Application Requirements Specification

Web application to guide through RAM and facilitate its implementation

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1.   SCOPE

1.1   Overview
The LRC (IFRC Livelihoods Resources Centre), hosted by SRC (Spanish Red Cross) in consortia with the ILO (International Labor Organization), OXFAM and IFRC (International Federation of the Red Cross and Red Crescent Societies) are working on a global enhance organization capacities project developing and adapting tools to facilitate the humanitarian practitioners work.

The market analysis becomes a core tool for better addressing priority needs in rapid and slow-onset emergencies. Broader analyses of market-systems for the purposes of rehabilitating livelihoods after emergencies are needed in order to:
  i.   Design better social protection against chronic poverty.
  ii. Reduce poverty through sustainable economic development.

Several organizations apart from those within the Red Cross Red Crescent movement such as IRC (International Rescue Committee), Act Alliance and Dan Church are using or adapting the RAM (Rapid Assessment Market, developed by IFRC and ICRC) as the base tool for market assessments immediately after crisis.

RAM has proved a quick tool and adaptable enough to be used by other organizations; therefore there is a clear need to develop an application including improved functionalities and the adaptability to facilitate even more the use by any organization.

1.2   Objectives
The objectives of the application are as following:

  -   To facilitate the gathering of data providing practitioners with the RAM tools in a web and/or mobile interface to facilitate the storage and systematization of data.
  -   To assist practitioners to customized tools and surveys to gather a more relevant information.
  -   To guide practitioners through the RAM process conducting them through the different steps.
  -   To assist practitioners in decision-making and data analysis, mainly by aggregating, organizing and showing relevant information. In any case the application will automatize the analysis.
  -   To automatize the report field filling when possible, mostly aggregating data from different locations when the same RAM involves different geographical areas.
  -   Allow users to access to previous RAM reports organized geographically and per commodity.

1.3 Limitations & Assumptions

The limitations are listed below:

- As noted above, in any case the application will automatize the analysis or decision-making, it will just assist practitioners to do it.

- In case of no internet connection the user will be able to gather data, but limited feedback will be given by the application, which will process the data and give feedback when internet connection is available to access the web application. This approach reduces maintenance of the application and ensures better sustainability.

2. LOGIC REQUIREMENTS

Below the most relevant use cases:

2.1. Register a RAM instance

An authenticated user will be able to create a new RAM instance, becoming the *RAM Team Leader*.

2.2. Edit practitioners included in a RAM.

RAM Team Leader will be able to add and delete *RAM Team Members* and/or *Survey Takers* to the RAM. Also it will be allowed to change roles linked to the RAM. If one added user is not register in the application an email will be sent to invite him/her to sign up.

2.3. Download RAM tools on ODK Survey (ODK 2.0)

Depending on the step the RAM is, the user will be able to download different tools:

- Step 1: Even it will be possible to download tools 2, 3 and 6, they may not be downloaded. Application will recommend to fill those tools in the web.

- Step 2: Tools 8, 9 and 10.

- Step 5: Tools 13, 14 and 15.

2.4. Upload Surveys results.

Users will upload Survey results to the application.

2.5. Edit tool content

For tools 2, 3 and 6 users are able to edit tool content maintaining a history of what has been edited. Tool 6 will take some data from tools 2 and 3.

2.6. Create Draft Market Flow Map

The application will allow to create a Draft Market Flow Map for a specific commodity.

2.7. Modify Market Flow Map

Users can insert, edit or delete flows within the Market Flow Maps.

2.8. Create Draft Market System Map

The application will allow to create a Draft Market System map for a specific commodity.

2.9. Modify Market System Map

Users can insert, edit or delete flows or elements within the Market System Maps.

2.10. Go through the process of deciding about continuing the RAM or not

Users can go through the decision process described in Tool 5 answering each question. To assist it the application will show relevant information for each question.

2.11. Consult decission process result for each user

RAM Team Leader will be able to consult the results for each team members.

2.12. Step forward in the RAM process.

RAM Team Leader will be responsible to step forward in the RAM process when each step is completed.

2.13. Allow to customize surveys for ODK Survey (ODK 2.0)

RAM tools can be customized adding market places and commodities as options. This will be done at the following steps:

- Step 3: Customization will be done for tools 8 and 9.

- Step 5: Customization will be done for tools 13, 14 and 15.

2.14. Analyze collected data

Users can go through the conclussion tree described in Tool 11 answering each question. To assist it the application will show relevant information for each question.

2.15. Fill in report

The application will allow users to fill in the sections of the report while it shows the relevant data and findings for each section which have been included in previous steps.

2.16. Export draft editable report

RAM Team Leader will be able to export a draft editable report.

2.17. Publish report

RAM Team Leader will be able to publish a report to make it available to any user.

2.18. Edit monitoring data

The application will allow users to edit monitoring collected data to refine it.

2.19. Consult monitoring data

Monitoring data will be available to consult by some roles depending on if it has been published or not.

2.20. Publish monitoring data.

RAM Team Leader will be able to publish monitoring data.

2.21. Consult previous completed RAMs

Any user will be able to consult previous completed RAM reports.

Livelihoods Resources Centre / Application Requirements Specification

3. GENERAL REQUIREMENTS

3.1 Environment and technology requirements

The application will have two main components:

- Surveys component:

    o Compatible with ODK 2, the application will use these tools to manage surveys from mobile devices.

    o The data will be sent to an Aggregator server on the server side from where it will be collected to be analyzed.

- RAM guide and data analysis component:

    o The application is expected to be based on Liferay Portal 6.2.

    o The application will be integrated in the Livelihoods Resources Centre website.

    o Web pages (except Market Maps) are required to properly fit on mobile devices, working on iOS and Android platforms.

3.2 Graphical User Interface (GUI) Requirements

GUI has to be attractive and user friendly, it will be available in four different layouts (mobile, portrait tablet, landscape tablet and desktop).

The wireframes will be built after this specification contest will be done. Those wireframes will be based on the specification details. And it will be iterative approach - once the wireframes are completed, they will be presented to LRC Staff and other stakeholders and determine what screens, features, controls, permissions (etc.) need to be modified, added, or deleted.

3.3 Languages

The application should be available in English, Spanish and French.

3.4 Security

All security checks will occur against permissions. Each function in the system will validate a user's permission against the required permission for the task. Non-registered users will have read-only access to the application just to consult completed RAMs. The permission model from Liferay Portal will be reused in the application. A link with the permission model of ODK2 should be developed.

One or more permissions will be assigned to roles. There will be roles linked to the application and roles linked to each RAM instance. A user may have more than one application role, and also different roles for different RAM instances. Below is a list of roles and permissions linked to the application:

- Anonymous user: are not registered users.
- Autheticated user: are any registered user.
- Administrator: Users charged with the web portal administration.

	Anonymous user	Authenticated user	Administrator
Create a RAM instance		X	
Consult published monitoring data	X	X	
Delete existing RAMs			X

Below is a list of roles linked to a RAM instance:
- Survey Taker: are users who only take surveys. They are allowed just to download and upload surveys.
- RAM Team Member: are users who collaborate with the RAM in the whole process. Members of the RAM Team.
- RAM Team Leader: A RAM instance can have several users with leader role, although it is recommended to have just one. The RAM Team Leader(s) will be the user(s) who will take the main decisions and who will compile all the RAM information.

	Survey Taker	RAM Team Member	RAM Team Leader
Add users to the RAM instance			X
Delete users from the RAM instance			X
Change user roles linked to the RAM instance			X
Download RAM tools for ODK Survey	X	X	X
Upload surveys results	X	X	X
Edit tools 2, 3 and 6 content		X	X
Create Draft Market Flow Map		X	X
Modify Market Flow Map		X	X
Create Draft Market System Map		X	X
Modify Market System Map		X	X
Carry on Tool 5 decision process		X	X
Consult and validate Tool 5 results			X
Step forward in the RAM process			X
Allow to customize surveys for ODK Survey		X	X
Analyze collected data		X	X
Consult collected data analysis		X	X
Fill in the report		X	X
Export draft editable report			X
Publish report			X
Edit monitoring data		X	X
Consult non-published monitoring data		X	X

4. REQUIRED DOCUMENTATION

- Requirements specification (this document).

- Logical data model

5. HELP / USER DOCUMENTATION

An interactive help will be provided within the application which will be accessible in any moment.

6. FUTURE ENHANCEMENTS

- To support mobile devices (Android and iOS) offline access to the analysis section. Native applications with web services using Liferay Mobile SDK and screenlets should be developed.

Livelihoods Resources Centre / Application Requirements Specification

7.   GLOSSARY

7.1   Definitions

Aggregator server: Server to upload and process ODK Data.

Open Data Kit: set of tools which help to author, field, and manage mobile data collection solutions. ODK will be used within this application.

ODK Survey: Mobile application to collect data.

Liferay: Web Portal where the application will be deployed.

7.2   Acronyms

IFRC - International Federation of the Red Cross and Red Crescent Societies

ICRC - International Committee of the Red Cross

LRC - IFRC Livelihoods Resource Centre

SRC - Spanish Red Cross

ILO - International Labor Organization

ODK - Open Data Kit

RAM - Rapid Assessment Market, developed by IFRC and ICRC

GUI - Graphical User Interface

Livelihoods Resources Centre / Application Requirements Specification