INFORMATION AND COMMUNICATION TECHNOLOGY AGENCY OF SRI LANKA

BIDDING DOCUMENT

NATIONAL COMPETITIVE BIDDING (NCB)

FOR

Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka- Phase II

IFB No: ICTA/GOSL/SER/NCB/2019/N/001

September, 2019

Contents

Information and Communication Technology Agency of Sri Lanka

Invitation for Bids (IFB)

Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka –Phase II
IFB No: ICTA/GOSL/SER/NCB/2019/N/001

1. Information and Communication Technology Agency of Sri Lanka (ICTA) that functions under the purview of Ministry of Digital Infrastructure and Information Technology (MDIIT), intends to improve the existing web-based spatial data management system to support the sustainable NSDI in Sri Lanka.

2. The Chairman, Department Procurement Committee (DPC), on behalf of Information and Communication Technology Agency of Sri Lanka (ICTA), now invites sealed Bids from eligible and qualified Bidders for implementing the web-based spatial data management system to support the sustainable NSDI in Sri Lanka- Phase II. Detailed description of schedule of requirements is given in the Bidding Document.

3. Bidding will be conducted using the National Competitive Bidding (NCB) procedure and is open to all eligible and qualified bidders as defined in Procurement Guidelines of Democratic Socialist Republic of Sri Lanka (GoSL)

   Bidders must meet the following minimum qualification criteria:
   - Experience as a Service Provider being in the business of provisioning of at least two (02) similar nature fully functional SDI Management systems, and successfully completed within the last six (6) years.

   - The minimum average annual volume of services performed by the Bidder over the last 3 years shall be Sri Lankan Rupees Eighty Million (LKR 80 Million).

4. Interested eligible Bidders may obtain further information from **Head of Procurement ,** ICTA, and inspect the Bidding documents free of charge during office hours (0900 Hrs 1700 Hrs) on working days commencing from **September 4, 2019** at the office of ICTA at the below address (Telephone: +94 2369099, Facsimile: +94 2369091 email: procurement@icta.lk**).** Bidding documents are also available on https://www.icta.lk/procurement/ only for reference purposes and interested eligible Bidders shall purchase the Bidding Documents as described in paragraph (5) below.

5. A complete set of Bidding Documents in English Language may be purchased by interested Bidders on submission of a written application and upon payment of a non-refundable fee of Sri Lankan Rupees Ten Thousand (LKR 10,000.00) from **September 4.,2019** during office hours on

working days from the office of **ICTA at 160/24, 2ⁿᵈ Floor, Kirimandala Mawatha, Colombo 05**. The method of payment will be by cash.

6. A pre-bid meeting with potential Bidders will be held at **1030 Hrs** on **September 17, 2019** at the office of ICTA at the above address.

7. Bids in hard copies must be delivered to **Head of Procurement, C/o Chairman**, **Information and Communication Technology Agency of Sri Lanka**, 160/24, 2ⁿᵈ Floor, Kirimandala Mawatha , Colombo 05 at or before **1500 Hrs on September 26, 2019**. Late Bids and Bids sent electronically will not be accepted and will be rejected. Bids will be opened immediately after the deadline for submission of bids, in the presence of Bidders or their authorized representatives who choose to attend in person at the address stated above (in Para 5).

8. All Bids must be accompanied by Bid Securities in the form of a Bank Guarantee using the format given with the Bidding Documents in the amount of Sri Lankan Rupees Five Hundred Thousand (LKR 500,000.00).

Chairman
Information and Communication Technology Agency of Sri Lanka
160/24, 2ⁿᵈ Floor, Kirimandala Mawatha,
Colombo 05
September 4, 2019

Section I. Instructions to Bidders

A: General

1. Scope of Bid	1.1	The Employer, as defined in the **Bidding Data Sheet (BDS)**, invites bids for the Services, as described in the Appendix A to the Contract. The name and identification number of this National Competitive Bidding (NCB) Contract is **provided in the BDS.**
	1.2	The successful Bidder will be expected to complete the performance of the Services by the Intended Completion Date **provided in the BDS.**
2. Source of Funds	2.1	Payments under this contract will be financed by the source **specified in the BDS.**
3. Corrupt or Fraudulent Practices	3.1	The attention of the bidders is drawn to the followings:

- Parties associated with Procurement Actions, namely, suppliers/contractors and officials shall ensure that they maintain strict confidentiality throughout the process;

- Officials shall refrain from receiving any personal gain from any Procurement Action. No gifts or inducement shall be accepted. Service providers/Suppliers/contractors are liable to be disqualified from the bidding process if found offering any gift or inducement which may have an effect of influencing a decision or impairing the objectivity of an official.

3.2 The Employer requires the bidders, suppliers, service providers, and consultants to observe the highest standard of ethics during the procurement and execution of such contracts. In pursuit of this policy:

a) *"corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;*

b) *"fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract;*

c) *"collusive practice" means a scheme or arrangement between two or more bidders, with or without the*

knowledge of the Employer to establish bid prices at artificial, noncompetitive levels; and

    d) *"coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.*

3.3   If the Employer found any unethical practices as stipulated under ITB Clause 3.2, the Employer will reject a bid, if it is found that a Bidder directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question.

4. Eligible Bidders   4.1   All bidders shall possess legal rights to supply the Services under this contract.

4.2   A Bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process, if they:

    (a)   are or have been associated in the past, with a firm or any of its affiliates which have been engaged by the Employer to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the services to be purchased under these Bidding Documents ; or

4.3   A Bidder that is under a declaration of ineligibility by the Government of Sri Lanka (GOSL), at the date of submission of bids or at the date of contract signing, shall be disqualified.

4.4   Foreign Bidder may submit a bid only if so stated in the BDS.

5. Qualification of the Bidder   5.1   All bidders shall provide in Section III, Bidding Forms, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.

5.2   In the event that prequalification of potential bidders has been undertaken **as stated in the BDS**, only bids from pre-qualified bidders shall be considered for award of Contract, in which case the provisions of sub-clauses 5.3 to 5.6 hereafter shall not apply. These qualified bidders should submit with their bids any information updating their original prequalification applications or, alternatively, confirm in their bids that the originally submitted prequalification information remains essentially correct as of the date of bid submission.

5.3   If the Employer has not undertaken prequalification of potential bidders, all bidders shall include the following

information and documents with their bids, unless otherwise **stated in the BDS**:

(a) copies of original documents defining the constitution or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bidder;

(b) total monetary value of Services performed for each of the last three years;

I experience in Services of a similar nature and size for each of the last three years, and details of Services under way or contractually committed; and names and address of clients who may be contacted for further information on those contracts;

(d) list of major items of equipment proposed to carry out the Contract;

I qualifications and experience of key site management and technical personnel proposed for the Contract;

(f) reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past five years;

(g) evidence of adequacy of working capital for this Contract (access to line(s) of credit and availability of other financial resources);

(h) authority to the Employer to seek references from the Bidder's bankers; and

(i) information regarding any litigation, current or during the last three years, in which the Bidder is involved, the parties concerned, and disputed amount;

5.4 Bids submitted by a joint venture of two or more firms as partners shall comply with the following requirements, unless otherwise stated in the **BDS**:

(a) the Bid shall include all the information listed in ITB Sub-Clause 5.3 above for each joint venture partner;

(b) the Bid shall be signed so as to be legally binding on all partners;

I the Bid shall include a copy of the agreement entered into by the joint venture partners defining the division of assignments to each partner and establishing that all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms; alternatively, a Letter of Intent to

execute a joint venture agreement, prior to the signing of the Contract, in the event of a successful bid shall be signed by all partners and submitted with the bid, together with a copy of the proposed agreement;

(d) one of the partners shall be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; when a foreign partner/s is/are involved one of the local partners shall be nominated as being in charge; and

I the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

5.5 To qualify for award of the Contract, bidders shall meet the following minimum qualifying criteria:

(a) annual volume of Services of at least the amount **specified in the BDS;**

(b) experience as service provider in the provision of at least two service contracts of a nature and complexity equivalent to the Services over the last Three (03) years **as specified in the BDS;**

I proposals for the timely acquisition (own, lease, hire, etc.) of the essential equipment **listed in the BDS**;

(d) a Project Manager with Five (05) years' experience in Services of an equivalent nature and volume, including no less than Three (03) years as Manager; and

I liquid assets and/or credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of no less than the amount specified in the **BDS**.

5.6 A history of awards against the bidder or any partner of a Joint Venture in litigation or in Arbitration may result in disqualification of the bid.

5.7 The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria of ITB Sub-Clause 5.5(a) and (e); however, for a joint venture to qualify the partner in charge must meet at least 75 percent of those minimum criteria for an individual Bidder and other partners at least 40 percent of the criteria. Failure to comply with this requirement will result in rejection of the joint venture's Bid.

6.1 Each Bidder shall submit only one Bid, either individually or as a partner in a joint venture. A Bidder who submits or

6. One Bid per

Bidder		participates in more than one Bid will cause all the proposals with the Bidder's participation to be disqualified.
7. Cost of Bidding	7.1	The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the Employer will in no case be responsible or liable for those costs.
8. Site Visit	8.1	The Bidder, at the Bidder's own responsibility and risk, may visit and examine the Site of required Services and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the Services. The costs of visiting the Site shall be at the Bidder's own expense.

B. Bidding Documents

9. Content of Bidding Documents	9.1	The set of bidding documents comprises the documents listed in the table below and addenda issued in accordance with ITB Clause 11:

Section I	Instructions to Bidders
Section II	Bidding Data Sheet
Section III	Bidding Forms
Section IV	Eligible countries (Not applicable)
Section V	Activity Schedule (Description of services)
Section VI	General Conditions of Contract
Section VII	Special Conditions of Contract
Section VIII	Performance Specifications and Drawings (if Applicable)
Section IX	Contract Forms

	9.2	The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or to submit a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in the rejection of its bid. Sections III, V, and IX should be completed and returned with the Bid in the number of copies specified in the **BDS**.
10. Clarification of Bidding Documents	10.1	A interested Bidder requiring any clarification of the bidding documents may notify the Employer by email at the Employer's address indicated in the invitation to bid. The Employer will respond to any request for clarification received earlier than 10 days prior to the deadline for submission of bids. Copies of the Employer's response will be forwarded to all Bidders who have purchased the bidding documents, including a description of the inquiry, but without identifying its source.

11. Amendment of Bidding Documents

11.1 Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing addenda.

11.2 Any addendum thus issued shall be part of the bidding documents and shall be communicated by e-mail to all Bidders of the bidding documents. Prospective bidders shall acknowledge receipt of each addendum by email to the Employer.

11.3 To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with ITB Sub-Clause 21.2 below.

C. Preparation of Bids

12. Language of Bid

12.1 The Bid, as well as all correspondence and documents relating to the Bid (including supporting documents and printed literature) exchanged by the Bidder and the Employer, shall be written in English language. In the event a document in a language other than English need be submitted, an official translation of the same in English need be submitted along with the document, and the content of the translated document shall only be recognized.

13. Documents Comprising the Bid

13.1 The Bid submitted by the Bidder shall comprise the following:

(a)   The Form of Bid (in the format indicated in Section III);

(b)   Bid Security;

(c)   Priced Activity Schedule;

(d)   Qualification Information Form and Documents;

and any other materials required to be completed and submitted by bidders, as **specified in the BDS**.

14. Bid Prices

14.1 The Contract shall be for the Services, as described in Appendix A to the contract and in the Specifications, Section VIII, based on the priced Activity Schedule, Section V, submitted by the Bidder.

14.2 The Bidder shall fill in rates and prices for all items of the Services described in the in Specifications (or Description of services), Section VIII and listed in the Activity Schedule, Section V. Items for which no rate or price is entered by the Bidder will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the

Activity Schedule.

14.3 The Service Provider and its Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price. However, VAT shall not be included in the price but shall be indicated separately.

14.4 The Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated as non-responsive and rejected

14.5 For the purpose of determining the remuneration due for additional Services, a breakdown of the lump-sum price shall be provided by the Bidder in the form of Appendix E to the Contract.

15. Currencies of Bid and Payment

15.1 The Bidder shall quote in Sri Lankan Rupees for local services and the payment shall be made for such services in Sri Lankan Rupees.

15.2 The Bidder may quote in US Dollars for services for which foreign currencies involved. And the Bidder may be required by the Employer to justify to the Employer's satisfaction for such foreign currency requirements if any.

16. Bid Validity

16.1 Bids shall remain valid until the date specified in the **BDS**. A bid valid for a shorter date shall be rejected by the Employer as non responsive.

16.2 In exceptional circumstances, prior to the expiration of the bid validity date, the Employer may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB Clause 17, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its bid.

17. Bid Security

17.1 The Bidder shall furnish as part of its bid, a Bid Security or a Bid-Securing Declaration, as specified in the **BDS**.

17.2 The Bid Security shall be in the amount specified in the **BDS** and denominated in Sri Lankan Rupees, and shall:

(a) at the bidder's option, be in the form of either a bank draft, a letter of credit, or a bank guarantee from a banking institution;

(b) be issued by any commercial bank licensed by the Central Bank of Sri Lanka.

(c) be substantially in accordance with the form of Bid Security included in Section III, Bidding Forms,

(d) be payable promptly upon written demand by the Employer in case the conditions listed in ITB Sub-Clause 17.5 are invoked;

(e) be submitted in its original form; copies will not be accepted;

(f) remain valid for a period of 28 days beyond the validity period of the bids, as extended, if applicable, in accordance with ITB Sub-Clause 16.2;

17.3 If a Bid Security or a Bid- Securing Declaration is required in accordance with ITB Sub-Clause 17.1, any bid not accompanied by a substantially responsive Bid Security or Bid Securing Declaration in accordance with ITB Sub-Clause 17.1, shall be rejected by the Employer as non-responsive.

17.4 The Bid Security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the Performance Security pursuant to ITB Clause 35.

17.5 The Bid Security may be forfeited or the Bid Securing Declaration executed:

(a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Bid Submission Form, except as provided in ITB Sub-Clause 16.2; or

(b) if the successful Bidder fails to:

(i) sign the Contract in accordance with ITB Clause 34;

(ii) furnish a Performance Security in accordance with ITB Clause 35.

17.6 The Bid Security or Bid- Securing Declaration of a JV must be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security or Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent to constitute the JV.

18. Alternative Proposals by Bidders

18.1 Alternative bids shall not be considered.

19. Format and Signing of Bid

19.1 The Bidder shall prepare one original of the documents comprising the Bid as described in ITB Clause 11 of these Instructions to Bidders, bound with the volume containing the Form of Bid, and clearly marked "ORIGINAL." In addition, the Bidder shall submit copies of the Bid, in the number **specified in the BDS,** and clearly marked as "COPIES." In the event of

discrepancy between them, the original shall prevail.

19.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder, pursuant to Sub-Clauses 5.3(a) or 5.4(b), as the case may be. All pages of the Bid where entries or amendments have been made shall be initialed by the person or persons signing the Bid.

19.3 The Bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D. Submission of Bids

20. Sealing and Marking of Bids

20.1 The Bidder shall seal the original and all copies of the Bid in two inner envelopes and one outer envelope, duly marking the inner envelopes as "ORIGINAL" and "COPIES".

20.2 The inner and outer envelopes shall

(a) bear the name and address of the Bidder;

(b) be addressed to the Employer at the address provided in the **BDS**

(c) **bear the name and identification number of the Contract as** defined in the BDS and

(d) provide a warning not to open before the specified time and date for Bid opening as **defined in the BDS**

20.3 In addition to the identification required in ITB Sub-Clause 20.2, the inner envelopes shall indicate the name and address of the Bidder to enable the Bid to be returned unopened in case it is declared late, pursuant to ITB Clause 22.

20.4 If the outer envelope is not sealed and marked as above, the Employer will assume no responsibility for the misplacement or premature opening of the Bid.

21. Deadline for Submission of Bids

21.1 Bids shall be delivered to the Employer at the address specified above (Refer 20.2 (b)) no later than the time and date **specified in the BDS.**

21.2 The Employer may extend the deadline for submission of bids by issuing an amendment in accordance with ITB Clause 11, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will then be subject to the new deadline.

22. Late Bids	22.1	The Employer shall not consider any bid that reaches after the deadline for submission of bids. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

23. Modification and Withdrawal of Bids

23.1 Bidders may modify or withdraw their bids by giving notice in writing before the deadline prescribed in ITB Clause 21.

23.2 Each Bidder's modification or withdrawal notice shall be prepared, sealed, marked, and delivered in accordance with ITB Clauses 19 and 20, with the outer and inner envelopes additionally marked "MODIFICATION" or "WITHDRAWAL," as appropriate.

23.3 No Bid may be modified after the deadline for submission of Bids.

23.4 Withdrawal of a Bid between the deadline for submission of bids and the expiration of the period of Bid validity specified in the BDS or as extended pursuant to ITB Sub-Clause 16.2 may result in the forfeiture of the Bid Security pursuant to ITB Clause 17.

23.5 Bidders may only offer discounts to, or otherwise modify the prices of their bids by submitting Bid modifications in accordance with this clause, or included in the original Bid submission.

E. Bid Opening and Evaluation

24. Bid Opening

24.1 The Employer will open the bids, including modifications made pursuant to ITB Clause 23, in the presence of the bidders' representatives who choose to attend at the time and in the place **specified in the BDS.**

24.2 Envelopes marked "WITHDRAWAL" shall be opened and read out first. Bids for which an acceptable notice of withdrawal has been submitted pursuant to ITB Clause 23 shall not be opened.

24.3 The bidders' names, the Bid prices, the total amount of each Bid and of any alternative Bid (if alternatives have been requested or permitted), any discounts, Bid modifications and withdrawals, the presence or absence of Bid Security, and such other details as the Employer may consider appropriate, will be announced by the Employer at the opening. No bid shall be rejected at bid opening except for the late bids pursuant to ITB Clause 22; Bids, and modifications, sent pursuant to ITB Clause 23 that are not opened and read out at bid opening will not be considered for further evaluation regardless of the circumstances. Late and withdrawn bids will be returned unopened to the bidders.

24.4 The Employer will prepare minutes of the Bid opening, including the information disclosed to those present in accordance with ITB Sub-Clause 24.3.

25. Process to Be Confidential

25.1 Information relating to the examination, clarification, evaluation, and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process. Upon the award to the successful bidder, the details of which may be availed on request. Any effort by a Bidder to influence the Employer's processing of bids or award decisions may result in the rejection of his Bid.

25.2 If, after notification of award, a bidder wishes to ascertain the grounds on which its bid was not selected, it should address its request to the Employer, who will provide written explanation indicating specific short-comings. Any request for explanation from one bidder should relate only to its own bid; information about the bid of competitors will not be addressed.

26. Clarification of Bids

26.1 To assist in the examination, evaluation, and comparison of bids, the Employer may, at the Employer's discretion, ask any Bidder for clarification of the Bidder's Bid, including breakdowns of the prices in the Activity Schedule, and other information that the Employer may require. The request for clarification and the response shall be in writing, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with ITB Clause 28.

26.2 Subject to ITB Sub-Clause 26.1, no Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded. If the Bidder wishes to bring additional information to the notice of the Employer, he should do so in writing.

26.3 Any effort by the Bidder to influence the Employer in the Employer's bid evaluation or contract award decisions may result in the rejection of the Bidder's bid.

27. Examination of Bids and Determination of Responsiveness

27.1 Prior to the detailed evaluation of bids, the Employer will determine whether each Bid (a) meets the eligibility criteria defined in ITB Clause 4; (b) has been properly signed; (c) is accompanied by the required securities; and (d) is substantially responsive to the requirements of the bidding documents.

27.2 A substantially responsive Bid is one which conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one (a) which affects in any substantial way the scope, quality, or performance of the Services; (b) which limits

in any substantial way, inconsistent with the bidding documents, the Employer's rights or the Bidder's obligations under the Contract; or (c) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

27.3 If a Bid is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

28. Correction of Errors
28.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Arithmetical errors will be rectified by the Employer on the following basis: if there is a discrepancy between unit prices and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected; if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; if there is a discrepancy between the amounts in figures and in words, the amount in words will prevail.

28.2 The amount stated in the Bid will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the Bidder, shall be considered as binding upon the Bidder. If the Bidder does not accept the corrected amount, the Bid will be rejected, and the Bid Security may be forfeited in accordance with ITB Sub-Clause 17.5(b).

29. Currency for Bid Evaluation
29.1 For evaluation and comparison purposes, the currency (ies) of the bid shall be converted into a single currency as specified in the BDS.

30. Evaluation and Comparison of Bids
30.1 The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with ITB Clause 27.

30.2 In evaluating the bids, the Employer will determine for each Bid the evaluated Bid price by adjusting the Bid price as follows:

(a) making any correction for errors pursuant to ITB Clause 28;

(b) excluding provisional sums and the provision, if any, for contingencies in the Activity Schedule, Section V, but including Day work, when requested in the Specifications (or Description of services) Section VIII;

(c) making appropriate adjustments to reflect discounts or other price modifications offered in accordance with ITB

Sub-Clause 23.5.

30.3 The Employer reserves the right to accept or reject any variation, deviation, or alternative offer. Variations, deviations, and alternative offers and other factors, which are in excess of the requirements of the bidding documents or otherwise result in unsolicited benefits for the Employer will not be taken into account in Bid evaluation.

30.4 The estimated effect of any price adjustment conditions under Sub-Clause 6.6 of the General Conditions of Contract, during the period of implementation of the Contract, will not be taken into account in Bid evaluation.

31. Preference for Domestic Bidders

31.1 Domestic bidders shall not be eligible for any margin of preference in Bid evaluation.

F. Award of Contract

32. Award Criteria

32.1 The Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Documents, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

Subject to ITB Clause 33, the Employer will award the Contract to the Bidder whose Bid has been determined to be substantially responsive to the bidding documents and who has offered the lowest evaluated Bid price, provided that such Bidder has been determined to be (a) eligible in accordance with the provisions of ITB Clause 4, and (b) qualified in accordance with the provisions of ITB Clause 5.

32.2 If, pursuant to ITB Sub-Clause 13.2 this contract is being let on a "slice and package" basis, the lowest evaluated Bid Price will be determined when evaluating this contract in conjunction with other contracts to be awarded concurrently. Taking into account any discounts offered by the bidders for the award of more than one contract.

33. Employer's Right to Accept any Bid and to Reject any or all Bids

33.1 Notwithstanding ITB Clause 32, the Employer reserves the right to accept or reject any Bid, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.

34. Notification of Award and Signing of Agreement

34.1 Prior to the expiration of the period of bid validity, the Employer shall notify the successful Bidder, in writing, that its Bid has been accepted.

34.2 Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract.

34.3 Upon the successful Bidder's furnishing of the signed Contract Form and performance security pursuant to ITB Clause 35, the Employer will promptly notify each unsuccessful Bidder and will discharge its bid security, pursuant to ITB Clause 17.4

35. Performance Security

35.1 Within fourteen (14) days of the receipt of notification of award from the Employer, the successful Bidder, if required, shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section IX Contract forms. The Employer shall promptly notify the name of the winning Bidder to each unsuccessful Bidder and discharge the Bid Securities of the unsuccessful bidders pursuant to ITB Sub-Clause 17.4. Refer BDS.

35.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security or execution of the Bid-Securing Declaration. In that event the Employer may award the Contract to the next lowest evaluated Bidder, whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily.

36. Advance Payment and Security

36.1 The Employer will provide an Advance Payment on the Contract Price as stipulated in the Conditions of Contract, subject to the amount **stated in the BDS.**

37. Bid Submission

37.1 It is mandatory for the Bidder to submit a PDF version of the bidding document along with the physical documents.

Section II. Bidding Data Sheet

The following specific information relating to services to be procured and procurement procedure that will be used shall complement, supplement or amend the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict the provisions in the Bid Data Sheet (BDS) shall prevail over those in the ITB.

Instructions to Bidders Clause Reference

A. General	
1.1	The Employer is: Information and Communication Technology Agency of Sri Lanka The name and identification number of the Contract is; **"Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka- Phase II"** IFB No: **: ICTA/GOSL/SER/NCB/2019/N/001** Bidders are required to bid for the total requirement of services given in description of services specified in the Bidding Documents. Bids for partial requirements shall be treated as non-responsive and shall be rejected.
1.2	Intended Completion Schedule: (a) Completion of **modification and enhancement** of NSDI system (including Website, Geoportal, Metadata catalog and Use Cases) with new functionalities should be done within (09) weeks from the date of contract award. (b) Designing, development and deployment of 4 use case applications should be completed within (11) weeks from the date of contract. (c) Completion of Capacity Building and awareness should be completed within (12) weeks from the contract. (d) Support and maintenance period shall be (03) years from the completion of the Phase II development.
2.1	The source of funding for this project is: Government of Sri Lanka (GOSL)
4.4	Foreign bidders are allowed to bid and foreign bidders should agree to establish an office in Sri Lanka with adequate competent staff and resources prior to commencement of service which should continue in operation for a period of (03) years for implementation, production, support and maintenance for the system.
5.2	Prequalification of potential bidders has not been undertaken under this procurement activity.
5.3	Prequalification of potential bidders has not been undertaken this procurement activity. All bidders shall include all information and documents stated in ITB 5.3 along with their bids.

5.5(a)	The minimum average annual volume of services performed by the Bidder over the last 3 years shall be Sri Lankan Rupees Eighty Million (LKR 80 Million).
5.5(b)	Experience as a service provider being in the business of provisioning of at least two (02) similar nature fully functional SDI Management systems and successfully completed within the last six (6) years. (The bidder shall submit details of services contractually committed, names and addresses of clients who may be contacted for further information on those contracts.)
5.5(d)	The Project Manager must have **10 years experience** in the management of projects of a similar scope and must have previous experience with planning, designing, and implementation of at least two Spatial Data Infrastructure projects. Qualification of the other key staff are indicated in Appendix A –(Refer **Project Organization & Key Staff**)
5.5(e)	Bidder must demonstrate access to or availability of financial resources such as liquid assets, un-encumbered real assets, line of credit and other financial means other than any contractual payments to be received under this contract to meet the cash flow requirement of not less than **Sri Lankan Rupees Twenty million (LKR 20 Million)** or equivalent, and net of the bidder's other commitments for this project.

B. Bidding Data

9.2 and 19.1	The number of copies of the Bid to be completed and submitted shall be one in addition to the original bid.
10.1	Pre Bid meeting shall be held at the office of the Information and Communication Technology Agency of Sri Lanka at 160/24, 2nd Floor, Kirimandala Mawatha, Colombo 05 on the following date and time Date: **September 17, 2019** Time: **1030 hrs**
13.1	Any other additional materials to be submitted with the bid as required and specified in the Bidding Documents
16.1	The period of Bid validity shall be 91 days from the deadline for Bid submission. Accordingly, bids should be valid till **December 26, 2019.**
17.1	The Bidder shall provide: Bid Security in the form of a Bank Guarantee (as per the format given in the Bidding Document) Bid Security shall be issued in favour of; Chairman, Information and Communication Technology Agency of Sri Lanka, 160/24, 2nd Floor, Kirimandala Mawatha, Colombo 05.
17.2	Bid Security shall be in the amount of Sri Lankan Rupees five hundred thousand (LKR 500,000.00) in the form of Bank Guarantee
17.2 (a)	Bid Security shall be in the form of a Bank Guarantee (as per the format given in the

	Bidding Documents).
17.2 (f)	Bid securities shall be valid for 28 days beyond the validity period of the bids. Accordingly, Bid Securities shall remain valid till **January 23, 2020**.
	If the Bid Security is to be issued by a bank outside Sri Lanka, it shall be from a bank that has a correspondent bank in Sri Lanka. Banks in Sri Lanka issuing the bank guarantee shall be a licensed commercial bank under the Banking Act No. 30 of 1988 and supervised by the Central Bank of Sri Lanka. The Bid security shall be enforceable in Sri Lanka.
19.1	The number of copies of the Bid to be completed and submitted shall be one in addition to the original bid.

D. Submission of Bids

20.1	The Bidder shall seal and submit the **Original** and **One Copy** of the Bid in two inner envelopes and one outer envelope, duly marking the inner envelopes as "ORIGINAL" and "COPY". It is mandatory for the Bidder to submit a **soft copy of the Original Bid** in **PDF** version.
20.2 (b)	Address is: **Head of Procurement ,** **C/o, Chairman** **Information and Communication Technology Agency of Sri Lanka,** **160/24, 2nd Floor,** **Kirimandala Mawatha,** **Colombo 05.**
20.2 (c)	Name and identification number: Name of Contract: **"Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka- Phase II"** IFB No **: ICTA/GOSL/SER/NCB/2019/N/001**
20.2 (d)	Shall be marked "Bids shall not be opened prior to deadline for submission of bids".
21.1	**The Deadline for Submission of Bids shall be:** **Time: at or before 1500hrs (3.00 P.M)** **Date: September 26, 2019**

E. Bid Opening and Evaluation

24.1	Bids will be opened immediately after the **Deadline for Submission of Bids** at the address of; Information and Communication Technology Agency of Sri Lanka, 160/24, 2nd Floor, Kirimandala Mawatha,

	Colombo 05.
29.1	The currency that shall be used for bid evaluation and comparison purposes is to convert all bid prices expressed in foreign currencies into a single currency, Sri Lankan Rupees. The source of exchange rate shall be daily indicative **selling exchange rate** of foreign currencies published by the **Central Bank of Sri Lanka**. The date of exchange rate shall be the date of **7 days prior to the deadline for submission of bids.**
30.3	Alternative bids and options shall not be considered.
31.1	Not Applicable

F. Award of Contract

32	**Following paragraph is added to clause 32.1** At the time the Contract is awarded, the Employer reserves the right to increase or decrease the quantity of Related Services originally specified in Appendix A – (Description of Services) by 20% without any change in the unit prices or other terms and conditions of the bid and the Bidding Documents.
35	The Performance Security acceptable to the Employer shall be the in the Standard Form of unconditional Bank Guarantee (as per the format given in the Bidding Document) issued by any commercial bank licensed by the Central Bank of Sri Lanka and the amount shall be 10% of the total contract price and shall valid till end of the Service Provider's warranty obligations. Performance security shall be submitted within 07 working days of the date of notification of award from the employer.
36.1	Not applicable

Section III. Bidding Forms

Service Provider's Bid

[date]
To: Chairman,
Information and Communication Technology Agency of Sri Lanka
160/24, Kirimandala Mawatha
Colombo 05

Having examined the bidding documents including addenda No …….., we offer to execute the *the services of " Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka-Phase II"* in accordance with the Conditions of Contract, specifications, drawings and activity schedule accompanying this Bid for the Contract Price of *[amount in numbers]*, *[amount in words] [names of currencies] excluding Value Added Tax (VAT).* All other levies applicable shall be included in to the price (ITB 14.3).

This Bid and your written acceptance of it shall constitute a binding Contract between us. We understand that you are not bound to accept the lowest or any Bid you receive.

We hereby confirm that this Bid complies with the Bid validity and Bid Security required by the bidding documents and specified in the Bidding Data Sheet.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Bidder: _____

VAT registration Number: _____

Address: _____

Qualification Information

1. Individual Bidders or Individual Members of Joint Ventures

1.1 Constitution or legal status of Bidder: *[attach copy]*

Place of registration: *[insert]*
Principal place of business: *[insert]*
Power of attorney of signatory of Bid: *[attach]*

1.2 The annual turnover of the last three (03) years, *[insert]*

1.3 Services performed as Service Provider on the provision of Services of a similar nature and complexity over the last three years. Also list details of work under way or committed, including expected completion date.

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach biographical data and valid certificates should be submitted. Refer also to ITB Sub-Clause 5.5(d) and GCC Clause 4.1.

Position	Name	Years of experience (general)	Years of experience in proposed position
(a)			
(b)			
…			

1.6 Audited Financial statements for the last three years: balance sheets, profit and loss statements, auditors' reports, etc. List below and attach copies.

1.7 Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List below and attach copies of support documents.

1.8 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Employer.

1.9 Information regarding any litigation, current or within the last three years, in which the Bidder is or has been involved.

Other party(ies)	Cause of dispute	Details of litigation award	Amount involved
(a)			
(b)			

1.10 We certify/confirm that we comply with eligibility requirements as per ITB Clause 4.

1.11 Statement of compliance with the requirements of ITB Sub-Clause 4.2.

1.12 Proposed Program (service work method and project schedule). Descriptions, drawings, and charts, as necessary, to comply with the requirements of the bidding documents.

1.13 Bidder should possess technical know-how, essential equipment and infrastructure facilities to the required level to cover the volume of services expected under the contract.

1.14 Qualifications of the contractor or consortium and its previous experience and capacity to address all elements of the scope of work outlined in this Appendix A, "Description of Services" and accompanying annexes.

2. Joint Ventures

2.1 The information listed in 1.1 - 1.10 above shall be provided for each partner of the joint venture.

2.2 The information in 1.11 above shall be provided for the joint venture.

2.3 Attach the power of attorney of the signatory (ies) of the Bid authorizing signature of the Bid on behalf of the joint venture.

2.4 Attach the Agreement among all partners of the joint venture (and which is legally binding on all partners), which shows that

(a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms;

(b) one of the partners will be nominated as being in charge, authorized to incur liabilities, and receive instructions for and on behalf of any and all partners of the joint venture; when a foreign partner/s is/are involved one of the local partners shall be nominated as being in charge; and

(c) the execution of the entire Contract, including payment, shall be done exclusively with the partner in charge.

3. Additional Requirements

3.1 Bidders should provide any additional information required in the BDS and to fulfill the requirements of ITB Sub-Clause 5.1, if applicable.

Letter of Acceptance

[letterhead paper of the Employer]

[date]

To: *[name and address of the Service provider]*

This is to notify you that your Bid dated *[date]* for execution of the **Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka- Phase II** for the Contract Price of the equivalent of *[amount in numbers and words]* as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our agency.

You are hereby instructed to proceed with the execution of the said contract for the provision of Services in accordance with the Contract documents.

Authorized Signature: _____

Name and Title of Signatory: _____

Name of Agency: _____

Attachment: Contract

Form of Contract
[letterhead paper of the Employer]

LUMP-SUM REMUNERATION

This CONTRACT (hereinafter called the "Contract") is made the *[day]* day of the month of *[month]*, *[year]*, between, on the one hand, *[name of Employer]* (hereinafter called the "Employer") and, on the other hand, *[name of Service Provider]* (hereinafter called the "Service Provider").

[***Note***: *In the text below text in brackets is optional; all notes should be deleted in final text. If the Service Provider consist of more than one entity, the above should be partially amended to read as follows:* "…(hereinafter called the "Employer") and, on the other hand, a joint venture consisting of the following entities, each of which will be jointly and severally liable to the Employer for all the Service Provider's obligations under this Contract, namely, *[name of Service Provider]* and *[name of Service Provider]* (hereinafter called the "Service Provider").]

WHEREAS

    (a)   the Employer has requested the Service Provider to provide certain Services as defined in the General Conditions of Contract attached to this Contract (hereinafter called the "Services");

    (b)   the Service Provider, having represented to the Employer that they have the required professional skills, and personnel and technical resources, have agreed to provide the Services on the terms and conditions set forth in this Contract at a contract price of……………………;

    (c)   the Employer has received the financial allocation from the Government of Democratic Socialist Republic of Sri Lanka (Hereinafter called as "GOSL") to eligible payments under this Contract.

NOW THEREFORE the parties hereto hereby agree as follows:

1.   The following documents shall be deemed to form and be read and construed as part of this Agreement, and the priority of the documents shall be as follows:

    (a)   the Letter of Acceptance;

    (b)   the Service Provider's Bid

    (c)   the Special Conditions of Contract;

    (d)   the General Conditions of Contract;

    (e)   the Specifications

    (f)   the Priced Activity Schedule

    (g)   And the following Appendices

        Appendix A: Description of the Services

        Appendix B: Schedule of Payments

        Appendix C: Key Personnel

Appendix D: Breakdown of Contract Price in Foreign Currency

Appendix E: Breakdown of Contract Price in Local Currency

Appendix F: Services and Facilities Provided by the Employer

Appendix G: Performance Incentive Compensation-Not used

Appendix H: Service Level Agreement

2.   The mutual rights and obligations of the Employer and the Service Provider shall be as set forth in the Contract, in particular:

(a)   the Service Provider shall carry out the Services in accordance with the provisions of the Contract; and

(b)   the Employer shall make payments to the Service Provider in accordance with the provisions of the Contract.

IN WITNESS WHEREOF, the Parties hereto have caused this Contract to be signed in their respective names as of the day and year first above written.

For and on behalf of *[name of Employer]*

_____

…………………………….
[Authorized Representative]   *Seal*

For and on behalf of *[name of Service Provider]*

_____

…………………………….
[Authorized Representative]   *Seal*

[**Note**: *If the Service Provider consists of more than one entity, all these entities should appear as signatories, e.g., in the following manner*:]

For and on behalf of each of the Members of the Service Provider

_____

 [name of member]

_____

[Authorized Representative]

_____

 [name of member]

_____

[Authorized Representative]

Bid Security (Bank Guarantee)

[The Bank shall fill in this Bank Security (Bank Guarantee) Form in accordance with the instructions   indicated.]

Beneficiary: _____

Date: _____

BID SECURITY (BANK GUARANTEE) No.: _____

We have been informed that _____ (hereinafter called "the Bidder") has submitted to you its bid dated (hereinafter called "the Bid") for the execution of _____ under Invitation for Bids No. _____ ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a Bid Security (Bank Guarantee).

At the request of the Bidder, we _____ hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of _____ (_____) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

(a)   has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or

(b)   having been notified of the acceptance of its Bid by the Employer during the period of bid validity, (i) fails or refuses to execute the Contract Form; or (ii) fails or refuses to furnish the performance security, in accordance with the Instructions to Bidders.

This guarantee will expire: (a) if the Bidder is the successful bidder, upon our receipt of copies of the contract signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful bidder; or (ii) twenty-eight days after the expiration of the Bidder's Bid.

Consequently, any demand for payment under this guarantee must be received by us at the office by _____ (date Month year).

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No...............................

_____
[signature(s)]

Section IV. Eligible Countries

Not Applicable

Section V. Activity Schedule

The Service Provider shall establish and provide services as described in the Appendix A – Description of Services. This gives detailed information about the project background, specifications, work flow, activities, and service level requirements etc.

5.1 Priced Activity Schedule

Table 1: System Improvement, Application Development and Training Cost

#	Description	Type of work	Bid Price (Excluding VAT))	
			Foreign Cost (USD)	Local cost (LKR)
1	Completion of **enhancement and modification** of NSDI system (including Website, Geoportal, Metadata catalog and Use Cases) as specified in the description of service. (Please refer section *9.1.1 under* Functional Requirements of Description of Services)	Enhancement and Modifications		
2	Designing, development and deployment of 4 use case applications. (Please refer section *9.1.2* **Application Development** under Functional Requirements of Description of Services)	Application Deployment		
3	Training and Capacity Building as specified in the description of service. (Please refer section *9.1.3* under Functional Requirements of Description of Services)	Outreach		
Total Price				

Note:
- **Bidder shall include Support and Maintenance Cost of the 1ˢᵗ Year to the Table 1. System Improvement, Application Development and Training**
- **Bidder shall include all license renewal cost for the 1ˢᵗ year Support & Maintenance to the Table 1. System Improvement, Application Development and Training (Refer Annex 1 of Appendix A)**

Table 2: Support and Maintenance Cost for 2nd & 3rd years

#	Description	Year	Price (excluding VAT) in (USD/LKR)	
			Foreign Cost USD	**Local cost LKR**
4	Providing Support and Maintenance(S&M) services for the NSDI System	**2nd Year**		
		3rd Year		
Total Price S&M for 2nd and 3rd years				

- **Bidder shall include all license renewal cost for the 2nd & 3rd year Support & Maintenance to the Table 2: Support and Maintenance Cost for 2nd & 3rd years (Refer Annex 1 of Appendix A)**

Note:

- **SLA-** In the event of any defective performance from the Service Provider or failure to furnish the agreed level of service, the Service provider will make reasonable efforts to restore the service to the required operating condition on an urgent basis. A penalty as stipulated in the Service Level Agreement (SLA) will be imposed in the case of defective performance or failure to provide the agreed level of service to resolve the issue.**.**

Table 3: Grand Summary

Table No.	Sub Total Price (excluding VAT) in (USD/LKR)	
	Foreign Cost USD	**Local cost LKR**
Table 1: System Improvement, Application Development and Training Cost		
Table 2: Support and Maintenance Cost for 2nd & 3rd years		
Total Bid Price **(carried out to the Service Providers Bid)**		

Note: Evaluation will be carried out based on the **Total Bid Price**.

Section VI. General Conditions of Contract

1. General Provisions

1.1 Definitions   1.1   The following words and expressions shall have the meanings hereby assigned to them:

(a)   "Contract" means the Contract Agreement signed by the Parties, together with the Contract Documents referred to therein, including all attachments, appendices, and all documents incorporated by reference therein.

(b)   "Contract Documents" means the documents listed in the Contract Agreement, including any amendments thereto.

(c)   "Contract Price" means the price payable to the Supplier as specified in the Contract Agreement, subject to such additions and adjustments thereto or deductions there from, as may be made pursuant to the Contract.

(d)   "Day" means calendar day.

(e)   "Completion Date" means the date of completion of the Services by the Service Provider as certified by the Employer

(f)   "GCC" means the General Conditions of Contract.

(g)   "Services" means the work to be performed by the Service Provider pursuant to this Contract, as described in Appendix A; and in the Specifications and Schedule of Activities included in the Service Provider's Bid.

(h)   "Employer" means the entity who employs the Service Provider

(h)   "Subcontractor" means any natural person, private or government entity, or a combination of the above, to whom any part of the Services is subcontracted by the Supplier.

(i)   "Service Provider" means the natural person, private or government entity, or a combination of the above, whose bid to provide the Services has been accepted by the Employer and is named as such in the Contract Agreement.

(j)   "Service Provider's Bid" means the completed bidding document submitted by the Service Provider to the Employer

(l)   "SCC" means the Special Conditions of Contract by which the

GCC may be amended or supplemented;

(m) "Specifications" means the specifications of the service included in the bidding document submitted by the Service Provider to the Employer

(n) "The Project Site," where applicable, means the place named in the SCC.

(o) "Activity Schedule" is the priced and completed list of items of Services to be performed by the Service Provider forming part of his Bid;

(p) "Member," in case the Service Provider consist of a joint venture of more than one entity, means any of these entities; "Members" means all these entities, and "Member in Charge" means the entity specified in the SSC to act on their behalf in exercising all the Service Provider' rights and obligations towards the Employer under this Contract;

(q) "Party" means the Employer or the Service Provider, as the case may be, and "Parties" means both of them;

(r) "Personnel" means persons hired by the Service Provider or by any Subcontractor as employees and assigned to the performance of the Services or any part thereof;

1.2 Applicable Law The law governing the contract shall be the laws of the Democratic Socialist Republic of Sri Lanka.

1.3 Language This Contract has been executed in the language **specified in the SCC,** which shall be the binding and controlling language for all matters relating to the meaning or interpretation of this Contract.

1.4 Notices 1.4.1 Any notice, request, or consent made pursuant to this Contract shall be in writing and shall be deemed to have been made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail, email or facsimile to such Party at the address specified in the SCC.

1.4.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

1.5 Location The Services shall be performed at such locations as are specified in Appendix A, in the specifications and, where the location of a particular task is not so specified, at such locations, whether in the Government's country or elsewhere, as the Employer may approve.

1.6 Authorized Representatives Any action required or permitted to be taken, and any document required or permitted to be executed, under this Contract by the Employer or the Service Provider may be taken or executed by the officials **specified in the SCC.**

1.7 Inspection and Audit by the GOSL	The Service Provider shall permit the GOSL to inspect its accounts and records relating to the performance of the Services under this contract and to have them audited by auditors appointed by the GOSL, if so required by the GOSL.
1.8 Taxes and Duties	The Service Provider and its Personnel shall pay such taxes, duties, fees, and other impositions as may be levied under the Applicable Law, the amount of which is deemed to have been included in the Contract Price.

2. Commencement, Completion, Modification, and Termination of Contract

2.1 Effectiveness of Contract	This Contract shall come into effect on the date the Contract is signed by both parties or such other later date as may be **stated in the SCC.**
2.2 Commencement of Services	
2.2.1 Program	Before commencement of the Services, the Service Provider shall submit to the Employer for approval a Program showing the general methods, arrangements, order and timing for all activities. The Services shall be carried out in accordance with the approved Program as updated, notified amongst the authorized representatives.
2.2.2 Starting Date	The Service Provider shall start carrying out the Services thirty (30) days after the date the Contract becomes effective, or at such other date as may be **specified in the SCC.**
2.3 Intended Completion Date	Unless terminated earlier pursuant to Sub-Clause 2.6, the Service Provider shall complete the activities by the Intended Completion Date, as is **specified in the SCC.** If the Service Provider does not complete the activities by the Intended Completion Date, it shall be liable to pay liquidated damage as per Sub-Clause 3.8. In this case, the Completion Date will be the date of completion of all activities.
2.4 Modification	Modification of the terms and conditions of this Contract, including any modification of the scope of the Services or of the Contract Price, may only be made by written agreement between the Parties.
2.5 Force Majeure	
2.5.1 Definition	For the purposes of this Contract, "Force Majeure" means an event which could not be anticipated oris beyond the reasonable control of a Party and which makes a Party's performance of its obligations under the Contract impossible or so impractical as to be considered impossible under the circumstances.

2.5.2 No Breach of Contract The failure of a Party to fulfill any of its obligations under the contract shall not be considered to be a breach of, or default under, this Contract insofar as such inability arises from an event of Force Majeure, provided that the Party affected by such an event (a) has taken all reasonable precautions, due care and reasonable alternative measures in order to carry out the terms and conditions of this Contract, and (b) has informed the other Party as soon as possible about the occurrence of such an event.

2.5.3 Extension of Time Any period within which a Party shall, pursuant to clause 2.4 of this Contract, complete any action or task, shall be extended for a period equal to the time during which such Party was unable to perform such action as a result of Force Majeure, provided that such period does not exceed 30 days

2.6 Termination

2.6.1 By the Employer The Employer may terminate this Contract, by not less than fifteen (15) days' written notice of termination to the Service Provider, to be given after the occurrence of any of the events specified in paragraphs (a) through (d) of this Sub-Clause 2.6.1:

(a) if the Service Provider does not remedy a failure in the performance of its obligations under the Contract, within fifteen (15) days after being notified or within any further period as the Employer may have subsequently approved in writing;

(b) if the Service Provider becomes insolvent or bankrupt;

(c) if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than thirty (30) days; or

(d) if the Service Provider, in the judgment of the Employer has engaged in corrupt practices, collusive practices, coercive practices, obstructive practices or fraudulent practices in competing for or in executing the Contract.

For the purposes of this Sub-Clause:

(i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another

party;

    (iv)   "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

    (v)   "obstructive practice" is

        (aa)   deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a GOSL investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

        (bb)   acts intended to materially impede the exercise of the GOSL's inspection and audit rights

2.6.2 By the Service Provider

The Service Provider may terminate this Contract, by not less than thirty (30) days' written notice to the Employer, such notice to be given after the occurrence of any of the events specified in paragraphs (a) and (b) of this Sub-Clause 2.6.2:

    (a)   if the Employer fails to pay any monies due to the Service Provider pursuant to this Contract and not subject to dispute pursuant to Clause 7 within forty-five (45) days after receiving written notice from the Service Provider that such payment is overdue; or

    (b)   if, as the result of Force Majeure, the Service Provider is unable to perform a material portion of the Services for a period of not less than thirty (30) days.

2.6.3 Suspension of funds

In the event that the GOSL suspends the funds to the Employer, from which part of the payments to the Service Provider are being made:

    (a)   The Employer is obligated to notify the Service Provider of such suspension within 7 days of having received the GOSL's suspension notice.

    (b)   If the Service Provider has not received sums due to by the due date stated in the SCC in accordance with Sub-Clause 6.5 the Service Provider may immediately issue a 14 day termination notice.

2.6.4 Payment

Upon termination of this Contract pursuant to Sub-Clauses 2.6.1 or

upon Termination	2.6.2, the Employer shall make the following payments to the Service Provider:

    (a)   remuneration pursuant to Clause 6 for Services satisfactorily performed prior to the effective date of termination;

    (b)   except in the case of termination pursuant to paragraphs (a), (b), (d) of Sub-Clause 2.6.1, reimbursement of any reasonable cost incident to the prompt and orderly termination of the Contract, including the cost of the return travel of the Personnel.

3. Obligations of the Service Provider

3.1 General

The Service Provider shall perform the Services in accordance with the Specifications and the Activity Schedule, and carry out its obligations with all due diligence, efficiency, and economy, in accordance with generally accepted professional techniques and practices, and shall observe sound management practices, and employ appropriate advanced technology and safe methods. The Service Provider shall always act, in respect of any matter relating to this Contract or to the Services, as faithful adviser to the Employer, and shall at all times support and safeguard the Employer's legitimate interests in any dealings with third parties.

3.2 Conflict of Interests

3.2.1 Service Provider Not to Benefit from Commissions and Discounts.

The remuneration of the Service Provider pursuant to Clause 6 shall constitute the Service Provider's sole remuneration in connection with this Contract or the Services, and the Service Provider shall not accept for their own benefit any trade commission, discount, or similar payment in connection with activities pursuant to this Contract or to the Services or in the discharge of their obligations under the Contract, and the Service Provider shall use their best efforts to ensure that the Personnel and its agents similarly shall not receive any such additional remuneration.

3.2.2 Prohibition of Conflicting Activities

Neither the Service Provider nor its Personnel shall engage, either directly or indirectly, in any of the following activities:

    (a)   during the term of this Contract, any business or professional activities which would conflict with the activities assigned to them under this Contract;

    (b)   after the termination of this Contract, such other activities as may be **specified in the SCC.**

3.3 Confidentiality

The Service Provider, and its Personnel shall not, either during the

	term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information relating to the Project, the Services, this Contract, or the Employer's business or operations without the prior written consent of the Employer.
3.4 Insurance to be taken Out by the Service Provider	The Service Provider (a) shall take out and maintain, at its own cost but on terms and conditions approved by the Employer, insurance against the risks, and for the coverage, as shall be **specified in the SCC;** and (b) at the Employer's request, shall provide evidence to the Employer showing that such insurance has been taken out and maintained and that the current premiums have been paid.
3.5 Service Provider's Actions Requiring Employer's Prior Approval	The Service Provider shall obtain the Employer's prior approval in writing before taking any of the following actions: (a) appointing such members of the Personnel not listed by name in Appendix C ("Key Personnel"), (b) changing the Program of activities; and (c) any other action that may be **specified in the SCC.**
3.6 Reporting Obligations	The Service Provider shall submit to the Employer the reports and documents specified in Description of Services in the form, in the numbers, and within the periods set forth in the said Appendix.
3.7 Documents Prepared by the Service Provider to Be the Property of the Employer	All plans, drawings, specifications, designs, reports, and other documents and software submitted by the Service Provider in accordance with Sub-Clause 3.6 shall become and remain the property of the Employer, and the Service Provider shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to the Employer, together with a detailed inventory thereof. The Service Provider shall not retain copies of such documents, software, licenses, data and any other form of intellectual property.
3.8 Liquidated Damages	
3.8.1 Payments of Liquidated Damages	The Service Provider shall pay liquidated damages to the Employer at the rate per day **stated in the SCC** for each day that the Completion Date is later than the Intended Completion Date. The total amount of liquidated damages shall not exceed the amount **defined in the SCC.** The Employer may deduct liquidated damages from payments due to the Service Provider. Payment of liquidated damages shall not affect the Service Provider's liabilities.
3.8.2 Correction for Over-payment	If the Intended Completion Date is extended after liquidated damages have been paid, the Employer shall correct any overpayment of liquidated damages by the Service Provider. The Service Provider shall be paid interest on the overpayment, calculated from the date of payment to the date of repayment, at the

rates specified in Sub-Clause 6.5.

3.8.3 Lack of performance penalty

If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, a penalty for Lack of performance will be paid by the Service Provider. The amount to be paid will be calculated as a percentage of the cost of having the Defect corrected, assessed as described in Sub-Clause 7.2 and **specified in the SCC.**

3.9 Performance Security

The Service Provider shall provide the Performance Security to the Employer in the format of the performance Bank Guarantee given in the bidding document no later than the date specified in the Letter of acceptance. The Performance Security shall be issued in an amount and form and by a bank acceptable to the Employer, and denominated in the types and proportions of the currencies in which the Contract Price is payable. The performance Security shall be valid until a date 28 days from the Completion Date of the Contract in case of a bank guarantee.

4. Service Provider's Personnel

4.1 Description of Personnel

The titles, agreed job descriptions, minimum qualifications, and estimated periods of engagement in the carrying out of the Services of the Service Provider's Key Personnel are described in Appendix C. The Key Personnel listed by title as well as by name in Appendix C are hereby approved by the Employer.

4.2 Removal and/or Replacement of Personnel

(a) Except as the Employer may otherwise agree, no changes shall be made in the Key Personnel. If, for any reason beyond the reasonable control of the Service Provider, it becomes necessary to replace any of the Key Personnel, the Service Provider shall provide as a replacement a person of equivalent or better qualifications and skills.

(b) If the Employer finds that any of the Personnel have (i) committed serious misconduct or have been charged with having committed a criminal action, or (ii) have reasonable cause to be dissatisfied with the performance of any of the Personnel, then the Service Provider shall, at the Employer's written request specifying the grounds thereof, provide as a replacement a person with qualifications and experience acceptable to the Employer.

(c) The Service Provider shall have no claim for additional costs arising out of or incidental to any removal and/or replacement of Personnel.

5. Obligations of the Employer

5.1 Assistance and Exemptions

The Employer shall use its best efforts to ensure that the Government shall provide the Service Provider such assistance as **specified in the SCC.**

5.2 Change in the Applicable Law

If, after the date of this Contract, there is any change in the Applicable Law with respect to taxes and duties which increases or decreases the cost of the Services rendered by the Service Provider, then the remuneration and reimbursable expenses otherwise payable to the Service Provider under this Contract shall be increased or decreased accordingly by agreement between the Parties, and corresponding adjustments shall be made.

5.3 Services and Facilities

The Employer shall make available to the Service Provider the Services and Facilities listed under Appendix F.

6. Payments to the Service Provider

6.1 Lump-Sum Remuneration

The Service Provider's remuneration shall not exceed the Contract Price and shall be a fixed lump-sum and all other costs incurred by the Service Provider in carrying out the Services described in Appendix A. Except as provided in Sub-Clause 5.2, the Contract Price may only be increased above the amounts stated in Sub-Clause 6.2 if the Parties have agreed to additional payments in accordance with Sub-Clauses 2.4 and 6.3.

6.2 Contract Price

The price is payable in Respective currencies as stated in the SCC.

6.3 Payment for Additional Services, and Performance Incentive Compensation

6.3.1 For the purpose of determining the remuneration due for additional Services as may be agreed under Sub-Clause 2.4, a breakdown of the lump-sum price is provided in Appendices D and E.

6.3.2 **If the SCC so specify,** the service provider shall be paid performance incentive compensation as set out in the Performance Incentive Compensation appendix.

6.4 Terms and Conditions of Payment

Payments will be made to the Service Provider according to the payment schedule **stated in the SCC. Unless otherwise stated in the SCC**, the advance payment (Advance for Mobilization, Materials and Supplies) shall be made against the provision by the Service Provider of a bank guarantee for the same amount, and shall be valid for the period **stated in the SCC.** Any other payment shall be made after the conditions **listed in the SCC** for such payment have been met, and the Service Provider have submitted an invoice to the Employer specifying the amount due.

6.5 Period allocated for Payments	Payments shall be made within the period specified in the **SCC**

6.6 Day works	6.6.1 If applicable, the Day work rates in the Service Provider's Bid shall be used for small additional amounts of Services only when the Employer has given written instructions in advance for additional services to be paid in that way.
	6.6.2 All work to be paid for as Day works shall be recorded by the Service Provider on forms approved by the Employer. Each completed form shall be verified and signed by the Employer representative as indicated in Sub-Clause 1.6 within two days of the Services being performed.
	6.6.3 The Service Provider shall be paid for Day works subject to obtaining signed Day works forms as indicated in Sub-Clause 6.6.2

7. Quality Control

7.1 Identifying Defects	The principle and modalities of Inspection of the Services by the Employer shall be as **indicated in the SCC.** The Employer shall check the Service Provider's performance and notify him of any Defects that are found. Such checking shall not affect the Service Provider's responsibilities. The Employer may instruct the Service Provider to search for a Defect and to uncover and test any service that the Employer considers may have a Defect. Defect Liability Period is as **defined in the SCC**.
7.2 Correction of Defects, and Lack of Performance Penalty	(a) The Employer shall give notice to the Service Provider of any Defects before the end of the Contract. The Defects liability period shall be extended for as long as Defects remain to be corrected.
	(b) Every time notice of a Defect is given, the Service Provider shall correct the notified Defect within the length of time specified by the Employer's notice or specified in the Service Level Agreement (SLA).
	(c) If the Service Provider has not corrected a Defect within the time specified in the Employer's notice, the Employer will assess the cost of having the Defect corrected, the Service Provider will pay this amount, and a Penalty for Lack of Performance calculated as as specified in Service Level Agreement (SLA).

8. Settlement of Disputes

8.1 Amicable Settlement	The Parties shall use their best efforts to settle amicably all disputes

arising out of or in connection with this Contract or its interpretation.

8.2 Dispute Settlement

8.2.1 If any dispute arises between the

and the Service Provider in connection with, or arising out of, the Contract or the provision of the Services, whether during carrying out the Services or after their completion, the matter shall be referred to the Adjudicator within 14 days of the notification of disagreement of one party to the other.

8.2.2 The Adjudicator shall give a decision in writing within 28 days of receipt of a notification of a dispute.

8.2.3 The Adjudicator shall be paid by the hour at the rate **specified in the BDS and SCC,** together with reimbursable expenses of the types **specified in the SCC**, and the cost shall be divided equally between the Employer and the Service Provider, whatever decision is reached by the Adjudicator. Either party may refer a decision of the Adjudicator to an Arbitrator within 28 days of the Adjudicator's written decision. If neither party refers the dispute to arbitration within the above 28 days, the Adjudicator's decision will be final and binding.

8.2.4 The arbitration shall be conducted in accordance with the arbitration procedure published by the institution named and in the place **shown in the SCC.**

8.2.5 Should the Adjudicator resign or die, or should the Employer and the Service Provider agree that the Adjudicator is not functioning in accordance with the provisions of the Contract, a new Adjudicator will be appointed in terms of section 8.2.1.

Section VII. Special Conditions of Contract

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
1.1(a)	The contract name is; **Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka –Phase II** The contract number; **ICTA/GOSL/SER/NCB/2019/N/001**
1.1(h)	The Employer is; Information and Communication Technology Agency of Sri Lanka
1.1(j)	The Service Provider is;_____
1.1(p)	The Member in Charge is: _____
1.3	The language is English. In the event a document in a language other than English need be submitted, an official translation of the same in English need be submitted along with the document, and the content of the translated document shall only be recognized.
1.4	Notices shall be given to the Authorized Representative stated in SCC 1.6
1.5	The Services shall be performed at such location intimated by the Employer in writing.
1.6	The Authorized Representatives at the commencement of this contract are: For the Employer: For the Service Provider: The parties may amend the above on notifications in writing signed by the Chief Executive of the respective institution.
2.1	The date on which this Contract shall come into effect is; the date the contract is signed by both parties (**Effective Date** of the contract).
2.2.2	The **Commencement Date** of Services is; 03 days from the **Effective D**ate of the contract.
2.3	Completion Date for Successful enhancement and modification of the NSDI system within 12 weeks from the **Commencement Date** of contract. Employer may decide at its discretion to extend of services period beyond the 12 weeks period covered under this contract considering the necessity.
2.4	Parties should ensure that due process of approval be obtained prior to such modifications and be in accordance with the GOSL.
3.1	Following are additional requirements that the Service Provider shall comply.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
	Upon termination and/or expiration of the contract due to the reasons as specified under GCC 2.6.1 and 2.6.2 respectively, Service Provider shall facilitate transferring of software, licenses, data and any other intellectual property ownership of which belong to the Employer from existing system to a new system designated by the Employer, within a reasonable period of time without any additional cost to the Employer.
	The Service Provider shall be required to sign an Non-Disclosure Agreement (NDA) at the time of signing the contract.
3.2.2 (b)	Neither the Service Provide nor its personnel shall disclose information in confidential nature with regard to the architecture, design and security of the infrastructure of the employer.
3.4	The risks and coverage by insurance shall be:
	1. Insurance against loss of or damage to (i) equipment purchased in whole or in part with funds provided under this contract, (ii) the service provider's property used in the performance of the Services, and (iii) any documents prepared by the service provider in the performance of the Services.
	2. All risk Insurance coverage (war, riots, civil commotion) including fire, floods, lightning and burglary with a minimum coverage to 110% of the Contract value.
3.8.1	The liquidated damages is applicable for delays beyond the last date specified for commissioning of services for use at the rate of 0.5% per week.
	The maximum amount of liquidated damages for the whole contract is Ten percent (10%) of the total Contract Price.
3.8.3	In the event of any defective performance from the Service Provider or failure to furnish the agreed level of service, the Service provider will make reasonable efforts to restore the service to the required operating condition on an urgent basis. A penalty as stipulated in the Service Level Agreement (SLA) will be imposed in the case of defective performance or failure to provide the agreed level of service to resolve the issue.
5.1	The assistance and exemptions provided to the Service Provider are: None
6.2	The total contract amount: in Sri Lankan Rupees is .... in Foreign Currency is ....
6.3.2	The performance incentive paid to the Service Provider shall be: Not applicable
6.4	Payments shall be made according to the schedule given in Appendix B – Schedule of Payments.

Number of GC Clause	Amendments of, and Supplements to, Clauses in the General Conditions of Contract
6.5	Payment shall be made within 60 days of receipt of the invoice and the relevant documents specified in Sub-Clause 6.4, and within 90 days in the case of the final payment. (refer Appendix B)
7.1	The principle and modalities of inspection of the Services by the Employer are as follows: Refer Appendix A – Description of Services
7.2	The Employer reserves the rights to encash the performance security for the lack of performance
8.2.1	The Adjudicator will be appointed in agreement with both Employer and the Service Provider. If any disagreement arises in appointing an Adjudicator, both Employer and the Service Provider shall agree to have the university of Moratuwa to appoint an Adjudicator on behalf of both Employer and the Service Provider.
8.2.3	The hourly rate payable to the Adjudicator shall be Sri Lankan Rupees Fifteen thousand (LKR 15,000)
8.2.4	Arbitration shall be heard in Sri Lanka in accordance with the Arbitration Act of Sri Lanka.

Section VIII. Performance Specifications and Drawings

Refer Appendix A – Description of Services

Section IX. Contract Forms

Table of Forms

Performance Bank Guarantee (Unconditional)

Performance Bank Guarantee (Unconditional)

To: _____

Whereas _____ (hereinafter called "the Service Provider") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ (hereinafter called "the Contract");

And whereas it has been stipulated by you in the said Contract that the Service Provider shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

And whereas we have agreed to give the Service Provider such a Bank Guarantee;

Now therefore we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Service Provider, up to a total of _____, _____, such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____*]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Service Provider before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Services to be performed there under or of any of the Contract documents which may be made between you and the Service Provider shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition, or modification.

This Guarantee shall be valid until a date 28 days from the date of issue of the Certificate of Completion.

Signature and seal of the Guarantor _____

Name of Bank _____
Address _____
Date _____

Advanced Payment Bank Guarantee

_____ *[Bank's Name, and Address of Issuing Branch or Office]*

Beneficiary: _____ *[Name and Address of Client]*

Date: _____

ADVANCE PAYMENT GUARANTEE No.:   _____

We have been informed that *[name of Service Provider]* (hereinafter called "the Service Provider") has entered into Contract No. *[reference number of the contract]* dated *[insert date]* with you, for the provision of *[brief description of Services]* (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, an advance payment in the sum of *[amount in figures]* (*[amount in words]*) is to be made against an advance payment guarantee.

At the request of the Service Provider, we *[name of Bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[amount in figures]* (*[amount in words]*)[1] upon receipt by us of your first demand in writing accompanied by a written statement stating that the Service Provider is in breach of their obligation under the Contract because the Service Provider has used the advance payment for purposes other than toward providing the Services under the Contract.

It is a condition for any claim and payment under this guarantee to be made that the advance payment referred to above must have been received by the Service Provider on their account number _____ at *[name and address of Bank]*.

_____

[1]

The Guarantor shall insert an amount representing the amount of the advance payment and denominated either in the currency(ies) of the advance payment as specified in the Contract, or in a freely convertible currency acceptable to the Client.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Service Provider as indicated in copies of certified monthly statements which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of the monthly payment certificate indicating that the Consultants have made full repayment of the amount of the advance payment, or on the __ day of _____, ___,[2] whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.

_____

[signature(s)]

Note: All italicized text is for indicative purposes only to assist in preparing this form and shall be deleted from the final product.

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[2] Insert the expected expiration date. In the event of an extension of the time for completion of the Contract, the Client would need to request an extension of this guarantee from the Guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the Client might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Client's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

APPENDIX A

Description of Services

Implementation of Web Based Spatial Data Management System for National Spatial Data Infrastructure (NSDI) in Sri Lanka –Phase II
NSDI ICTA/GOSL/SER/NCB/2019/N/001

1. Introduction

National Spatial Data Infrastructure (NSDI) has been proposed to consolidate and optimize the use of spatial data from across diverse organizations including government and private sector. This will enhance decision making, reduce duplication and integrate varied services across all the sectors enabling innovative and consolidated approaches to problem solving.

In this regard, Information and Communication Technology Agency of Sri Lanka has established NSDI platform with basic functionalities and is live on www.nsdi.gov.lk. The system consist of web site, geo-portal and metadata catalogue. Further, five use case applications have been developed to demonstrate and aware the potential benefits of the NSDI platform among citizens.

Development of NSDI platform consisted of two phases where Phase I development is already completed. To improve the usability of the NSDI at various communities of Sri Lanka, ICTA wants to improve the functionality of SL NSDI. The purpose of this document is to solicit proposals by companies or consortia that are qualified for the Phase II development of the NSDI system.

2. Background

Spatial data sets are collected by a number of organizations and institutions in isolation and only serving individual organizations' purposes but not considering the expectations and requirements of other stakeholders. These data sets are managed in closed systems and this has created a multitude of information silos. As a result, these data systems are not accessible by other organizations. Also, it is difficult to understand what information is available and where it is stored. This has led to redundant effort and several organizations have been collecting the same information because they are unaware that the types of information they need already exist.

Effective and efficient decision making is one of the key factors for a productive government service delivery process and to ensure the good governance. National Spatial

Data Infrastructure (NSDI) is a platform for sharing spatial data across the organizations and support such organizations to make decisions more effectively and efficiently using up-to date and real-time evidence.

At present, NSDI platform which is established on top of the esri platform and is live on www.nsdi.gov.lk and deployed in the Lanka Government Cloud (LGC 2.0). And the system consists of more than 120 data layers contributed by twenty plus stakeholder organisations.

Prior to establishing NSDI infrastructure solution, ICTA conducted a comprehensive baseline study to assess the present situation of collection, storing and usage of national spatial data across the organizations and overall readiness of the staff. This information was further analyzed to develop a detailed Requirements Analysis that provided the basis for a detailed Request for Proposal (RFP). The current system is based on the Description of Services (DOS) of the bidding document published in 2017, it consisted of both Phase I and Phase II functional requirements in order to provide the bidders a holistic picture of the system. But the bids were called only for Phase I functional requirements since NSDI was a new concept for Sri Lanka and the complexity of the system. And it was decided to develop the system including only the basic functionalities to create awareness and to get the stakeholder binding and to proceed with Phase II as a second step. The current effort is to invite competitive bids by qualified firms or consortia to enhance the existing sytem with improvements and additional services that will be needed to become SL-NSDI a fully pledged system.

3. Concise statement of the objectives

The overall objective of the NSDI Phase II Implementation is Configuration of NSDI Geo-portal and metadata catalogue with phase II functional requirements particularly automating through APIs.

Specific objectives are as follows:

- Enhancement of the existing NSDI System including website, Geo-portal and metadata catalogue and use case applications;
- Allow stakeholders to update and validate data with versioning and timestamp respectively.
- Data Sharing and migration
- Process and publish GIS data layers and derivatives of map products within the GeoPortal environment, with given content and cartographic design;
- Development of four (4) use case applications
- Conduct stakeholder capacity building and awareness to stakeholders with the direction of TRC (Technical Review Committee) in coordination with ICTA.
- Knowledge transfer and on-site training for GIS officers assigned in order to run the system

4. Scope of work

The following provides a summary of the primary activities to be carried out in the implementation of the SL-NSDI phase II. These are indicative only, and it is up to each bidder to provide a more detailed description of all the specific tasks required to achieve the stated project targets and deliverables. The requirements are classified under NSDI Geoportal advancement, additional use cases development and outreach trainings.

a) NSDI Geoportal advancement

- The selected bidder is required to study the existing NSDI system comprehensively.
- Management of the data in NSDI system
- Improvement of existing NSDI web site
- Advancement of existing Geoportal, metadata portal with new functionalities
- Improvement of existing Use Case Applications if required.
- Make it possible to consume other OGC compliance services through API s

b) Development of Use Case Application –

Should involve establishing requirements based applications that address specific business processes to empower the planers and decision makers through web and mobile interfaces. Following are the Applications suggested to develop during Phase II development.
- o Application for Ministry of Education
- o Application for Department of Police
- o Crowd Source Application- Mobile based
- o Application for Survey Department -3D Colombo(city GML)

c) Outreach trainings-
- Conduct stakeholder capacity building and awareness
  - o Admin Training
  - o User Training
  - o Awareness

d) Operation and Maintenance for a period of 3 years after the implementation is completed

5. Qualification of Contractor

- **General**

Provide an overview of the company, its history and core competencies. If a consortium, provide a similar summary for each entity involved, and identify what role they would play in the current scope of the Phase II of NSDI.

Bidders should be fulfilling the following minimum eligibility criteria and must also submit documentary evidence in support of fulfillments of these criteria while submitting the technical bids.

- Experience as a service provider being in the business of provisioning of at least two (02) similar nature fully functional SDI Management systems, and successfully completed within the last six (6) years.
- The average annual volume of services performed by the Bidder over the last 3 years shall be Sri Lankan Rupees eighty million (LKR 80 Million).

- **Projects of a Similar Nature and Scope**

Provide a listing and summary description regarding each project or activity previously conducted that is of a similar nature and scope of NSDI system development.

Project information should include at a minimum:
- Project name;
- Project description;
- Project owner name;
- Identify what parts of each project are comparable or otherwise relevant to the SL-NSDI GeoPortal implementation program;
- Total project budget;
- If partial involvement by Contractor, indicate amount of budget applied to Contractor works;
- Provide project referral contact information;

- **Minimum Qualifications of key professional staff**

Provide a complete description of the project team and how it would be organized into each track as described in scope of work. Also provide the qualifications of key staff who would be involved in the project, including direct references to projects and activities that have direct relevance to the current project.

- Project Manager.
- Senior Technical Consultant(s)
- GeoPortal Specialist.
- GIS Data Analyst(s).

- GIS Cartographer.
- Outreach and Communications Specialist(s).
- UI/UX Engineer
- Software Architect
- QA Lead

	Key Professional Staff	Academic & Professional	Experience in the PROPOSED ROLE	Experience in working in SOA / web services / integration projects/GIS Projects & related tools	Exposure SQA Process	Specific Qualifications/ Requirements
a)	Project Manager	M. BA. And Professional Certification in Project Management	10 years	6 years	6 years	Enterprise Application and experience in planning, designing, and implementation of at least two Spatial Data Infrastructure program projects.
b)	Senior Technical Consultant	M. Sc. or Higher	5 years	5 years	5 years	Experience in managing the design and implementation of GIS systems and at least one Spatial Data Infrastructure program.
c)	GeoPortal Specialist.	Basic Degree or Higher	3 years	3 years	3 years	Experience in customized programming and interfaces for web-based GIS applications and mapping services.

Specialization in database design and spatial analytical procedures |
| d) | GIS Data Analyst | Basic Degree or Higher | 3 years | 3 years | 3 years | Strong background knowledge in Advanced GIS software and related products such as advanced spatial and 3D analytical tools, thematic mapping, trend analysis, etc. |
| e) | GIS Cartographer | Basic Degree or Higher | 3 years | 3 years | 3 years | Specific experience in creating cartographic products for display in an interactive map viewing environment |

f)	Outreach and Communications Specialist	Basic Degree or Higher	3 years	3 years	3 years	Experience in awareness, training in GIS, good presentation ability.
g)	Software Architect	M. Sc. or equivalent	5 years	5 years	5 years	Enterprise Application Development, GIS based Web and Mobile applications.
h)	UI/UX Lead	B. Sc. or equivalent	3 years	3 years	3 years	Enterprise Application Development, Wireframing, Prototyping, GIS based Web and Mobile applications.
i)	Quality Assurance Lead	M. Sc. or equivalent	3 years	3 years	3 years	Enterprise Application Quality Assurance

- **Project Management Approach and Methodology**

Provide a summary description of the approach that would be used to manage the current project.

a. Explain your technical understanding of the objectives of the assignment. You should highlight the problems being addressed and their importance, and explain the technical approach you would adopt to address them. You should also list the potential standards, protocols & specifications you may adopt and highlight the compatibility of these with the existing architecture.

b. In order to illustrate the feasibility of your proposed approach & methodology please provide detail description on the following. Also you should submit supporting documents wherever possible.

Describe experiences in similar nature projects with the followings, (At least 3 projects should be provided using Annexure 3)

    I.   Please provide details explaining the project in detail.
    II.   Leveraging open standards/ open protocols and interoperability. EG. APIs
    III.   Reference architecture of the project and architectural best practices used.
    IV.   GIS tools used in the project.
    V.   Elaborate how you have ensured high-availability, scalability and fault tolerance of the implemented solution(s)
    VI.   Elaborate use of any monitoring tools for maintainability
    VII.   Elaborate the security and performance considerations in aforementioned projects
    VIII.   Degree of in-house SQA standards and procedures
    IX.   Elaborate support and maintenance experience
    X.   Elaborate cloud deployment experience

6. Approach, Outputs and Deliverables

The contractor is required to submit the following list of deliverables for the NSDI project.

No	Deliverables	Phase	Timeline
01	1.1 NSDI Phase II- Solution Implementation Proposal with clear methodology	**Inception**	Commencement date + 3 weeks
	1.2 Implementing schedule / Project Plan		
	1.3 Detailed Software Requirement Specification (DSRS)		
	1.4 QA Test Plan		
	1.5 Acceptance criteria for Deliverables and UAT		
	1.6 User Training Plan		
02	2.1 Detailed Software Technical Documentation (DSTD)	**Elaboration**	Commencement date + 5 weeks
	2.2 Release Management plan (including staging, production and support and maintenance)		
	2.3 Data migration and integration plan		
	2.4 Application Prototypes		
03	3.1 Proper maintenance of source code in SVN	**Construction**	Commencement date + 9 weeks
	3.2 Test Cases and Test scripts		
04	4.1 Updated Solutions installation guide	**Transition**	Commencement date + 11 weeks
	4.2 User manual		
	4.3 Administrator manual		
	4.4 QA Status Report		
	4.5 Proper maintenance of issues in the Issue tracking System		
	4.6 Successful UAT acceptance of NSDI system advancement and Application deployment		
05	5.1 Operational Acceptance Report and Commissioning	**Acceptance**	Commencement date + 12 weeks
	5.2 Completion of Training Sessions		
	5.3 Support and Maintenance for 1st Year		
06	6.1 Monthly Support and Maintenance Report	**S&M**	Date of operational acceptance + 24 months
	6.2 Final Support and Maintenance(S&M) report should consist with comprehensive knowledge transfer & relevant documentation.		

7. Services and Facilities Provided by ICTA

7.1 Current NSDI Phase I documentations will be provided by ICTA.

7.2 Proper knowledge transfers of the NSDI Phase I including source code and the relevant technical documentation.

7.3 Web-based access to the ICTA SCM system.

7.4 Access to staging/ production servers.

7.5 Web-based access to the ICTA SVN system and SCM.

7.6 Arrange meetings and workshops with relevant stakeholder (if required).

7.7 Arrange and facilitate workshops/trainings with guidance of Technical Review Committee.

8. Review Committees and Review Procedures

The consultant is required to work closely with the ICTA Team.
All versions of deliverables, designs and trainings etc will be reviewed and accepted by Technical Review Committee appointed by ICTA.

9. Compliance List

9.1 Functional Requirements

9.1.1 NSDI System - Modification and Enhancement using Standard APIs

ID	Requirement	Content	Comply (Yes/No)	Bidders Comment
Geoportal Management and Administration				
01	User Management and Authentication	• Provide User Management component for defining user roles to control the access of tools and database • Support user authentication for registered users per their authorization level or role via the ICTA single sign-on system • Authenticated privileged users must be able to access public and secured map services • Allow registered data publishers to access and update the metadata records they are responsible for • Provide metadata harvesting tools to allow the GeoPortal administrator to automatically or on an as-needed basis retrieve new or updated metadata records from preregistered data publishers for posting; • Provide metadata harvesting tools to allow the GeoPortal administrator to automatically or on an as-needed basis retrieve new or updated metadata records from preregistered data publishers for posting; • Ability for GeoPortal administrator to set and control access rights including what data can be viewed, in what form (WMS, WFS, etc.), what can be		

		downloaded directly from the GeoPortal, or referred by email to the publisher for a physical copy of the data • Monitor GeoPortal utilization and provide reporting on periodic and as-needed basis • Make GeoPortal metadata available for discovery by other.		

02	Payment Gateway	GeoPortal should consist of functions to integrate a payment gateway and integration should be done by contractor.
		    • The shopping cart to be provided
		    • The invoice to be generated
		    (Detail requirements to be finalized during the implementation)		

03	Usage Logs	Reports and Charts on usage logs on map viewer and map services		
04	Metadata harvesting tools	Should be able to harvesting using ASCII and XML/ GML formats		
05	Metadata validation tool	• Metadata element validation, • metadata content validation, • thesaurus validation, • keyword validation • Validate compliance of metadata according to the international standards as well as the specific standard customized and adopted by the SL-NSDI. If not automatically notify the data publishers • Review and approve submitted metadata prior to publishing		
06	Access to GeoPortal metadata records	Support provision of access to GeoPortal metadata records by other applications such as RSS readers, wikis and		

		content management systems.		
07	Discovery, query and map preview of metadata	Support discovery, query and map preview of metadata published by others		
08	Data Updating/Uploading	Create interface through APIs complying with W3C standards for stakeholders to upload/update and modify their own data sets in to the system. (Both fundamental and thematic data sets) • Should be able to add and update layers by stakeholders through versioning scenarios. • Any changes to data shall be recorded in a separate table and shall be stamped with the identity of the user and the date / time of the creation/change. • Should be able to upload any user's data in order to do simple operations in map viewer and email the map.		
09	Ability to download a selected data layer	• Provide the ability to download a selected data layer or part of data layer in different formats(shp, KML, etc.,) according to the user privileges defined. • Downloading facility should be provided for some of the data layers under open data policy (*transport, admin boundaries, geonames, grids of 1K, 10K & 50K, electorate boundaries*)		
10	Data standards and migration	• Use the data format provided by the Technical Review Committee as the common data format.		

		• There should be tools to migrate Stakeholders datasets to the SL- NSDI common data format. (Common data format provided by the Technical Review Committee). Stakeholders are allowed to maintain their own data formats with them. • When data is downloaded by stakeholders there should be facility to get those data in their own data format or common format of SL NSDI. • No data migration is involved in thematic data handling.		
11	Data validation	• If the data sets are composed of fundamental data sets validation should be done by the custodian who is having the mandate to the particular data set. • All Data manipulations in the system will be eventually validated by the respective custodian to make the data sets consistent.		
12	Maintain the metadata records	Provide authorized data publishers with the tools to develop and maintain the metadata records for which they are the authorized custodian.		
Geoportal Map Viewer Enhancements				
01	Map Viewer Presentation	• Incorporate 'Sri Lanka base map' provided by of the Survey Department as the default base map of the SL NSDI geoportal. • When click on a features of the base map it should display the information of feature in a pop-up window. • Different representations of the same feature in different layers at the same zoom level.		

		• Ability to represent different map types (choropleth maps, density maps, heat maps etc)		
02	Dashboard	GeoPortal should consist of Dashboard and • Shall be able to provide management with easy-to-understand, easy-to-use reports that use appropriate info graphics (Charts) to monitor the performance and usability of the geoportal. • Shall have a GIS-enabled real-time dashboard to display dynamic charts & graphs that the management wants to view • Shall have easy to use, interactive facility for management to generate ad-hoc reports, etc.		
03	Redlining	Application shall support the following redlining operations on the map. User shall able to select any of the following available tools and perform the required operation. o Drawing a sketch using Freehand format o Drawing a Point o Drawing a Line o Drawing a Polygon o Writing a text on the map o Clearing the drawing redlines from the map o Modify/delete the drawn redline		
04	Statistics on a GIS layer	• Provide an option to calculate the statistics on a map layer o Count o Lenghth o Area o Convert to different area parameters such as		

		sqft/sqm etc., • Provide an option to generate charts based on the thematic information (Bar charts, Pie Charts, line charts etc.)		
05	Advanced Search	User shall select the "export" option to export the results information to an excel file or different format.		
06	Email Map	Application shall have an "Email Map" option to send the currently displayed map through email. • User shall activate the email map function and provide following details • Recipients mail ids • Mail Subject • Mail Body Text • Tool shall send an email to the recipients with the current map details with user provided subject and email body.		
07	Information Query Tool	Information tool should be further developed in alignment with the international standard adopted by ArcGIS, QGIS etc.		
08	Data Clearinghouse	Provide discovery and access links to data, metadata, website and related applications.		
09	Add/Register layers / services to NSDI metadata catalog.	• Allow registered data publishers to access and update the metadata records they are responsible for in the Metadata catalog . • Logins for each department to be created. • Provide tools to validate submitted metadata according to multiple international metadata standards as well as the specific standard customized and		

		adopted by the SL-NSDI. • Provide the ability for data publishers to be automatically notified when submitted metadata records are not in compliance with the adopted standard.		
10	Access web map services	• Allow users to access web map services from other online publishers utilizing OGC web map publishing standards • Provide Google maps and imagery services as base maps		
11	Add Map Services	Application shall provide an option to add map service, where user can add a map service in following ways: • Add map service using APIs and valid URL. • Add map service from the list of predefined servers. For the selected server, the list of map services shall be displayed. User shall select the required service from the list add it to the map.		

12	Raster Services	• Add raster imagery, raster data sets.
		 • Allow raster operations as follows
		     ○ Georeferencing tool
		     ○ On screen digitizing
		     ○ Clipping tools		

13	User Interfaces	• Re-design of User Interfaces of Geoportal, metadata catalog and existing applications of the NSDI as per the Technical Review Committee directives. • Design of User Interfaces for new applications		
14	Web Site	• Redesign of existing NSDI website new Banner Graphics • Customer Survey - Linkage to survey form to solicit input and feedback from the GeoPortal user		

		community		

9.1.2 Application Developments-

Should involve establishing requirements based applications that address specific business processes to empower the planers and decision makers through web and mobile interfaces. Following are the Applications to be developed during Phase II development.

- o Application for Ministry of Education

- o Application for Department of Police

- o Crowd Source Application- Mobile based

- o Application for Survey Department -3D Colombo(city GML)

(Brief descriptions of applications - Refer Annex 2.)

9.1.3 Training and Capacity Building

ID	Requirement	Content	Comply (Yes/No)	Bidders Comment
01	Basic Technical Training and Capacity building exercises	• The Contractor will be responsible for providing the basic technical training and capacity building exercises that will enable the government staff to operate and maintain the NSDI system. Training programme should cover the followings, • Knowledge Transfer and Admin Training • End User Training • Awareness • Contractor should indicate how this is to be achieved, addressing both formal classroom instruction and on-the-job training activities that may be required. Minimum number of trainings should be 10.		
02	Training Plan	The contractor should provide the number of training programs planned to conduct and target audience.		

9.2 Non-Functional Requirements

1. Security

1.1. User Authentication and Authorization

All applications should be able to access via ICTA's common infrastructure/application itself and independently via respective department's web site if required. Any authorization requirements should be implemented within the specific web/mobile application.

However, the solution should have the provision to integrate with the ICTA's proposed Identity Management solution in future.

An administrative application need to be developed wherever applicable.

Wherever applicable internal small applications need to be developed to capture and store relevant data.

1.2. Confidentiality and Integrity

All developed web/mobile applications should ensure "confidentiality" and "integrity" whenever required by adhering to transport and message level security standards. (i.e.: HTTPS, WS-Security)

1.3. Authentication

The web/mobile application should be able to verify the users.

1.4. Authorization

The web/mobile application should be able to verify that allowed users have access to resources.

1.5. Non-repudiation

All Web/mobile applications should ensure non-repudiation by having standard audit-trails and provisions to have WS-Security using digital signatures.

1.6. OWASP Guidelines

All web/mobile applications should ensure that the OWASP guidelines for security are followed when designing, developing and deploying the web/mobile application.

2. Audit Facilities

Wherever applicable, an audit trail of all activities must be maintained. On a service or operation being initiated, the system should log the event, creating a basic 'audit log entry'. It should not be possible for the operation to be executed without the log entry being made.

The information recorded in the audit trail depends on the type of activity which takes place. Each service would be responsible for logging detailed information. The different types of operations are -

- Data Capture & Maintenance
- Creation of an entry / item
- Modification an item
- Deletion
- Control (or status change)
- Process execution
- Data synchronization
- Print (only selected item)
- Retrieval
- Monitor

Detail logging may be enabled or disabled for each type of operation, and/or for each business object. It should be possible to configure which attributes of a data item should be traced at the detail level. Tracing of some attributes may be considered mandatory, and they should not be turned off.

3. Backup And Contingency Planning

The main contingencies that should be considered and the training with regards to these shall be given to the relevant staff -

- Equipment failure
- Physical / natural Disaster
- Messaging or communication facilities.

- Changes in operations and policy

- Sudden absence of key personnel

- Breach in Security

Automatic Backups daily, weekly *and* monthly should be taken. All the backup procedures and backups needs to be tested regularly for restoration.

4. Performance Testing

Please find the below index as a guide to determine the benchmark values for the Application under the test.

Item	Performance
Screen Navigation: field-to-field	< 5 milliseconds
Screen Navigation: screen-to-screen	< 3 seconds
Screen Refresh	< 3 seconds
Screen list box, combo box	< 2 seconds
Screen grid – 25 rows, 10 columns	<3 seconds
Report preview – (all reports) – initial page view (if asynchronous)	< 40 seconds in most instances. It is understood that complicated / large volume reports may require a longer period
Simple inquiry – single table, 5 fields, 3 conditions – without screen rendering	< 4 seconds for 100,000 rows
Complex enquiry – multiple joined table (5), 10 fields, 3 conditions – without screen rendering	< 6 seconds for 100,000 rows
Server side validations / computations	< 10 milliseconds
Client side validations / computations	< 1 millisecond
Batch processing (if any) per 100 records	< 120 seconds
Login, authentication, and verification	< 3 seconds

Daily backups (@Dept.) – max duration	1 hour (on-line preferred)
Total Restore (@Dept.) – max duration	4 hours

Following performance criteria is provided as a guideline only. If the actual performance is falling below the stipulated figures, the consultant is to justify the reasons. However, the performance level must be accepted by the technical evaluation committee appointed by the client. The bandwidth is assumed at 1mbps (shared) with 1,000 concurrent users (50% load factor) in total.

4.1 Performance Test Process Outputs

- Performance Test Scripts
- Performance Test Results

5. Usability

The web/mobile application should be extremely usable, even a greenhorn user should be able to handle the system and incorporate all the functionality of the system in a simple and user friendly interface. The web/mobile application should be internationalized and localized if needed. The web/mobile application should be responsive where it should be viewable on any computing device.

A randomly chosen user of the GeoPortal shall be able to:
- Search location visualized on a map within 10 seconds
- Enter a metadata record in a maximum of 4 minutes
- Enter a new user within 5 minutes (undertaken by the Database Administrator)

6. Interoperability

The web application should be able to view in standard compatible web browsers.

7. Availability

The web/mobile application should be performed as follows,

- The GeoPortal shall be available 24 hours a day, 7 days a week (24/7).

- The GeoPortal shall be available at government offices via the Lanka Government Network, and available for public and private institutions, and citizens, via the Internet.

- The system shall be able to manage at least 100 concurrent users and it should be scalable up to 1000 concurrent users.

- 99.99% available unless the web/mobile application is designed with expected downtime for activities such as database upgrades and backups.

- Hence to have high availability, the web/mobile application must have low downtime and low recovery time.

8. Robustness

The web/mobile application should be able to handle error conditions gracefully, without failure. This includes a tolerance of invalid data, software defects, and unexpected operating conditions.

- Failure Detection
  - Once deployed, there should be appropriate tools to discover anomalies and failures of the system

- Fault Tolerance
  - Web/mobile application developer should anticipate exceptional conditions and develop the system to cope with them. The web/mobile application must be able to use reversion to fall back to a safe mode, meaning, the application should continue its intended functions, possibly at a reduced level, rather than falling completely.

9. Maintainability

The code of web/mobile application should be properly documented with appropriate comments and no complex codes (highly cohesive and loosely coupled) to do modifications such as corrections, improvements or adaption.

10. Compliance to Standards

The code of web/mobile application should be standardized by following web/mobile standards like W3C and ECMA – European Computer Manufactures Association, to save time, augment the extensibility of the code, increase web/mobile traffic and improve the accessibly and load time of your application.

11. Reusability

The web/mobile application should be able to use of existing assets in some form with the software product development process. Assets are products and by-products of the software development life cycle and include code, software components, test suites, design and documentation.

12. Internationalization

The web/mobile application should be able to access in Sinhalese, English and Tamil. The web/mobile application should be able to view in a usable manner in all three languages in any computing device.

13. API Management

13.1. API Standards and Best Practices

API standards and best practices that should be adhered to the code.

13.2 API Documentation
- Swagger documentation should be provided.

13.3. API Security

The web/mobile application should be used appropriate API security protocol mentioned below.
- Basic API authentication
  - Basic authentication should never be used without TLS (formally known as SSL) encryption as user name and password combination can be easily decoded otherwise.
- OAuth1.0a

- Uses cryptographic signature value that combines the token secret, nonce, and other request based information. Can be safely used without SSL.
- Recommend for sensitive data applications
- OAuth2
  - No need to use cryptographic algorithms to create, generate and validate signatures as all the encryption handled by TLS.
  - Recommend for less sensitive data applications
- JWT (JSON Web/mobile Tokens)

14. Scalability

The web/mobile application should be both scalable and resilient. A well-designed application should be able to scale seamlessly as demand increases and decreases. It should be resilient enough to withstand the loss of one or more hardware resource.

15. Legal and Licensing

- The web/mobile application should comply the national law.

- All modules of the GeoPortal shall be able to be scaled-up to the required number of users as and when required.

15. Extensibility

The web/mobile application should be designed and developed in a way that it can cater to future business needs.

16. Testability

The web/mobile application should be designed and developed in a way that testability is high, meaning, the ease of testing a piece of code or functionality, or a provision added in software so that test plans and scripts can be systematically executed. In simple terms, the software should be tested easily with most famous 5 testing categories,

- Unit test
- Integration test
- System test

- Safety test
- Experience test

Refer Aden (2016)'s view on semantic testing for more information.

The web application should be working according to the given criteria in the latest version and 5 versions before in web browsers such as Mozilla Firefox, Google Chrome, Opera, and Apple Safari and the latest version and 2 versions before in Internet Explorer.

17. Notes

- Some of the none-functional requirements shall be excluded based on the project requirement with the approval of the Technical Review Committee appointed by ICTA.
- The vendor can propose similar standards/requirements for the above-mentioned standards/requirements with the approval of Technical Review Committee appointed by ICTA.
- The design documents should be based on 4+1 architecture model or the template provided by ICTA.
- If APIs are available (Service Layer) 'API Documentation' should be provided as an annexure to the design document as stated in 'Section 13'.
- ICTA or its designated entity (end user) should have the right to access, modify, further develop and enhance the system at no cost to ICTA or its designated entity (end user) for the customized software components
- Contractor should sign a non-disclosure agreement with respect to data provided by stakeholder institutions.
- The Contractor shall provide to the client the ownership rights in respect to the client specific components of the system through a source code management repository designated by the client, provided there exist no license restrictions affecting transfer of such ownership. The ownership rights in respect of client specific components may be shared between the client and the consultant at the discretion of client.

  Client specific components shall mean:
  Licensed software components which are modified to meet the system requirements *AND*
  Bespoke applications to meet the system requirement

- The system will be audited by SLCERT (Sri Lanka Computer Emergency Readiness Team) for Information Security. The consultant shall implement the necessary changes/modifications/enhancement recommended by CERT.

[ANNEX 1] – NATIONAL SPATIAL DATA INFRASTRUCTURE (NSDI)-OVERALL ARCHITECTURE & DESIGN

DEPLOYMENT ARCHITECTURE
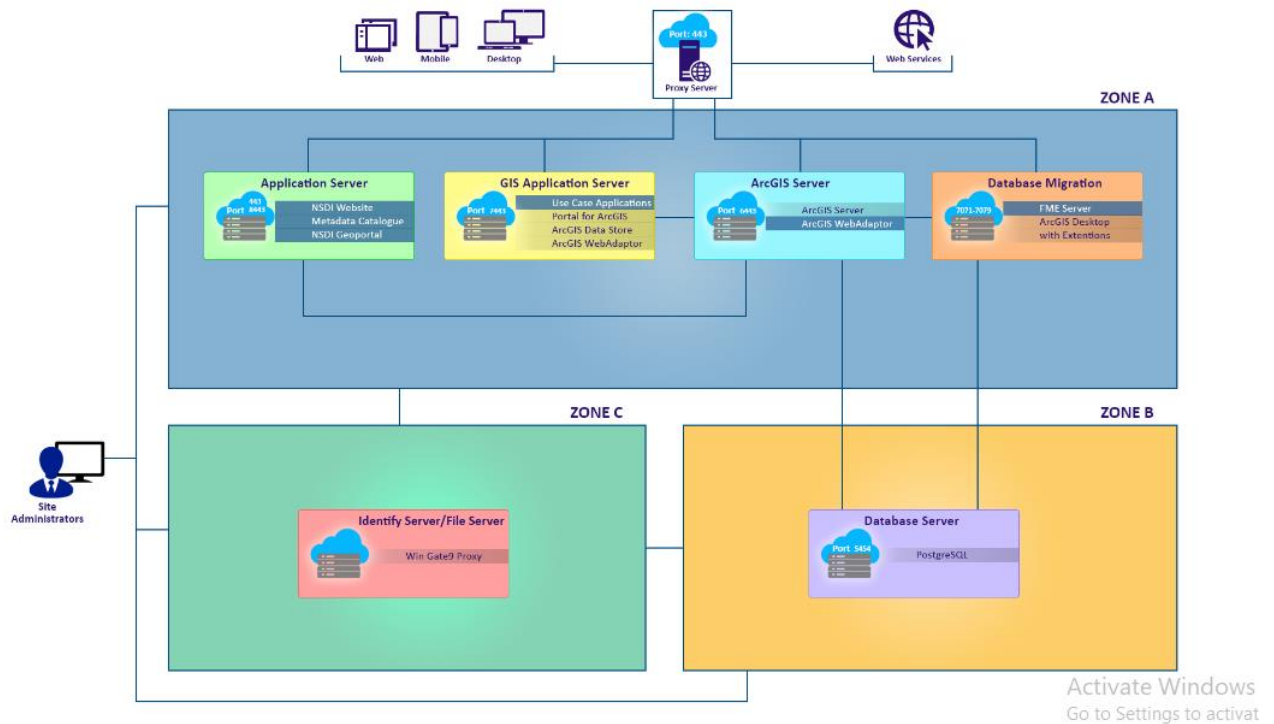
Solution Architecture design of the NSDI Phase- I is a very straight-forward deployment scenario and utilized the infrastructure to the best possible extent so as to reduce redundant servers and software licenses. The enterprise geodatabase server that is running PostgreSQL & ESRI based custom application formed the foundation for the web deployment in this project.

The deployment have 2 environments (1) Production/Live (2) Staging. Both the environment have to be keep in synchronization for applications, services and database after GIS and non-GIS data loading from various departments continually. Both the environment are deployed in similar Architecture.

Please see table below for all the software's of NSDI and licenses.

No.	Software Description	Software Manufacturer/ OEM	Permanent or annual
1	ArcGIS Enterprise 10.6 Advanced for Production Server & Staging server	ESRI	Perpetual / Permanent (annual renewal to upgrade and support AMC of OEM).
2	ArcGIS Enterprise 10.6 Image Server for Production & Staging Servers	ESRI	Perpetual / Permanent (annual renewal to upgrade and support AMC of OEM).

3	ArcGIS Desktop 10.6 Advanced and Extensions (3D Analyst, Spatial Analyst & Network Analyst)	ESRI	Perpetual / Permanent (annual renewal to upgrade and support AMC of OEM).
4	FME Server 2018 for Production Server & Staging Server	SAFE Software	Perpetual / Permanent (annual renewal to upgrade and support AMC of OEM).
5	FME Desktop 2018 – ESRI version	SAFE Software	Perpetual / Permanent (annual renewal to upgrade and support AMC of OEM).
6	Drupal CMS for Production & Staging Servers	Drupal Open source	Open Source
7	Windows Server 2016 - standard edition Production & Staging Servers	Microsoft	Perpetual / Permanent End of life as per Microsoft policy for the Windows server operating system
8	Symantec Endpoint Protection Production & Staging Servers	Symantec	Annual renewal (yearly Subscription mandatory)
9	Win Gate 7 Proxy Software Enterprise edition Production & Staging Servers	Qbik	As NSDI servers and domain, firewall and proxy are controlled by LGN / ICTA. This proxy software is not needed anymore for renewal.
10	PostgreSQL - RDBMS & PostGIS for Production & Staging Servers	PostgreSQL Open Source	Open Source

[ANNEX 2] – BRIEF DESCRIPTION OF USE CASE APPLICATIONS

1. Application for Ministry of Education:

Develop an Educational Geographic Information System for seamless visualization of school locations across the country. This system shall use the data/technology available in NSDI and it is expected to address requirements for locating, analyzing and reporting various types of schools based on attribute/spatial information using the web interface.

(Detail requirements will be finalized with stakeholder consultation).

2. Application for Department of Police- Citizen Safety

Need to develop an application to Department of Police in order to improve police operations by pushing data and analysis, enabling shared data and situational awareness. This is basically for Citizen Safety and it is expected to mapping crime, identify crime hot spots, profiling offenders, disaster locations etc. This system equipped with the GIS tools by providing hot spot generation, zonation, navigation and mobile location identification and enabling the Police Department to be smarter, faster and Empower Officers with real-time location insight for better decision-making.

(Detail requirements will be finalized with stakeholder consultation).

3. Crowd Source Application

Crowd Source application should be developed for the community to generate/ comment on selected spatial data layers such as Survey Dept. base data layers, Archaeological Sites, event base incidents (disaster, epidemics etc). Following tools should be developed;

- Able to add information by point, line, polygon

- Able to upload photographs (max of 3)

- Citizens shall be able to comment on any feature from selected data layers of NSDI geoportal.

- A workflow to be provided where NSDI administrator can extract these inputs and forward to departments for verification and incorporation to the data set.

All the above functionalities should be available on mobile for Android, iOS and Windows.

(Detail requirements will be finalized with stakeholder consultation).

4. Application for Survey Department -3D Colombo(city GML)

Main objective of this application is to create Colombo City GML.

Contractor has to create 3D web map showing 3D buildings on image overlaid on DEM. This should have simple tools to zoom pan and navigation through roads and display information etc

Following data will be provided by the Survey Dept.

1.   Building footprints of Colombo Metro region with elevations (added incorporating from LiDAR DSM)
2.   DEM of the area
3.   Transportation, hydrography and toponomy layers
4.   Ortho image of the area

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[ANNEX 3] – CONSULTANT'S EXPERIENCE

Consultant's Experience

[*Using the format below, provide information on each assignment for which your firm, and each associate for this assignment, was legally contracted either individually as a corporate entity or as one of the major companies within an association, for carrying out successfully completed consulting services similar to the ones requested under this assignment. Use 20 pages maximum*

Consultant must submit reference documents issued by the client, experience without reference letters will not be considered.]

Assignment name:	Approx. value of the contract (in current LKR, US$ or Euro):
Country: Location within country:	Duration of assignment (months):
Name of Client:	Total № of staff-months of the assignment:
Address:	Approx. value of the services provided by your firm under the contract (in current LKR, US$ or Euro):
Start date (month/year): Completion date (month/year):	№ of professional staff-months provided by associated Consultants:
Name of associated Consultants, if any:	Name of senior professional staff of your firm involved and functions performed (indicate most significant profiles such as Project Manager, Team Leader):
Narrative description of Project: *Describe experiences in similar consultancy services with the following components in relation to the project*	

i.   A. High level architecture and best practices used. (Submit the diagram)

I.   *B.*   *Leveraging open standards/ open protocols and interoperability. EG. APIs*
☐ *Yes*   ☐ *No*
If yes elaborate how it was done.

ii.   *GIS tools used in the project.*
☐ *Yes*   ☐ *No*
If yes elaborate how it was done.

iii.   *Elaborate how you had met non-functional requirements in the above project in following areas.*
A.   *Security*
B.   *High Availability*
C.   *Performance*
D.   *Scalability*

E. Testability
F. Fault Tolerance
G. Other

iv.   Elaborate use of any monitoring tools for maintainability
☐ *Yes*   ☐ *No*
If yes elaborate how it was done.

v.   Degree of in-house SQA standards and procedures used.
☐ *Yes*   ☐ *No*
If yes elaborate how it was done.

i.   Elaborate cloud deployment experience in the above project.

<table>
<tr><td colspan="2"></td></tr>
<tr><td>ii.</td><td>Elaborate how support and maintaining was provided in the above project.</td></tr>
</table>

Description of actual services provided by your staff within the assignment.

#	Staff composition	Speciality area(s)
1		
2		
3		
4		
5		
6		

Appendix B – Schedule of Payments

Payment will be made according to the following schedule.

No	Deliverables	Timeline	Payment/ % of the total contract price
01	1.1 NSDI Phase II- Solution Implementation Proposal with clear methodology 1.2 Implementing schedule / Project Plan 1.3 Detailed Software Requirement Specification (DSRS) 1.4 QA Test Plan 1.5 Acceptance criteria for Deliverables and UAT 1.6User Training Plan	Commencement Date + 3 weeks	10 %
02	2.1 Detailed Software Technical Documentation (DSTD) 2.2 Release Management plan (including staging, production and support and maintenance) 2.3 Data migration and integration plan 2.4 Application Prototypes	Commencement Date + 5 weeks	15%
03	3.1 Proper maintenance of source code in SVN 3.2 Test Cases and Test scripts	Commencement Date + 9 weeks	30%
04	4.1 Updated Solutions installation guide 4.2 User manual 4.3 Administrator manual 4.4 QA Status Report 4.5 Proper maintenance of issues in the Issue tracking System 4.6 Successful UAT acceptance of NSDI system advancement and Application deployment	Commencement Date + 11 weeks	15%
05	5.1 Operational Acceptance Report, Comprehensive knowledge transfer and Commissioning 5.2 Completion of Training Sessions 5.3 Support and Maintenance for 1st Year	Commencement Date + 12 weeks	10%
06	6.1 Payments for 2nd and 3rd year S & M costs will be paid at the end of each quarter.	After the one year S & M from the Date of operational acceptance + 24 months	20%

Note: Above payments shall be released on acceptance of deliverables by the Technical Review Committee and ICTA officials.

Appendix C – Key Personnel

Provide a complete description of the project team and how it would be organized into each activity as described in scope of work. Also provide the qualifications of key staff who would be involved in the project, including direct references to projects and activities that have direct relevance to the current project.

- Project Manager.
- Senior Technical Consultant(s)
- GeoPortal Specialist.
- GIS Data Analyst(s).
- GIS Cartographer.
- Outreach and Communications Specialist(s).
- UI/UX Engineer
- Software Architect
- QA Lead

Project Delivery Team

Name of Staff	Qualification	Area of Expertise/Experience	Position Assigned	Task Assigned

Format of Curriculum Vitae of Key personnel

Name of the Employee	
Proposed Position	
Nationality	
Age	
Education	
Other training	
Offices Held, Academic Distinctions, Awards & Scholarships	
Language & Degree of Proficiency	
Membership in Professional Societies	
Countries of Work Experience	
Employment Record	
Period	Company & Designation
	(Could be expanded to suit requirement)
Detailed Employment Record	
Time frame	Description of Projects
	(Should be expanded to suit requirement)

Appendix D – Breakdown of Contract Price in Foreign Currency

Appendix E - Breakdown of Contract Price in Local (Sri Lankan Rupees)

Appendix F – Services and Facilities provided by the Employer

- Current NSDI Phase I documentations will be provided by ICTA.
- Proper knowledge transfers of the NSDI Phase I including source code and the relevant technical documentation.
- Web-based access to the ICTA SCM system.
- Access to staging/ production servers.
- Web-based access to the ICTA SVN system and SCM.
- Arrange meetings and workshops with relevant stakeholder (if required).
- Arrange and facilitate the workshop/training with relevant stakeholders.

Appendix G – Performance Incentive Compensation

Indicated in the Appendix H

Appendix H – Service Level Agreement for Support and Maintenance

1. Introduction

The aim of this agreement is to provide a basis for close co-operation between the Client and the Consultant for support and maintenance services to be provided by the Consultant, thereby ensuring a timely and efficient support service is available. The objectives of this agreement are detailed in Section 2.

This agreement is contingent upon each party knowing and fulfilling their responsibilities and generating an environment conducive to the achievement and maintenance of targeted service levels.

2. Objectives of Service Level Agreements

1   To create an environment conducive to a co-operative relationship between Client, Consultant and Client's representatives (government organizations) to ensure the effective support of all end users.

2   To document the responsibilities of all parties taking part in the Agreement.

3   To define the commencement of the agreement, its initial term and the provision for reviews.

4   To define in detail the service to be delivered by each party and the level of service expected, thereby reducing the risk of misunderstandings.

5   To institute a formal system of objective service level monitoring ensuring that reviews of the agreement is based on factual data.

6   To provide a common understanding of service requirements/capabilities and of the principals involved in the measurement of service levels.

7   To provide for all parties to the Service Level Agreement a single, easily referenced document which caters for all objectives as listed above.

8   The service provider should adhere to the non-functional requirements that are stated in the Description of Services (Appendix A) to maintain high availability and business continuity of NSDI.

9   To design a business continuity plan with client in terms of disaster recovery, maintain system back-ups and related roles and responsibilities of both parties

3. Service Level Monitoring

The success of Service Level Agreements (SLA) depends fundamentally on the ability to measure performance comprehensively and accurately so that credible and reliable information can be provided to customers and support areas on the service provided.

Service factors must be meaningful, measurable and monitored constantly. Actual levels of service are to be compared with agreed target levels on a regular basis by both Client and Service Provider. In the event of a discrepancy between actual and targeted service levels both Client and Service Provider. Are expected to identify and resolve the reason(s) for any discrepancies in close co-operation.

Service level monitoring will be performed by Client. Reports will be produced as and when required and forwarded to the Service Provider.

4. Principal Period of Support (PPS) Requirements

The consultant must provide support and maintenance services during Support Levels mentioned below;

PPS category	Support Hours	Applicability
PPS1	From 08:00 AM to 06:00 PM Monday to Friday (excluding public holidays)	For the internal department administration system/ external integrations, API exposed to external departments.
PPS2	From 08:00 AM to 10:00 PM, all days in the week (including public and mercantile holidays)	Online services offered via portal/ external integrations related to smooth operation of the online services

5. On-Call Services Requirements

Service Provider MUST make at least ONE qualified personnel available to the Client by telephone and email for the reporting and resolution of non-conformities or other issues, defects or problems. Dedicated telephone numbers and emails should be available for reporting issues. Client will nominate the personnel who are authorized to report non-conformities or other problems with the system from the departments. Reporting of non-conformities includes requests by the Client to apply critical software updates or patches.

Table-1 shows the response priority assigned to faults according to the perceived importance of the reported situation and the required initial telephone response times for the individual priority ratings. All times indicated represent telephone response time during specified Support Levels. The indicated telephone response time represents the maximum delay between a fault/request being reported and a Consultant's representative contacting the Client by telephone. The purpose of this telephone contact is to notify the Client of the receipt of the fault/request and provide the Client with details of the proposed action to be taken in respect of the particular fault/request.

Support Level	Business Critical		Non-Business Critical	
	Fatal	Impaired	Fatal	Impaired
PPS1	10 minutes within Support Hours	20 minutes within Support Hours	20 minutes within Support Hours	45 minutes within Support Hours
PPS2	20 minutes within Support Hours	45 minutes within Support Hours	1 hour within Support Hours	2 hours within Support Hours

Table-1: Response Priority

Note:

Fatal   - Total system inoperability
Impaired   - Partial system inoperability
Business Critical   - Unable to perform core business functions
Non-Business Critical - Able to perform limited core business functions

Service Provider notification can occur outside Support Level time, and thus the response may occur after the next Support Level begins. Furthermore, "Time to Arrive On-Site (specified in above table) starts from Support Level starting time and "Time to Resolve the Problem" is Support Level time starting from the actual time of arrival on site.

6. Problem Resolution and Penalties

If faults are not corrected within the time limits specified in the Table-2, the Client shall be entitled to a penalty payment for each hour that the Service Provider fails to resolve the fault.

Maximum ceiling of penalty for a given month is 10% of the monthly support and maintenance price.

Support Level	Business Critical		Non-Business Critical	
	Fatal	**Impaired**	**Fatal**	**Impaired**
PPS1	30 mins LKR 20,000.00 per hour	1 Hours LKR 15,000.00 per hour	1 Hours LKR 15,000.00 per hour	2 Hours LKR 10,000.00 per hour
PPS2	1 Hour LKR 10,000.00 per hour	2 Hours LKR 7,500.00 per hour	2 Hours LKR 7,500.00 per hour	4 Hours LKR 5,000.00 per hour

Table-2: Resolution Time and Penalties

7. "This SLA is applicable only on the applications installed and developed by Service Provider and not on any hardware or connectivity related failures".

8. "ICTA shall not change any OS, Software, Patches (other than security/anti-virus patches) or hardware after Go-Live without prior agreement from the service provider and after due analysis of impacts on the application. All failures resulting due to above changes shall be out of SLA".

9. "Service Provider commits to have dedicated resources on-site during the maintenance period and all issues will be attended by the resources available on-site".

10. "At the beginning of maintenance period Service Provider and Client (ICTA) will mutually identify and agree on "Business Critical and Non-Business Critical" functionality/tools classification to apply SLA terms".