

# **Software designer – Maldives Transport Authority IT System**

## **Bidder Information Sheet**

### **1. General Information**

As Government's efforts to improve the doing business environment and improve the trade facilitation environment, the Ministry of Economic Development (MED) has prioritized establishment of a National Single Window (NSW) for trade facilitation.

In support of this initiative, MED has recently completed Business Process Analysis (BPA) of 7 core agencies that will be initially integrated under a NSW project. The BPA assessment has provided a number of recommendations that could be implemented across the agencies in a manner that would complement the NSW project.

Some of the core agencies identified for the NSW project relies on the information provided by vessel management system of the Transport Authority – a regulatory Authority under Ministry of Economic Development.

Currently Transport Authority provide almost all of its vessel related services to the trading community through a manual process. As such, to speed up work on implementation of BPA recommendations and to bring the Maritime Section of Transport Authority in par with other core agencies of NSW, MED through the EIF Tier 1 project intend to extend technical support to TA to enhance their existing IT system.

### **2. Eligible Bidders**

The invitation is open to all interested local parties with a formal intent to enter into an agreement. Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid will result in disqualification of the bid proposals submitted by the bidder.

Both Individuals and registered local business entities (companies, partnerships, co-operative societies and soletraders) will qualify for the bid provided all documents mentioned in Section 7 of this information note are presented at the bid submission date and time.

### **3. Language of the Bid**

The language of the bid shall be submitted in English.

### **4. Scope of Work and Deliverables**

In consultation with Maldives transport Authority Focal Point and MED designated staff, the successful bidder is expected to deliver the scope of work and outputs outlined in the terms of reference included in APPENDIX I of this information note.

### **5. Project Delivery Duration**

The winning bidder will be expected to complete the scope of work as per the timeline indicated in Section V of the Terms of Reference included in APPENDIX 1 of this information note. Application should be submitted in a sealed envelope with all the documents listed under Section 7.

Bid proposal should have a minimum validity of 35 days and all prices should be quoted with a final offer price, inclusive of all taxes and there shall not be any hidden or omitted costs.

## 6. Evaluation Criteria and Procedure

### 6.1 Price 35%

The points will be given using benchmark marking criteria where lowest proposed price will be considered as the benchmark. The full marks will be given to the bench mark value and others weighted accordingly using the formula below.

$$\text{MAX\%} = (\text{Proposed price} / \text{Benchmark price}) \times 35\%$$

#### 6.1. Experience of the bidder 20%:

The bidder must submit a portfolio of relevant work done accompanied by references about the satisfactory delivery of finished projects. The bidder should give contact numbers and names of references for each project.

The projects listed as references should be carried out in the last 10 years (Jan 2007 – to present period). Any projects prior to this period will not be counted towards the points. Points for experience will be given as follows

$$\text{MAX\%} = (\text{No. of projects} / \text{Benchmark no. of projects}) \times 20\%$$

#### 6.2. Educational Qualification and Experience of the consultant/team proposed by the bidder 20%

The bidder must indicate in the technical proposal the team proposed to carry out the consultancy work. Marks will be scored as per the following criteria

- Experience and educational qualification of the lead software designer/team in carrying out similar projects in the last 10 years– 10%
- Experience and educational qualification of other designers – 10%

#### 6.3. Bidder proposal 25%

In addition to meeting the work scope and outputs specified in the TOR, the bidder must outline in the technical proposal, additional services that they will provide during the service period. Ministry will positively consider proposals where flexibility is accommodated in providing services such as bug fixing and handholding over an beyond 3 months.

The BID evaluation committee will review the bid proposal and all documents submitted and award marks based on the best offer. Marks will be allocated based on the matrix below.

|   | <b>Focus Area</b>   | <b>Weightage</b> |
|---|---|------------------|
| 1 | Quality of bidder profile - in terms of understanding of the tasks to be carried out and and demonstration of how the bidder meets the selection criteria | 10               |
| 2 | Methodology/Workplan/Schedule   | 10               |
| 3 | Bug fixing and hand holding beyond 3 months   | 5                |

## **7. Documents to be Submitted**

All bids should be submitted with the following forms and any bids submitted without the forms will be automatically disqualified.

Marks will be awarded based on the information on these forms. The bid documents should include pricing and work schedule for the proposed task.

7.1 Form 1 – Application for BID submission

7.2 Form 2 – Bidder profile and technical proposal

7.3 Form 3 – Price schedule for the contracting service

The documents should be submitted in a closed envelope. The envelope should be clearly labelled as **“Software designer – Maldives Transport Authority IT System”** and addressed to:

EIF Project  
Ministry of Economic Development  
Male’ Maldives

The proposal should be in a secure bind and there should not be loose papers.

## **8. Deadline**

Bid Information Session will be held on 8<sup>th</sup> May 2018 (Tuesday) 13:00 hrs at the Ministry of Economic Development, Velaanaage 11<sup>th</sup> Floor, Conference Hall.

**Bid Submission will be held on 15<sup>th</sup> May 2018 (Wednesday) 13:00 hrs at the Ministry of Economic Development, Velaanaage 11<sup>th</sup> Floor, Conference Hall. Bids received before and after the bid submission deadline will not be entertained by the Ministry.**

## **APPENDIX I**

### **Terms of Reference**

#### **Terms of Reference – Software Design**

##### **Terms of Reference – Enhancement of Transport Authority’s Vessel Management System**

###### **I- Introduction**

As Government’s efforts to improve the doing business environment and improve the trade facilitation environment, the Ministry of Economic Development (MED) has prioritized establishment of a National Single Window (NSW) for trade facilitation.

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Some of the core agencies identified for the NSW project relies on the information provided by vessel management system of the Transport Authority – a regulatory Authority under Ministry of Economic Development.

Currently Transport Authority provide almost all of its vessel related services to the trading community through a manual process. As such, to speed up work on implementation of BPA recommendations and to bring the Maritime Section of Transport Authority in par with other core agencies of NSW, MED through the EIF Tier 1 project intend to extend technical support to TA to enhance their existing IT system.

With this objective, the MED would like to seek services of a local consultant (registered business entities or individuals) who could provide the technical expertise in undertaking the tasks outlined in the work scope below.

###### **II- Scope of work**

With the overall guidance and direction from MED and focal points assigned from TA, the consultant is required to develop an online web-based system to automate key services rendered by the Maritime section of TA to the business community covering functions listed in Annex 1 of the TOR.

In developing the existing IT system, the consultant should recommend design methods to improve user friendliness and versatility of the systems developed.

In developing the IT system, the consultant shall give due consideration to the following aspects.

- Draw business or individual information from existing master databases managed by the government where ever possible (eg. BOLI software system to verify registered businesses, DNR database for individual information)
- Ensure that the enhanced functionality developed under this consultancy are compatible with other systems that will be integrated under the NSW project.
- Ensure that new functionalities developed are structured in such a way such that it is easier to manage.
- In developing the IT system factor in the recommendations provided in the BPA report and consult with both internal and external users, senior officials of TA and related authorities to

ensure systems developments are made in line with policy and legal parameters and taking into consideration the view of users.

- Design and develop the IT system in a manner that will enhance system efficiency across all core 7 agencies identified for NSW project and facilitate optimization of end users experience.
- Adhere to the following **technical requirements** for system development.
  1. The Application should be developed using Laravel – PHP framework
  2. The database should be developed on MySQL Server and should be compatible with existing database structure and other systems that will be integrated under the NSW project.
  3. The system should use the NCIT Efaas system to authenticate users (both Official and Public users).
  4. Test scripts/mechanisms must be provided that tests all system functions, procedures and any other code that is used in the development of modules.
  5. Documentation of all functions and stored procedures; description of the parameters, return type(s), pre-conditions, assumptions, errors that could be thrown and the explanation of what the function or stored procedure actually does, must be provided.
  6. The owner of all the source code will be solely TA. The fully documented source code shall be shared with MED as the contracting party and TA, by the consultant at all times. The source code includes related database schemas and SQL scripts.

### **III- After Sales Service & Maintenance**

The consultant shall be available to assist MED for a minimum period of 4 month to fix bugs and minor alterations (field additions) as and when needed. Thereafter, TA will undertake the responsibility of making any changes to the system and can choose to enter into a maintenance contract with the vendor or a third party.

### **IV- Outputs**

At the end of the consultancy period, the following outputs shall be delivered:

- A web based online system to ease the functionality of Maritime section of TA
- Online interfaces developed for all the services listed in Annex 1
- All newly developed interfaces fully tested and made available for end users
- Systems Requirement Specifications (SRS) for all services modules listed in Annex 1 fully documented and made available to MED and TA at the end of the reporting period. The SRS document shall factor in the recommendation provided in the BPA report.
- User manuals developed for all interfaces developed for service modules listed in Annex 1
- System source codes developed shall be shared with and handed to MED and TA at the end of the consultancy period.

### **V- Time frame**

The work has to be carried out within a duration of 04 months from the date of contracting.

The contractor shall submit a proposed work plan on how the tasks and outputs will be delivered.

### **VI- Reporting arrangements**

With the overall guidance from MED the selected consultant shall work closely with the technical team in TA and the BPA working group. The work shall be carried out as a joint collaboration between TA, related government agencies and the selected consultant.

The selected consultant shall report on a regular basis to designated officials from TA and MED. The selected consultant shall designate a team leader to manage the development work and shall be responsible for regular reporting.

Every fortnight, the team leader on behalf of the selected consultant shall report the progress to the designated focal point in TA and MED.

## **VII- General Qualifications**

The selected consultant (whether applied as a registered entity or individual) should have team members with following qualifications:

- Should have a degree in Software Engineering and minimum 3 years' experience
- Demonstrate fluency in using Laravel – PHP Framework and MySQL and other related software
- Experience in database development
- Experience with CentOS server administration
- Good documentation skills
- Ability to work in a team

## Annex 1 – Specific Outputs to be delivered

| Function                                    | Scope  |
|---|--|
| 1. Builder and Naval Architect Registration | <ul style="list-style-type: none"> <li>• Online Registration</li> <li>• Online payment</li> <li>• Over counter payment collection</li> <li>• Individual Builder information               <ul style="list-style-type: none"> <li>• Name, Address, ID Number, Professional Certificate no./ Or experience letter number from the respective agency, Type of vessels build</li> </ul> </li> <li>• Naval Architect information               <ul style="list-style-type: none"> <li>• Name, Address, ID Number, Achieved Academic Certificate no.</li> <li>• Achieved Professional Certificate no.</li> <li>• Type and number of vessels designed</li> </ul> </li> <li>• Issue Builder/Naval Architect registry</li> </ul>  |
| 2. Boat Yard Registry                       | <ul style="list-style-type: none"> <li>• Online Registration</li> <li>• Online payment</li> <li>• Boat Yard Name, Owner, Type of vessels build, location and address of boat yard, boat yard contact number, email address</li> <li>• Company profile, Number of vessels build, type of vessels build, technical staff details, technical staff certificate copy/ experience letter.</li> <li>• Retrieve the submitted Naval Architect information from Data Base</li> <li>• Boat yard drawing with measurements</li> <li>• Boat Yard tools/ machinery details</li> <li>• Individual Boat Builder details can be integrated (this individual need to be a registered boat builder)</li> <li>• Issue Boat Yard Registry               <ul style="list-style-type: none"> <li>• Issued date, expiry date, certificate number, revalidation date</li> </ul> </li> </ul> |
| 3. Hull Number Registration                 | <ul style="list-style-type: none"> <li>• Online Registration</li> <li>• Online payment</li> <li>• Type of service</li> </ul>   |

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|---------------------------------|--|
|                                 | <ul style="list-style-type: none"> <li>• New hull number, builder change, change build island or boat yard, hull number ownership change</li> <li>• Hull number Owner information <ul style="list-style-type: none"> <li>• Individual owner/ company/ association, ID number/ company registration number, permanent address, island, contact number, email address</li> </ul> </li> <li>• Builder details <ul style="list-style-type: none"> <li>• Name of the builder or Name of the boat yard and ID number or company number, address, island, contact number, email address</li> </ul> </li> <li>• Vessel Details <ul style="list-style-type: none"> <li>• Vessel build in Maldives, Imported</li> <li>• Type of vessel, length (meters), width, depth, Build island or boat yard, expected date of completion, type of material used (wood, fibreglass, steel, aluminium or others), type of trade which the vessel will be used.</li> </ul> </li> <li>• Details of previous hull number if achieved <ul style="list-style-type: none"> <li>• Owner of the hull number, address, id number/ company registration number, contact number, previously issued hull number, vessel Build Island, builder name/ Yard Name and ID number.</li> </ul> </li> <li>• Hull number ownership change <ul style="list-style-type: none"> <li>• Name of the existing hull number owner, id number, address</li> </ul> </li> <li>• Issue Hull number letter</li> </ul> |
| 4. Builder Certificate approval | <ul style="list-style-type: none"> <li>• Online Registration</li> <li>• Online payment</li> <li>• Boat yards and boat builders can submit the hull certificate for approval once the vessel is complete before submitting the vessel for registration</li> <li>• Hull number, Vessel Name, Vessel Complete date, Vessel Owner name and address, Keel laid date</li> <li>• DWL Length, Moulded Length, overall length, DWL Breadth, Moulded Breadth, Overall Breadth, DWL Depth, Moulded Depth, Overall Depth</li> <li>• Vessel 6 Station Measurements</li> </ul>   |

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|   | <ul style="list-style-type: none"> <li>• ½ Breadth Depth Mark 0</li> <li>• ½ Breadth Depth Mark 1</li> <li>• ½ Breadth Depth Mark 2</li> <li>• ½ Breadth Depth Mark 3</li> <li>• ½ Breadth Depth Mark 4</li> <li>• Issue of Gross and Net Tonnage information</li> </ul>   |
| 5. MR-2 Pre-registration survey   | <ul style="list-style-type: none"> <li>• Online submission</li> <li>• Online payment</li> <li>• Hull number / Registry number, Owner name, ID number, address, contact number, email address.</li> <li>• Issue payment slip</li> </ul>   |
| 6. Hull Registration  | <ul style="list-style-type: none"> <li>• Online submission</li> <li>• Online payment</li> <li>• Based on Registration application and Builders certificate and MR2 Survey if the vessel is build up to 1/3 then Hull registry will be issued.</li> </ul>   |
| 7. - Local Vessel Registration and other related services<br>- Foreign Vessel Registration<br>- Bareboat Registration<br>- Deletion Certificate and Non-encumbrance certificate<br>- Mortgage registration and cancellation | <ul style="list-style-type: none"> <li>• Online Registration</li> <li>• Online payment</li> <li>• Enter owner information (Retrieve from existing)</li> <li>• Vessel Information new vessel search from hull number <ul style="list-style-type: none"> <li>• Clause 4 (Gross tonnage certificate) information retrieve (need to edit)</li> <li>• Engine information, Engine manufacture company name, model, horsepower (2 or three engine details need to be entered)</li> </ul> </li> <li>• If registered vessel search by registry number</li> <li>• Need to edit vessel owner details, vessel measurements, trade change, engine to sails, sail to engine and other changes</li> <li>• Should be able to issue registry Provisional Registry (6 months or 01 year)</li> <li>• Should be able to issue registry for specific period of time (1 to 05 years for project purposes)</li> <li>• Should be able to issue bare boat registry</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• Should be able to register mortgage and cancel mortgage</li> <li>• Should be able to cancel the registry and issue a deletion certificate</li> <li>• Should be able to issue bill of sales in case of deletion</li> <li>• Need to retrieve and associate MIRA collected annual fee</li> <li>• Need to check imported vessel details from Maldives Customs Service</li> <li>• Need to retrieve Fishing vessels registered in Ministry of Fisheries as they do not have to pay annual fee</li> <li>• Issue registry</li> </ul> <hr/> <ul style="list-style-type: none"> <li>- Deletion Certificate and Non-encumbrance certificate</li> <li>- Foreign and local ships (this process is part of registration cancellation process)</li> <li>- Retrieve information from registration database</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Mortgage Registration process</li> <li>• Online Registration</li> <li>• Online payment</li> <li>• Vessel Registry Number, Owner</li> <li>• Agreement details, amount and number of years of mortgage</li> <li>• For cancellation need previous mortgage agreement</li> <li>• For mortgage issue a mortgage agreement number</li> <li>• For mortgage cancellation issue a mortgage cancellation number</li> <li>• Mortgage details should be available for stake holders (banks and financial institutes)</li> <li>• This process need to be done through online</li> </ul> |
| <p>8. Safety Survey and certification for local vessels and local steel vessels (National Certificate)</p> | <ul style="list-style-type: none"> <li>• Online submission</li> <li>• Online payment</li> <li>• Survey submission <ul style="list-style-type: none"> <li>• Vessel Information (Should be retrieved from registration database, Date in which survey needed to be conducted, Need to check annual fee from MIRA, Vessel position)</li> </ul> </li> </ul>  |

- Owner/Operator Information
  - Retrieved from registration data base
- Reason for survey
  - New Build, Certificate going to expire, Certificate expired, Certificate lost, To increase carrying capacity, Owner change, Trade change and others
- Get Vessel Communication equipment information
  - CAM License number, Date, Call Sign, MMSI Number, Model & Serial Number, Frequency and check annual license fee (These information's are from Communication Authority of Maldives, but it's not available through their portal)
- Enter docking information (Eheli kamuge liyun)
  - Retrieve vessel information, retrieve boat yard information, Report number, docking date, docking station, hull condition, generator condition, shaft and propeller condition, air pipe and sounding pipe status, tank status, cargo hold status, navigation status, Zink anodes status and others, certificate issued date.
- Assign MTA registered surveyor
  - Need to maintain surveyor information and issue them one year surveyor identification card. Should maintain (Surveyor name, address, id number, island, contact number, email address, professional certificate number achieved after MTA training and date)
- Surveyor should be assigned by a senior staff or immediate supervisor
- Surveyor should get details of all the vessels that are assigned for him to survey.
- Based on the type of vessel the survey check list should be printed
  - There are 06 categories of survey check lists (Category A vessels trading up to 200NM , Category B vessels trading from 12 to 24 NM, Category C vessels trading from 6 to 12 NM, Category D vessels trading up to 6 NM and Category E vessels trading within harbour or

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|--|---|
|  | <p>port areas)</p> <ul style="list-style-type: none"> <li>• Check list should be filled by using I-pad or electronic device.</li> <li>• Once the survey is complete if the vessel has fulfilled all the requirements the owner should get the survey completion message in that message the certificate collection date should be mentioned. If the vessel survey is incomplete the owner should get a full report and this report should mention the areas that he need to fulfil and should request to submit for re registration.</li> <li>• Once the survey is complete back office staff should be able to generate the certificates. It should be verified by an officer and a senior officer should approve it before sending it to print. If the owner requests it to send by e-mail. It should be automatically generated by e-mail.</li> <li>• If there are equipment's that MTA has given extension then a survey report should be generated and send it along with the certificates.</li> <li>• This survey can be conducted throughout the 200 islands.</li> <li>• For foreign going survey if the vessel is abroad survey letter should be issued to the owner.</li> <li>• Single Voyage permit will be issued for those vessels that are abroad and need to be brought to Maldives.</li> <li>• A Survey report should be issued along with the other certificates for the vessels which are abroad and need to issue a single voyage.</li> </ul> |
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Note: some of the above listed functions in the system design process can be further streamlined and hence due consideration shall be made to streamline such functions when developing the System Requirements Document.