------------|
| (a) WAN (Wide Area Network) | <input type="checkbox"/> |
| (b) LAN (Local Area Network) | <input type="checkbox"/> |
| (c) Intranet | <input type="checkbox"/> |
| Internet access | |
| (d) Via modems | <input type="checkbox"/> |
| (e) Via leased lines | <input type="checkbox"/> |
| (f) Own a domain | <input type="checkbox"/> |
| (g) Internal Email & groupware | <input type="checkbox"/> |
| (h) Internet security systems (like firewall, proxy servers, token cards) | <input type="checkbox"/> |
| (i) IT security policy | <input type="checkbox"/> |
| (j) Office document management system | <input type="checkbox"/> |
| (k) OA applications (like MS Office or Lotus SmartSuite) | <input type="checkbox"/> |

19. Does your firm use the following technical computing packages?

| | | | | | | | |
|---|------|--------------------------|-------------|--------------------------|--------------------------|--------------------------|--|
| (a) QS packages | | | | | | | |
| 1. Altes QS | | <input type="checkbox"/> | 2. RIPAC QS | | <input type="checkbox"/> | | |
| 3. ICEPAC QS | | <input type="checkbox"/> | 4. QSM QS | | <input type="checkbox"/> | | |
| 5. BillSoft QS | | <input type="checkbox"/> | | | | | |
| 6. Others (Please specify _____) | | | | | | <input type="checkbox"/> | |
| (b) CADD packages | | | | | | | |
| (1) AutoCAD | R.9 | <input type="checkbox"/> | R.10 | <input type="checkbox"/> | R.11 | <input type="checkbox"/> | |
| | R.12 | <input type="checkbox"/> | R.13 | <input type="checkbox"/> | R.14 | <input type="checkbox"/> | |
| | 2000 | <input type="checkbox"/> | | | | | |
| (2) Microstation | V.5 | <input type="checkbox"/> | 95 | <input type="checkbox"/> | SE | <input type="checkbox"/> | |
| | V.J | <input type="checkbox"/> | | | | | |
| (c) Structural analysis packages (Please specify _____) | | | | | | <input type="checkbox"/> | |
| (d) Project management packages (Please specify _____) | | | | | | <input type="checkbox"/> | |
| (e) Cost estimating packages (Please specify _____) | | | | | | <input type="checkbox"/> | |
| (f) EDA/CAD packages (Please specify _____) | | | | | | <input type="checkbox"/> | |
| Others (Please specify) | | | | | | | |
| (g) _____ | | | | | | | |
| (h) | | | | | | | |

20. What is percentage of your technical staff who has their own computers? (Please exclude site offices.)

0-20 % 21-40 % 41-60 %
61-80 % > 80 %

21. Do you have the following types of IT support service? (You may select more than 1 choice.)

| | Internal | Outsourced |
|---|--------------------------|--------------------------|
| (a) General Office PC Support | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) CAD System Support | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) System Support (LAN, WAN, Email etc.) | <input type="checkbox"/> | <input type="checkbox"/> |
| Others (Pls. specify) | | |
| (d) _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) _____ | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) _____ | <input type="checkbox"/> | <input type="checkbox"/> |

Thank You

--- End of Questionnaire ---