

# **Requirements Specification**

(Technical Report)

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## **Marketing Information Module**

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## **Section 1.Overview**

### **1.1. Problem Definition**

The main problem is the low income of the Egyptian growers (farmers), producers and exporters that caused by different marketing obstacles ( such as traders monopolization of market prices, high cost of transportation, long distance between marketing and production canthers, high prices of packaging, etc ...).

### **1.2. Goals**

Provide adequate marketing information that aid to solve the marketing obstacles and sequentially to increase the grower/producer and exporter income.

### **1.3. Objectives:**

Develop a nationwide web-based marketing information system that will use to speedy collection and dissemination of market information. This web-based is important to meet the Information gap between growers, producers and exporters. Consequently it provides the end user with other useful information that is marketing opportunities information, market publications (local and foreign market prices, magazines, technical Reports, etc ....) and marketing successful stories. This information will aid to increase the agriculture marketing efficiency.

## Section 2. Requirement Analysis

**2.1. System actors and information needed:** Identify each type of module user, and specify all needed information for each type.

Who	Information Needed
<p><b>Grower</b></p> <p><b>And Producer</b></p>	<ul style="list-style-type: none"> <li>• How to select the best product/crop.</li> <li>• Communication with exporters' directory.</li> <li>• Marketing (local/Foreign) Opportunities and Prices.</li> <li>• Technical Reports and Other Marketing publications.</li> <li>• Successful Stories in the marketing area.</li> <li>• Agri / Production standards, agreement and policies.</li> <li>• Regulation and policies links and national links.</li> </ul>
<p><b>Agribusiness</b></p> <ul style="list-style-type: none"> <li>• Exporters</li> <li>• Consultants</li> <li>• Input Suppliers.</li> </ul>	<ul style="list-style-type: none"> <li>• Communication growers and producers directories.</li> <li>• Market Change Orientation.</li> <li>• Agri / Production standards, agreement and policies</li> <li>• Regulation and policies links and national links.</li> <li>• <i>Market (local/Foreign) Opportunities and Prices</i></li> <li>• Technical Reports and Other Marketing publications.</li> <li>• Successful Stories in the marketing area.</li> </ul>
<p><b>Scientists</b></p> <ul style="list-style-type: none"> <li>• Researcher.</li> <li>• Market Analysts.</li> <li>• Students.</li> <li>• ....</li> </ul> <p><b>Decision Maker</b></p>	<ul style="list-style-type: none"> <li>• Information about growers/producers and exporters and their specialty.</li> <li>• Market Library Resources (Reports, Publication, magazines .....).</li> <li>• Statistical information (season prices, weekly prices ...).</li> <li>• Communication with market stakeholders.</li> <li>• Important links, useful links national links.</li> <li>• Statistics, analysis and intelligent report.</li> <li>• Market monitoring information:               <ul style="list-style-type: none"> <li>• <i>Market (local/Foreign) Opportunities and Prices</i></li> <li>• <i>Specialty of growers, producers and exporters (Regional information).</i></li> </ul> </li> </ul>

## **2.2. Actors Characteristics**

This section profiles the users in terms of their roles and IT skills and experience. The users of the system are categorized as *end-users* and, administrator user as follows:

*End-users* may be in one or more of the following categories:

- Public Users.
- Authorized Users (members of marketing information Module stakeholders).

Public users mean the people how can get benefits from the system such as, exporters. This user well interact with the system through using Internet, to get the data about growers and producers.

An “Authorized Users” means a user who is a member of the identified marketing information Module stakeholders, and who has successfully logged in the backend component. *They* needs to be able to easily:

- Insert new content, in text and other formats.
- Update existing content, in text and other formats.
- Delete the existing content.
- Upload files and images.
- Published Capability (for the approver).

Administrator user performing a *system administrator* role that are :

- Develop and maintains.
- Manage user accounts, i.e. register Public Users as Authorized Users.

*End-users* may be assumed to don't have IT skills and experience. *Authorized Users* should be assumed to be relatively experienced users of Internet applications.

### Section 3. System Models

Based on our objectives for developing a nationwide web-based information system that will use to speedy collection and dissemination of marketing information, system assumptions and components will be as the following:.

**The system model assumptions are:** Target users have the capabilities for free, easy and efficiency way for using these modules. All available information and publications will be provided by different stakeholders.

**The proposed system consists** of four sub-modules, that are *Marketing Directories*, *Opportunities*, *Guider* and *successful stories* as shown in figure 1, with two components that are backend and front-end.

**The backend component** provides the data management functionalities that enable each stockholder to enter/update/delete/publish data items. This component provides the marketing module data security, that for each stockholder there is a specific username and password which associated with a specific capability.

**The front end component** provides the information retrieving/browsing/accessing functionalities, and is available for any site user.



Figure1.System Models Components

### 3.1. Marketing Directories

**Objective:** this sub-module provides adequate information about Egyptian *Growers, Producers and Exports*. It consists of different functionality and capabilities as shown in figure2.

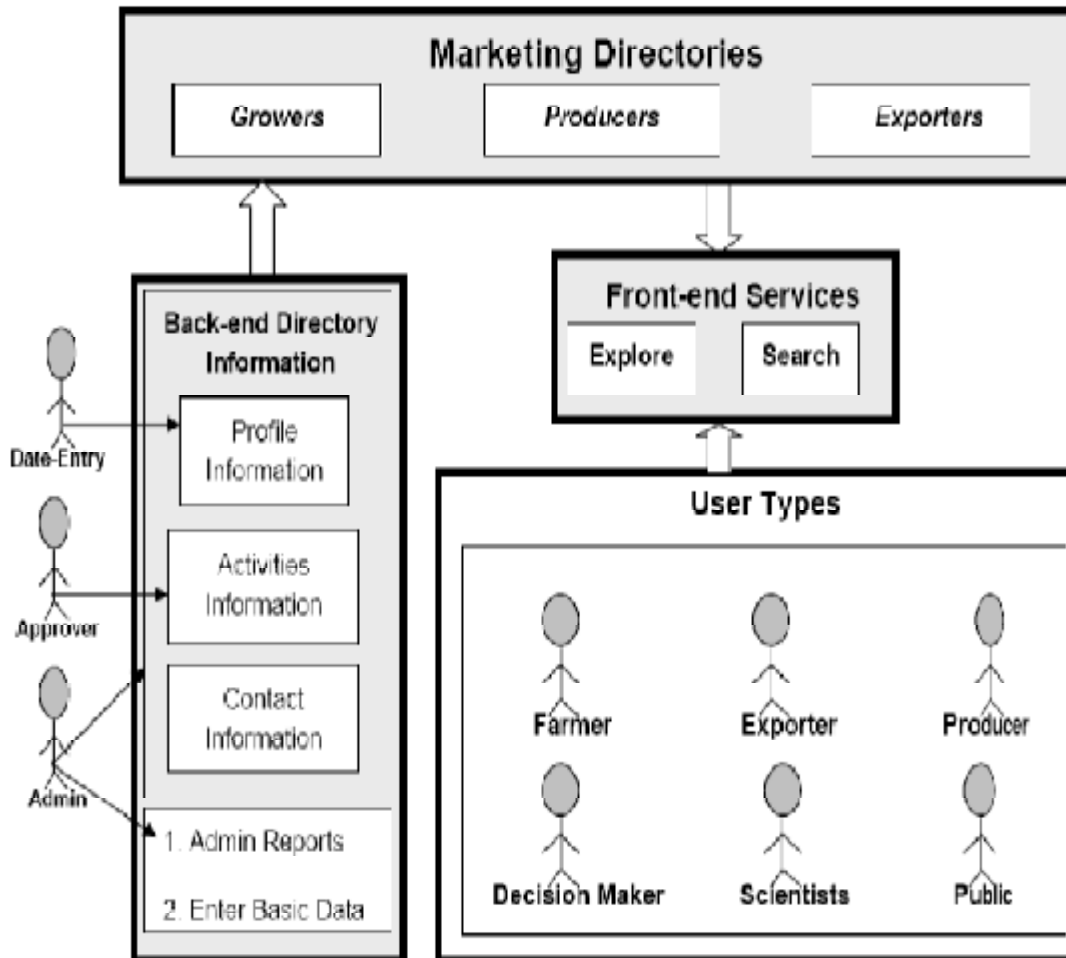


Figure2. Marketing Directories' Users

**Users:** There are two types of users in the back-end component. First one is data entry, who responsible for entering data and the second is the administrator, who is responsible for acceptance or rejection all entered data form the data-entry and publish it to the front-end.

**Inputs:** The needed information form each market directory can be classified in to three categories that are profile, activities and contact information, each category has different type of data as shown in the following:.

<u>Profile Information</u>	<u>Activities Information</u>
<ul style="list-style-type: none"><li>•Name.</li><li>•Type: 1. Person    2. Company    3.Organization</li></ul> <p><i>For Agriculture Association Members</i></p> <ul style="list-style-type: none"><li>•Association Name.</li></ul>	<ul style="list-style-type: none"><li>•Activity : 1. Grower    2. Producer.    3. Exporter 4. Two or more types.</li></ul> <p><b>General Specialty:</b></p> <ol style="list-style-type: none"><li>1. Agriculture Crops    2. Industrial product ( based on agriculture crops).</li></ol> <ul style="list-style-type: none"><li>•Type: each general type has different types 1. Fruits    2. Vegetables    3. Food processing 4. Others</li></ul> <ul style="list-style-type: none"><li>•Crop/Product</li><li>•Verities.</li><li>•Organic /Non organic attribute.</li></ul>
<u>Contact Information</u> <ul style="list-style-type: none"><li>•Location: 1- Governorate    2-Directorate    3-Vilage</li><li>•Contact Person</li><li>•Telephone &amp; Fax.</li><li>•Web page &amp; e-mail.</li></ul>	

**Output:** - All input data will be used for providing the front-end services and functionality.



### 3.2 Marketing Opportunities

**Objective:** this module provides marketing opportunities information. There are different marketing opportunities (sell/buy for local markets or export/import for foreign markets).

**Inputs:** marketing opportunity data that can be categorized as the following:



### 3.3 Marketing Guider:

**Objective:** this module provides different type of publications (technical and analysis reports, market trend and prices, marketing magazines, etc...).

**Inputs:**

- Meta data about the publication (type, language, title, description).
- The uploaded file ( html, pdf, text, word, etc...).

### 3.4 Successful Stories:

**Objective:** this module provides information *about marketing successful stories.*

**Inputs:** input data is *story (title, author, description, time and place, problem effects, solution methodology, success reasons, solution effects)* and with capability of upload images or files.

## Section 4. Function Requirements

### Login

There are two types of data management users. The first is responsible for entering data (data-entry user). The second is responsible for approving the entered data (data-administrator, simply administrator). Each stockholder (in the current phase: HIEA, AFR and IDC units) will have these two types of users. Public user information will be published by IDC units. For each stockholder uses a specific username and a password that is associated for a particular type of market directories and a particular type of data management. In back-end component, input of the login function are: user name and password. The main objective for this function is to save system security and aid the information truth.

### Data accessing

- Facilitate data navigation
- Explore all marketing module information.

### Search

- **Benefits:** Save time and effort for the end-user and improved information availability.
- **Input:** Search by free text or selecting specific searching keywords.
- **Output:** Displays one or more page that reflects the search target.

**Report Generation:**

• **Benefits:** Provides the monitoring of data transaction for a specific period of time. As shown in figure3, the transaction report contains *user name*, *organization*, *region* and his actions for this period of time.

<b>Input Data</b>	
<b>Region name:</b> (Choose from list).	<b>Organization name:</b> (Choose from list).
<b>User Name:</b> (Choose from list).	<b>Farm name:</b> (Choose from list).
<input type="button" value="Generate"/>	

<b>The template of <i>Output Data Report</i></b>	
<b>Form Name</b>	<b>Actions</b>
...	...

Figure3. **Data transactions report form**

## Section 5.Non-Functional Requirements

### 🚧 Interfaces

- Market Module Support the Egyptian user (in Arabic language interface).
- It has to be accessed via internet using *Windows Explorer*.
- Since most end-users have little experience with computers, the market module should be user friendly and the following interfaces are recommended:

**Menus**, which provide the ability to obtain information through choice and so avoid any typing errors.

**Windows, which is very useful in some situations such as:** system help files, error messages, and reports.

### 🚧 Security

Different factors will be used to protect the website from accidental or malicious access, use, modification, destruction, or disclosure. Specific requirements in this area could include the need to:

- *Assign certain functions to different components (front-end and Back-end).*
- *Restrict communications between some areas as entered data, published data, rejected data and data after edit.*

### 🚧 Verification and Validation requirements

Verification and validation activities must be done before delivering the final system. The objective of the verification activity is to verify that there are no discrepancy between the implementation and the design. The objective of the validation activity is to ensure that the system is valid and satisfy users' requirements.

## Section 6. Workflow Diagram

As shown in figure4, the workflow provides different benefits as:

- Improved change information management.
- Describe the information quality.
- Describe the communication between different module stakeholders and actors.

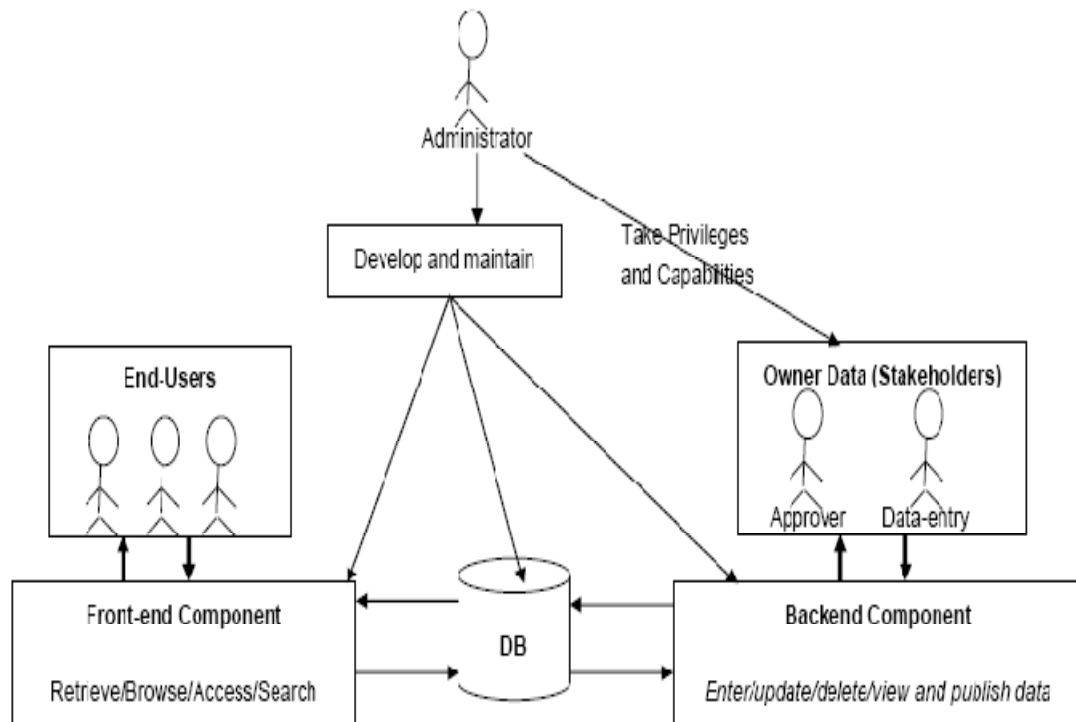


Figure.4. Workflow diagram

## Section 7. Dataflow Diagram

Figure.5 represents a scenario for dataflow between data-entry and approver for *all market modules components*. In this scenario, a data-entry operator may add a new record and modify it at any point in time until he submits it for approval. Once it be in "To be approved" state, the data-entry will no longer have any access to it unless it gets rejected by the administrator (Admin). Administrator at some given organization receives a record to approve. Admin can modify this record, approve it, reject it and send it back to the data-entry, or simply delete it.

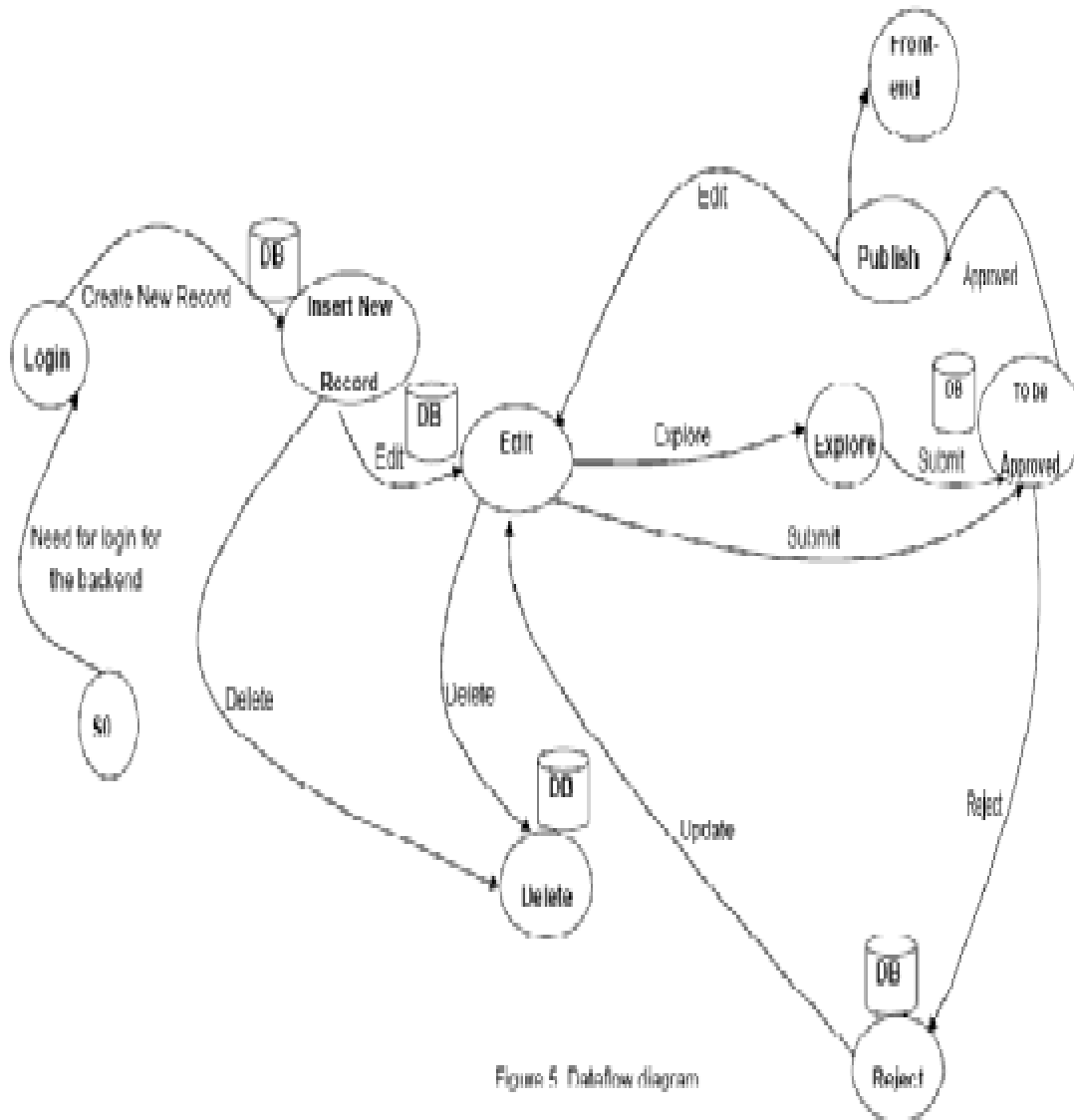


Figure 5 Dataflow diagram

## Section 8. Module Perspective

This section is intended to document operational characteristics (Software Specification) of the Marketing Information Module.

- **8.1 Module Interfaces**

The system will run as a web-based information system.

- **8.2 User Interfaces**

All user interfaces to the system will be provided via standard web browsers. It will be possible for a user to perform all system functions using MS Internet Explorer.

- **8.3 Operating System**

Server software will run on a MS Windows XP platform.

- **8.4 Database**

The system will use standard database protocols and SQL for data storage and retrieval.

- **8.5 Availability**

The system should be available on a 24hr x 7-day basis.

## Section 9. References

Document Title	Author
Stakeholders Analysis of Rural and Agricultural Development Communication Network.	Dr. Mohamed H. Kassem,
Agricultural Research Information Strategy	Dr. Hesham A. Hassan
Related Web-Sites	

## Section 10. Acronyms

Related Web-Sites

- § HEIA
- § The Horticultural Export Improvement Association
- § AFR
- § Agriculture Foreign Relations
- § UPEHC
- § Union of Producers and Exporters of Horticultural Crops