Brief of Scope
Development of School ICT Society Website and EDUCSIRT Website

1. Background

The Information and Communication Technology Agency of Sri Lanka (ICTA) is the apex body in implementing the Government ICT policy and making recommendations for policies required for ICT based development in Sri Lanka aligning with the national development agenda.

As part of the above agenda, ICTA is in the process of formulation and driving national level initiatives towards developing and empowering all sectors through the intervention of digital technologies.

To uplift the knowledge and enable benefits of ICT technologies to the school community; ICTA, jointly with MOE (Ministry of Education) has started to develop and empower School ICT societies island wide covering 97 educational zones since year 2016. Objectives of this initiative are; Raise awareness and knowledge sharing on new digital technologies among school communities; Inspire them to be ICT industry leaders; Expose them to new digital technologies; Encourage Research and Promote Innovation; Promoting Entrepreneurship; Promoting digital education.

Further to that, the usage of the internet is highly increased among school students in the last decades. Although the Internet can be considered as world largest resource repository; the threats associated with it cannot underestimate. Since it is difficult to overcome all the threats technically, aware students about the risks and safety precaution will be the best possible solution. In this regard, Information and Communication Technology (ICT) for fortification of school children has been considered as one of the key development areas to be addressed.

ICTA in collaboration with the Ministry of Education ICT Branch, Sri Lanka Computer Emergency Readiness Team (SLCERT), the National Child Protection Authority (NCPA) and United Nations Children's Fund (UNICEF) recently launched the EDUCSIRT (EDU Computer Security Incident Response Team) initiative in purpose of establishing a trainers pool empowered by comprehensive training towards establishing school level internet readiness teams and already in year 2016 completed two workshops and trained 100 trainers.

By taking these facts in to consideration ICTA intends to develop two websites which will enable for all students, teachers and other parties to directly involved with this school ICT societies and EDUCSIRT programs. This will connect with each other and the world thereby connecting schools and members creating a world of opportunity.

2. Objective

Main objective: Develop two comprehensive web sites to promote School ICT Society Program and EDUCSIRT program and provide facilities to collaborate activities of School ICT Societies, EDUCSIRT and its stakeholders.

3. Scope of services

A consultant will be selected to develop the School ICT Society and EDUCSIRT web applications. Establish a user friendly and more creative web sites which will be integrated with social media (ex – Facebook). Furthermore, this web sites will contain all the project details and it will be the central point to obtain required details of the School ICT Society and EDUCSIRT.

Details of Scope of services - **Annex 1**

4. Team Composition & Qualification Requirements for the Key positions (and any other requirements which will be used for evaluating the Key positions)

	Key Positions	**Preferred Qualifications**	**Preferred Experience**
	Project Manager (01)	B. Sc in IT or equivalent	Demonstrated project management experience in at least two-year full time project of similar nature.
	Business Analyst (01)	B. Sc in IT or equivalent	Demonstrated business analyst experience in at least two-year full time project of similar nature.
	Tech Lead (01)	B. Sc in IT or equivalent	Demonstrated leading experience of a development team at least two years' full time project of similar nature.
	Senior software engineer (02)	B. Sc in IT or equivalent	Demonstrated software engineering experience in at least three-year full time project of similar nature.
	Software engineer (04)	B. Sc in IT or equivalent	Demonstrated skills on PHP, MySql, Java, HTML, ASP, .Net and relevant Web development languages and tools in at least two years' full time project of similar nature.
	UI engineer (02)	B. Sc in IT or equivalent	Demonstrated skills on graphic designing in at least two years' full time project of similar nature.
	Web developer (04)	B. Sc in IT or equivalent	Demonstrated skills on web developing in at least two years' full time project of similar nature.

	QA engineer (02)	B. Sc in IT or equivalent	Demonstrated skills on QA engineering at least two years' full time project of similar nature.

5. Functional Requirements and Nonfunctional Requirements

Functional Requirements and Nonfunctional Requirements – **Annex 2**

06. Services and Facilities Provided By Client

- Arrange meetings with relevant end users and stakeholders
- Co-ordinate and arrange all appointments / meetings
- The basic content (for website Main Page) for School ICT Society and EDUCERT
- Other than above listed facilities, no facilities whatsoever will be provided to the successful bidder by the Client.

07. Review Procedure

ICTA, SLCERT, MOE appointed review committee will review the deliverables. All the deliverables should be delivered in a manner acceptable to ICTA.

Annex 1

3. Scope of services: For School ICT Society and EDUCSIRT Website

3.1 Study the main functions and services of the School ICT Society and EDUCSIRT initiatives to understand its scope of work.

3.2 Perform a comprehensive study regarding the similar web sites.

3.3 The web site should be Unicode compatible and web sites should be trilingual (English and local languages).

3.4 Draft the Software (web) Requirement Specifications of the web application, present it to the ICTA and obtain the approval from ICTA.

3.5 Web site will contain all the information regarding the School ICT Society and EDUCSIRT program, School profiles and society committee members. Where a person will be able to find information about the program and its activities.

3.6 Design the website structure and finalize the information architecture of the web site.

3.7 Consultant should design the initial front end UI with the consultancy of ICTA,

i. Wireframe should be sent to ICTA by the consultant
ii. Consultant should send designs for each template (graphical representation) to ICTA
iii. Submit the prototype and site map of the web
iv. Once the design for each template (graphical representations) is accepted by ICTA, consultant will be able to proceed with the development.

3.8 The consultant should develop different templates which could be applied for all necessary pages of School ICT Society and EDUCSIRT. All templates should be presented to ICTA for sign off.

3.9 The templates should facilitate incorporating text, graphics, animations, sounds, video clips, forms, databases downloadable forms, plugging, API's etc. to the sites. The scripting languages should be compatible with all browsers, responsiveness and the hosting server platform.

3.10 Consultant should develop the templates adhering to the World Wide Web (W3C) standards and latest version of Web standards,
ttps://www.icta.lk/ictaassets/uploads/2016/03/Government_web_standards.v3.pdf

3.11 It is preferred that consultant is using agile methodology to develop the web application.

3.12 Web site should be integrated with the available social media platforms.

3.13 New School ICT Society and EDUCSIRT web sites should be developed using CMS system with backend support. System Admin users should be able to change the content/ images etc. through the CMS.

3.14 Consultant should develop the structure of the School ICT Society and EDUCSIRT profile web pages and stakeholders web profile pages. Users should be able to insert content for the particular web pages.

3.15 Consultant should provide complete administrative rights and full back up of the full system.

3.16 All content, images, and other media which are used in the web site should not

violate local & international copyrights.

3.17 The consultant will be responsible for overall web development and should submit all the reporters that are required, including project completion report prior to the project closure. Approval for all the delivery milestones by the ICTA is mandatory.

3.18 Hosting

i. Hosting in Lanka Government Cloud (LGC) with a provided domain name.

ii. Transfer the ownership (if consultant develop in their hosting place) to ICTA with full administrative rights.

3.19 Consultant should resolve security issues and bugs identified according to the audit report by SLCERT.

3.20 All the documents must be submitted in to SCM or confluence (location will be provided by ICTA)

3.21 All the source codes must be submitted in to SVN or GIT hub (period of a one (1) year without any additional cost)

3.25 Testing and Quality Assurance

3.25.1. Quality Assurance should be guaranteed for the whole web site in all aspects.

3.25.2. Quality Assurance approach should be described in detail in the Methodology.

3.25.3. The web developer should implement all necessary security measures and adhere to the security measures proposed by Sri Lanka Computer Emergency Response Team (SLCERT) for ensuring the security of the web site where the Web site should be immune to exploitations such as, SQL Injection; Cross-site scripting (XSS); Session/ (J hack guard) URL poisoning etc.

3.26 Upload the website in to the web server. In case it is required to shift the website from the existing server to new server, the consultant should provide necessary technical support for 1 year from the date of sign off.

3.27 Consultant should provide maintenance for the web site for a period of a one (1) year without any additional cost.

3.28 Support ICTA to keep the web site up and running by resolving any identified technical issues relating to the web site s during the project period.

Annex 2

Functional Requirements and Nonfunctional Requirements for School ICT Society and EDUCSIRT Website

5.1 Functional Requirements

5.1.1 Search function should be equipped with advance features and it should support users find and accurately what they are looking for in the web application. (Example – School ICT Society Facebook page link, School Profile Pages, about committee members, News updates etc.). Also, search function should enable editing and/or optimization of text for various html tags, meta data, page titles,

and page text as necessary. Analysis and recommendations on optimal web site structure, navigation, code, etc. for best SEO purposes. Advance search should be included where users will be able to specify certain areas and find the relevant data.

5.1.2 Only Admins, Selected User Levels and Cooperate Partners should be able to have accounts.

5.1.3 School Committee Members should be able to manage relegated school profile page via their accounts.

5.1.4 As per ICTA requirement consultant should create user accounts with different privilege levels

5.1.5 Cooperate partners should have account. Via the profile, they should be able to assign and select issue types and state the status.

5.1.6 Admins should be able to manage the site and admins should be able to perform all the tasks that user level should be able to perform.

5.1.7 Forum/Blog should be visible to all the users without any restriction. Only Admins, Committee members and Cooperate partners should be able to post on the forum.

5.1.8 School Profile pages should be visible to all the users; School Profile pages should have all the relevant data.

5.1.9 System should grab request, issues from all School Profile pages according to the requirement and all the request, issues should categorize properly.

5.1.10 Clients should be able to insert content (text, video, picture, sounds etc.) to the website.

5.1.11 Clients should be able to upload resource materials to the resource repository

5.1.12 All the users should be able to visit resource repository and down load the materials

5.1.13 Full access for forum/blog will be provided for any user, however admins should be able to moderate the forum/blog.

5.1.14 Should support real time chat facilities

5.1.15 Should provide a mechanism for incidents reporting/handling, counseling, legal advising etc for EDUCSIRT website.

5.2 Non-Functional Requirements

5.2.1 Assumptions

5.2.1.1 System runs under cloud computing data base (system developers should recommend wither its cloud or internal servers)

5.2.1.2 System should be able to handle unlimited number of users

5.2.1.3 System is running under normal conditions

5.2.2 Security

5.2.2.1 Confidentiality and Integrity

Website should ensure “confidentiality” and “integrity” whenever required by adhering to transport and message level security standards. (i.e. HTTPS, WS-Security)

5.2.2.2 Availability

Website should be developed to ensure “High Availability” to remain the system available all the time. (e.g. website clustering capability should be taken into consideration in the development)

5.2.2.3 User authentication and authorization

Website should be able to access via using email of the users. Any authorization requirement should be implemented within the specific web site. Register and authenticate users by email & password. An administrative application need to be developed wherever applicable. Wherever applicable internal small applications need to be developed to capture and store relevant data.

5.2.2.4 Non-repudiation

Website should ensure non-repudiation by having standard audit-trails and provisions to have WS-Security using digital signatures.

5.2.3 Audit Facilities

5.2.3.1 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.

5.2.4 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 -

I. Equipment failure
II. Physical / natural Disaster
III. Messaging or communication facilities.
IV. Changes in operations and policy
V. Sudden absence of key personnel
VI. 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.

5.2.5 Performance

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 512kbps (shared) (point to point between LIX and the Department web service) with 1,000 concurrent users (50% load factor) in total.

Item	**Performance**
Screen Navigation: field-to-field	< 10 milliseconds
Screen Navigation: screen-to-screen	< 5 seconds
Screen Refresh	< 3 seconds
Screen list box, combo box	< 3 seconds
Screen grid – 25 rows, 10 columns	< 5 seconds
Report preview – (all reports) – initial page view (if asynchronous)	< 60 seconds in most instances. It is understood that complicated / large volume reports may require a longer period
Simple enquiry – single table, 5 fields, 3 conditions – without screen rendering	< 5 seconds for 100,000 rows
Complex enquiry – multiple joined table (5), 10 fields, 3 conditions – without screen rendering	< 8 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

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