

Terms of References
Revamp SMART Social Circle (SSC) Web site



Information and Communication Technology Agency of Sri Lanka

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1.0 Background

Information and communication technology (ICT) is widely growing aspect in the modern world and it has been recognized as an essential element for growth of the development. As a result government of Sri Lanka has recognized ICT as a key element to foster social integration, peace, economic growth and poverty reduction.

Smart social circle initiative is a program which has been led by the ICTA to empower social awareness, recognize opportunities and critical issues within any area in Sri Lanka. This program will provide much needed facility to citizens to engage in policy making of the government and contribution towards good governance.

Idea is to create social circles using social media technology to cover all the Grama Niladhari (GN) divisions within the country, which will ultimately connects citizens with the digitized world via the SSC site. Furthermore a SSC can be a relevant society that you are involved in will meet the following requirements,

1. The minimum number of active members should be 50
2. Your team should prioritize community based activities

This project involved with developing a comprehensive web application which will support SSC project. Web application will enable users to track status of each task and empower citizens, citizen's journalism and create awareness regarding the project also web application will act as a resource repository which will provide educational resources to citizens.

SSC web application will be integrated with all the Facebook pages of the SSC project and it will be integrated with the Social media tool to provide an efficient service.

However in the past many development initiative strategies did not achieve the intended outcomes. Fair reasons behind this would be, believes of the people, social structure of the country and resistance for change. This was mainly due to the fact that citizens were not fully aware of the benefits of such programs. Generally people intend to resist any thing or any idea that they are not familiar with, as a result previous efforts did not succeed as predicted.

By taking these facts in to consideration, SSC has been carefully designed to subjugate with each of the above mentioned details. Program has been designed in a way that it involves citizens directly from each GN division, each division will have their own social media web page to connect with each other and the world, and therefore citizens will witness firsthand experience with the benefits of the program.

Finally, project impact would be empowering people with practical ICT skills that can be used for their day to day activities, promote entrepreneurship, and expand their income through the use of ICT technologies and to act as citizen journalists for national development. This will facilitate the development of an environment conducive to the achievement of the nation's intellectual, cultural, and social aspirations through ICT. (Please refer appendix A for High level graphical representation of the system)

2.0 Objective

Main objective - : Develop a comprehensive web application to promote SSC project and its activities of SMART Social Circle project and to provide a common platform to identify, solve issues and indorse opportunities and needs which are being escalated within the Facebook SSC pages and increase awareness about the SSC project via the web application.

Sub objectives

1. This web application will contain all the project details and it will be the central point to obtain required details of the SSC project.
2. Web application should be integrated with SSC Facebook pages.
3. SSC web application will be used to create networks among entrepreneurs, administrators, activists, educators, innovators and all the citizens who engaged with SSC program.
4. To link all the citizen with the digitize world to open up new market opportunities.
5. Create new market segments nationally and internationally
6. Create new supply chains for anyone who is engage with SSC
7. Facilitate the necessary resources to educate users regarding digitize word (resource repository).
8. Opportunities ,issues and needs that are pointed to SSC site will be disseminated world wide

3.0 Scope of services

A vendor will be selected to revamp the SSC web application. Establish a user friendly and more accretive web application which will be integrated with the SSC Facebook pages.

- 3.1 Perform a comprehensive study regarding the similar web sites and service
- 3.2 Submit the DSRS and DSTD document and establish a meeting to finalize the design and functionality.
- 3.3 Accepted consultant should designed the initial front end UI with the consultancy of ICTA
 - i. Wireframe should be sent to ICTA by the vendor
 - ii. Consultant should send a graphical representation (PNG) to ICTA
 - iii. Submit the prototype and site map of the SSC web
 - iv. Once the graphical representations is accepted by ICTA, vendor will be able to proceed with the development.
- 3.4 SSC web application should be trilingual (English, Sinhala and Tamil) and English content will provided by the ICTA, translation and proofing should be done by the vendor
- 3.5 Issue tracking –
 - i. Establish a system which will be integrated with the Facebook pages where status of the each issue type will be stated and users will be able to view brief information about the issue
- 3.6 Web application will contain all the information regarding the SSC project, SSC pages and Knowledge Agents. Where a person will be able to find information about the project and its activities.
- 3.7 Resource repository – web application will contain resource repository which will contain electronic media. Example – Pdf, eBooks etc.
- 3.8 Advance Search function –
 - i. Search function should be equipped with an advance features and it should support users find and accurately what they are looking for in the web application. (Example – SSC Facebook page links, Grama Niladhari Pages, about knowledge Agents, News updates etc).
 - ii. Also search function should enable editing and/or optimization of text for various html tags, meta data, page titles, and page text as necessary.
 - iii. Analysis and recommendations on optimal web application structure, navigation, code, etc. for best SEO purposes.
 - iv. Advance search should be included where users will be able to specify certain areas and find the relevant data.
- 3.9 Vendor should provide necessary documents and training of managing the web application
- 3.10 Consultant should develop this using a content management system and ICTA approval is a mandatory
- 3.11 It is preferred that vendor is using agile methodology to develop the web application.
- 3.12 Consultant should provide complete administrative rights and full back up of the full system
- 3.13 All content, images, and other media which are used in the web application should not Violate international copyrights.
- 3.14 The consultant will be responsible for overall web development and should submit

- project completion report prior to the project closure. The consultant will also be required to provide necessary documentation
- 3.15 Approval for all the delivery milestones by the ICTA is mandatory.
 - 3.16 The consultant should facilitate the signing of a MoU between ICTA and the vendor, the terms and condition of which should be decided in consultation with the ICTA.
 - 3.17 Hosting
 - i. Replace the existing web application with new one in provided domain names.
 - ii. Transfer the main portal ownership to ICTA with full administrative rights.
 - 3.18 Submit a project completion report prior to the project closure.
 - 3.19 Provide necessary documentation (eg. User guides) and demonstration of managing the SSC web.
 - 3.20 Support ICTA to keep the web application up and running by resolving any identified technical issues relating to the web application s during the project period.
 - 3.21 Vendor should resolve security issues and bugs identified according to the audit report by ICTA.
 - 3.22 Vendor should provide visibility of the web application to ICTA
 - 3.23 Maintenance of web application
 - 3.24 Following services should be provided by the
 - i. consultant for a period of a one (1) year without any additional cost
 - 3.25 All the documents must be submitted in to SCM or confluence (location will be provided by ICTA)
 - 3.26 All the source codes must be submitted in to SVN or GIT hub (period of a one (1) year without any additional cost)
 - 3.27 Web application developer should adhere to the highest standards conforming to World Wide Web (W3C) standards
 - 3.28 Testing and Quality Assurance
 - 3.28.1. Quality Assurance should be guaranteed for the whole web application in all aspects.
 - 3.28.2. Quality Assurance approach should be described in detail in the Methodology.
 - 3.28.3. The web developer should implements 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 application s where the Web application should be immune to exploitations such as, SQL Injection; Cross-site scripting (XSS); Session/(J hack guard) URL poisoning etc
 - 3.29 Web application should be mobile responsive.
 - 3.30 The website should be Unicode compatible.

4.0 Team Composition & Qualification Requirements for the Key Experts (and any other requirements which will be used for evaluating the Key Experts)

- Project manager
- 01 Tech Lead
- 01 Senior software engineer
- 03 software engineers
- 02 UI engineers
- 02 content developers

Key Positions	Preferred Qualifications	Preferred Experience
Project Manager	Relevant degree from a recognized university	Demonstrated project management experience in at least one year full time project of similar nature.
Tech Lead (1)	Relevant degree from a recognized university or equivalent	Demonstrated led the development team at least two years full time project of similar nature.
Senior software engineer (01)	Relevant degree from a recognized university or equivalent	Demonstrated software engineering experience in at least three year full time project of similar nature.
Software engineer (more than 03)	Relevant diploma from a recognized Institute or University	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 (more than 02)	Relevant diploma from a recognized university or equivalent	Demonstrated skills on graphic designing in at least two years full time project of similar nature.

5.0 Final outputs

5.1. Primary Output of this project

5.1.1 Wireframe

5.1.2 Graphical design

5.1.3 Beta version of the Web site

5.2 Final Output of this project

5.2.1 Final SSC web site

5.2.2 Signed MoU with ICTA and site owners

5.2.3 All the guide line documents and project completions reports

5.2.3 Link SSC web application with the SSC facebook and other related social media

6.0 Reporting Requirements

6.1 Hard copy submission

- 6.1.2 Statement on completion on activities mentioned in the deliverables under each task
- 6.1.3 Project completion report at the end of the project
- 6.1.4 User guides for managing the SSC web portal (technical and non-technical)

6.2 Softcopy submission:

- 6.2.1 Project completion report.
- 6.2.2 User guides for managing the SSC web (technical)
- 6.2.3 SSC web backup and fully administrative rights to ICTA

7.0 Functional Requirements and Nonfunctional Requirements

7.1 Functional Requirements

7.1.1 General

- 7.1.1.1 Advance search should be able to give suggestions
- 7.1.1.2 Search bar should be able to have advance search
- 7.1.1.3 All the viewers will be able to access, view and post in the public the forum
- 7.1.1.4 All the visitors will be able to access subject and connect to the relevant facebook page (Subject – is refers to either issue or an opportunity)section
- 7.1.1.5 Subject section
- 7.1.1.6 Section will have generally two sections
 - 7.1.1.6.1 Business
 - 7.1.1.6.2 Issues
- 7.1.1.7 subjects will be able visit see according to the GN division (SSC) vise or subject type
- 7.1.1.8 Visitors will be able to click GN division and view all the subjects or visitors will be able to select a particular subject type to view all the subjects under that particular issue type.
- 7.1.1.9 Viewers will be able to simply click an issue box and view all the details related to that issue, and view the status
- 7.1.1.10 Issue box will contain following
 - 7.1.1.10.1 Issue name
 - 7.1.1.10.2 Issue type
 - 7.1.1.10.3 Related Grama Niladari division
 - 7.1.1.10.4 A link to the particular Grama Niladari division facebook page
 - 7.1.1.10.5 Description of the issue
 - 7.1.1.10.6 Related or videos Images
 - 7.1.1.10.7 Reference number
 - 7.1.1.10.8 Location
 - 7.1.1.10.9 Status
- 7.1.1.11 All the users will be able to visit Media page and either view or download media
- 7.1.1.12 All the users will be able to visit Resources page and either view or download any resource
- 7.1.1.13 Users will be able to retrieve any deleted subject item.
- 7.1.1.14 If a tag is been deleted from the Facebook page subject box will be deleted from the system as well.
- 7.1.1.15 In a case of password or user name is miss placed , users will be able to retrieve it using forgot my password or username function

7.1.2 Corporate partners

Cooperate partners – who have partnership with SSC project to develop and ensure the further development of the project and who are involved with larger donations. Ex Microsoft, Moabite. MAS

Cooperate partners can either sign up or invited by ICTA

- 7.1.2.1 Sign up
- 7.1.2.2 User must enter Company name
- 7.1.2.3 Upload a company logo
- 7.1.2.4 Enter contact person name
- 7.1.2.5 Enter contact number
- 7.1.2.6 Enter contact email address
- 7.1.2.7 Facebook page name
- 7.1.2.8 Facebook page link
- 7.1.2.9 Human verification
- 7.1.2.10 Submit user details to register
- 7.1.2.11 Registered partners will receive a confirmation mail from ICTA
- 7.1.2.12 Registered partners will be able to view any subject type
- 7.1.2.13 After selecting the subject user will be able to view the following
 - 7.1.2.13.1 Issue name
 - 7.1.2.13.2 Issue type
 - 7.1.2.13.3 Related Grama Niladhari division
 - 7.1.2.13.4 A link to the particular Grama Niladhari division Facebook page
 - 7.1.2.13.5 Description of the issue
 - 7.1.2.13.6 Related or videos Images
 - 7.1.2.13.7 Reference number
 - 7.1.2.13.8 Location
- 7.1.2.14 Partners will have their own page and it will be linked to their official Facebook page
- 7.1.2.15 Partners will be able to share donation and other information on their Facebook and selected GN pages (donated Facebook pages).
- 7.1.2.16 Partners will be able to de -activate their partnership temporarily by simply de activating the account.
- 7.1.2.17 Partners will have their own page and it will be linked to their official Facebook page
- 7.1.2.18 Partners will be able to share donation and other information on their Facebook and selected GN pages (donated Facebook pages).
- 7.1.2.19 Partners will be able to de -activate their partnership temporarily by simply de activating the account.
- 7.1.2.20 Deactivation time can be given after the times runs out account will be automatically reactivated.
- 7.1.2.21 After deactivation partners will be able to manually activate their account
- 7.1.2.22 Partners will be able to delete their partnership by simply deleting the account
- 7.1.2.23 If a partner de activate or delete their account their logo will also get deleted or temporarily get deleted from the web site. After reactivation logo will be display in the web site

7.1.2.24 In a case of re-registering partner can find the logo from the media library or re upload their logo

7.1.2.25 If a partner delete their account they will have to re-register to become a partner

7.1.2.26 Partners will be able to contact users (send messages)

7.1.2.27 Block users

7.1.3 Admin

7.1.3.1 Log in

7.1.3.2 Will be able to do all the activities that a donors, partners and Knowledge agents can

7.1.3.3 Delete partners

7.1.3.4 Temporarily deactivate or activate accounts

7.1.3.5 Temporarily hold the project

7.1.3.6 Check verification of the user

7.1.3.7 Send mail to the user

7.1.3.8 Send automatically generated mails.

7.1.3.9 delete SSC's account

7.1.3.10 deactivate SSC's account

7.1.3.11 Activate SSC's account

7.1.3.12 Invite partners

7.1.3.13 Contact users (send messages)

7.1.3.14 Edit subject back log

7.1.3.15 Delete and temporarily deactivate subjects

7.1.4 Knowledge Agents

7.1.4.1 Log in

7.1.4.2 Edit, delete, deactivate and activate subject box.

7.1.4.3 Report Donors

7.1.4.4 Report Partners

7.1.4.5 Request partners

7.1.4.6 Contact users (send messages)

7.1.4.7 Block users

7.1.4.8 Retrieve deleted subject items

(Above mention and more).

7.2 Nonfunctional Requirement

7.2.1 Assumptions

- 7.2.1.1 System runs under cloud computing data base (system developers should recommend wither its cloud or internal servers)
- 7.2.1.2 System should be able to handle unlimited amount of users
- 7.2.1.3 System is running under normal conditions

7.2.2 Accessibility

- 7.2.2.1 Pages will load within milliseconds , heavy pages will load within 1-1.05 seconds
- 7.2.2.2 Log-in page will appear with in less than a second
- 7.2.2.3 Site will be able to access any time any ware
- 7.2.2.4 After pressing the log in button system will be logged in within 0.5 mil seconds
- 7.2.2.5 Users will be able use their email address as their log in username

7.2.3 Disaster recovery

- 7.2.3.1 Users must answer the security question , which provide access to them if they lose their password or username
- 7.2.3.2 Users must give an alternative email address so if they lost their user name the long in code will be send to their alternative email address
- 7.2.3.3 System will automatically back up all the data in every 15 minutes in to a another server

7.2.4 Efficiency

- 7.2.4.1 Users should be able use their email address as their log in username
- 7.2.4.2 After sending the message it will deliver instantly
- 7.2.4.3 Any email sent by the server will get delivered within milliseconds to the recipient
- 7.2.4.4 Dictionary support for all the text which will be written on the system
- 7.2.4.5 Users will be able to use search engine and it will provide suggestions for the ease of use
- 7.2.4.6 Forum topics will be ailing according to amount of replies

7.2.5 Effectiveness

- 7.2.5.1 If the user name or password is incorrect, it will indicate that within a message User name or password is wrong and it will indicate the user which entity is incorrect by high lighting the incorrect area
- 7.2.5.2 Also users will be able to forget password section, after confirming the answer to the secret question login code will be send to the registered email address within seconds.

- 7.2.5.3 Also admin is able to use a back door entrance to login to the site if he or she lost the password after confirming with security code that has been given to the admin in the registration email will be send to their registered email addresses by providing login details
- 7.2.5.4 Users will be able to simply drag and drop and set the profile picture
- 7.2.5.5 Profile pictures and all the pictures will be systematically examine for any nudity and system will automatically remove unwanted pictures after sending a message to admin and to the user
- 7.2.5.6 If a person keep uploading nudity pictures after 3 warning times system will ban the persons account permanently
- 7.2.5.7 Dictionary will be available and users will be able to use it while they are writing it will provide suggestions. Ex Google docs dictionary
- 7.2.5.8 Users will be able to forget password section, after confirming the answer to the secret question login code will be sent to the registered email address within seconds.

7.2.6 Extensibility

7.2.6.1 System will use a Light software platform and by using PHP and other extendable languages (by not relying on one frame work) it gives the developers freedom further enhancement

7.2.7 Privacy

7.2.7.1 User are able to hide their account details by setting privacy setting to private

7.2.7.2 Users will be able to specify who are the people have access to their

7.2.8 Robustness

7.2.8.1 Data base will indicate if there is a threat of unexpected unlimited number of requests area coming and this will protected the data base from reaching the its limit caused by unexpected number of database connections or request or data

7.2.8.2 The system should enable to prevent the unwanted SQL injections

7.2.9 Security

7.2.9.1 Confidentiality and Integrity

All developed eServices Web applications/ back end e-services should ensure “confidentiality” and “integrity” whenever required by adhering to transport and message level security standards. (i.e. HTTPS, WS-Security)

7.2.9.2 Availability

All eServices Web applications / back end e-services should be developed to ensure “High Availability” to remain the system available all the time. (e.g. eServices Web applications clustering capability should be taken into consideration in the development)

7.2.10 Non-repudiation

7.2.10.1 All eServices Web applications / back end e-services should ensure non-repudiation by having standard audit-trails and provisions to have WS-Security using digital signatures

7.2.11 Audit Facilities

7.2.11.1 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 -

- I. Data Capture & Maintenance
- II. Creation of an entry / item
- III. Modification an item
- IV. Deletion
- V. Control (or status change)
- VI. Process execution
- VII. Data synchronization
- VIII. Print (only selected item)
- IX. Retrieval
- X. 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.

7.2.12 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 -

- XI. Equipment failure
- XII. Physical / natural Disaster
- XIII. Messaging or communication facilities.
- XIV. Changes in operations and policy
- XV. Sudden absence of key personnel
- XVI. 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.

7.2.13 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

8.0 Output, Deliverables, Payment and Time Schedule

The maximum period of the contract is two months

	Task	Deliverables	Deadline	Payment % of Total Payment
1.	Initial design process of web site	Provide a report including following <ul style="list-style-type: none"> • Selection criteria of selecting SSC web application • Comprehensive study regarding web application similar to this project • Approved wireframe documents • Approved graphical designs • Submit the top level architecture for ICTA approval • Project management plan • QA plan • DSRS document • DSTD document 	Commencement Date + 1 week	20%
2.	SSC web Initial development stages	<ul style="list-style-type: none"> • Submit of the prototype version of the web application 	Commencement Date + 2 weeks	10%
3.	Development of SSC web (Beta version)	Submit the completed web including the following: <ul style="list-style-type: none"> • Multilingual web portal in a user attractive and user friendly manner in Sinhala/Tamil and English languages. • Translate all the content • Upload the content and finalize the web portal • Link the SSC Facebook pages with the SSC web • Technical report on, host, server configuration, firewall configuration, of SSC web. • Search Engine Optimization should be carried out for the main web portal • Beta version release (After ICTA evaluation) • Web application should be mobile responsive 	Commencement Date + 4 weeks	20%

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4.	SL CERT audit for beta version	Submit the complete version of beta version of the web application to get the SL CERT certification	Commencement Date + 2 weeks	5%
5.	Development of SSC web Final web site	<p>ICTA (or ICTA nominated expert's) approval for</p> <p>Submit the completed web including the following:</p> <ul style="list-style-type: none"> • Fully developed multilingual web application with user attractiveness • All the user interaction functions should function with 100% accuracy • Technical report on, host, server configuration, firewall configuration, of SSC web. • Complete guideline for web site • Search engine optimization • Technical report on, host, server configuration, firewall configuration, of SSC web. • Web application should be mobile responsive 	Commencement Date + 8 weeks	15%
6.	SL CERT audit for final version	Submit the complete version of the web application on to get the SL CERT certification	Commencement Date + 2 weeks	15%
7.	Submit Project Closure report.	<ul style="list-style-type: none"> • Submit a project completion report including , Project summary, • Full web application backup (web and database) of the Main culture portal and other technical supported web sites and server configurations and fully administrative right document.- on a CD/DVD • Proper issue management document • QA reports • Source codes must be checked into SVN • All the required documents should be uploaded into the DMS provided by ICTA 	Commencement Date + 8 weeks	5%
8.	Maintenance and Services	<p>Statement on conducting;</p> <ul style="list-style-type: none"> • Maintenance of the SSC web with hosting 	Sign-off date + one year	10%

Appendix A

