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Requirement Specification

PSF Membership Management System



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A. General

1 Organizational Background

The Private Sector Federation - Rwanda (PSF) is a professional organization, dedicated to promote and represent the interests of the Rwandan business community. It is an umbrella organization that groups 9 professional chambers. It was established in December 1999, replacing the former Rwanda Chamber of Commerce and Industry.

The Private Sector Federation (PSF) has registered major successes since its creation in 1999. Beyond a strong brand and membership base, PSF pioneered Business Development Services (BDS), registered wins in advocacy and played a strong national and regional role.

Yet, the business sector still needs to mature into Rwanda economic engine. While Vision 2020 and EDPRS call for a private sector led economy, the business sector, we realize that a strong Private Sector Federation must also achieve financial self-reliance.

Our members and our leaders have expressed willingness to support the Federation based on performance. To move towards self-reliance, we now have a clear membership fee structure.

Leadership will be critical for success. The key to success is ownership and accountability from all PSF stakeholders over the plan by all levels of PSF, i.e. the Secretariat, Province, Chambers and Associations. Both Rwanda's trajectory and PSF's history illustrate the power of determined leadership to deliver results.

2 Project Description

PSF is currently in a process of re-structuring and reviewing its strategies and is appraising the adequate resources necessary to support key objectives and to ensure that it can respond to the changing needs of their members and to the increased expectations from stakeholders. In order to be able to address the number of challenges, the Membership Management System (MMS) of PSF has come under review and its functioning and practicability is seen as an elementary and very important tool for the functioning of a modern Business Membership Organisation (BMO). The necessary modernisation and professionalization of the MMS is achievable through the implementation of an adequate software and seen is an urgent step towards adjustments and improvements for PSF.

3 Project Roadmap

The following figure describes the project roadmap:

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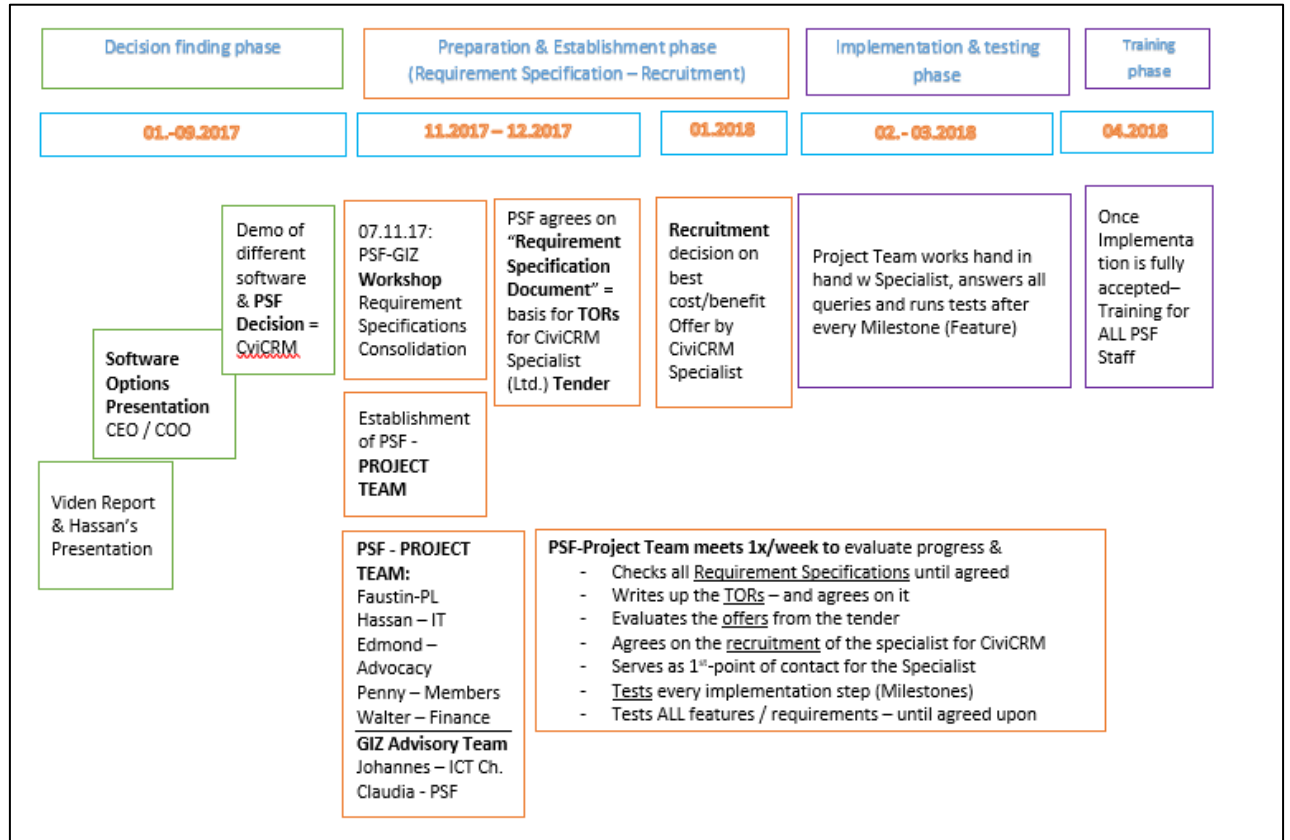


Figure 1 Roadmap

B. Requirement Specification

4 System Architecture Overview

4.1 High Level System Architecture

The system shall reflect the following access layers based on the organizational structure of PSF:

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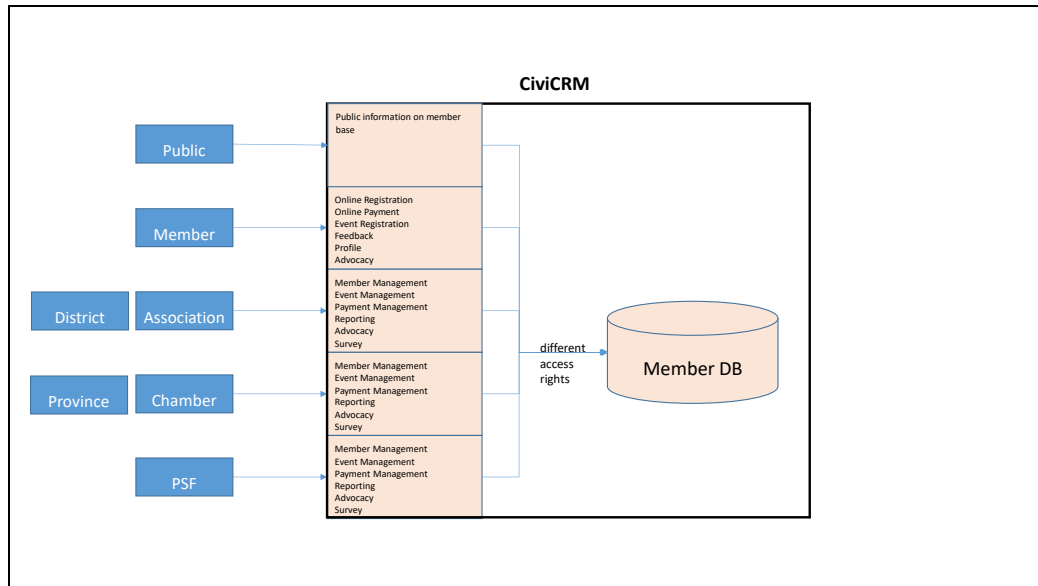


Figure 2 System Architecture

[Cust. Req. 1] System Access Level

A **public access** shall be granted to retrieve public available data from the membership database (for example company names and profiles). This data is listed on the PSF/Chamber/Association website and can be browsed with search fields and filters.

For potential **members** a self-service is provided on the PSF/Chamber/Association website to register as a new member. Existing members can login to the system with user name and password via the PSF/Chamber/Association website. There, the member has access to various services such as maintenance of company profile, online payment of membership fees, event registration and feedback forms.

Associations and **chambers** have administrator access rights to the system. The access is restricted to the members of the corresponding association or chamber. The administrator has access to features like membership management, event management, payment management and reporting.

Districts and **provinces** have administrator access rights to the system. The access is restricted to the members of the corresponding district or province. The administrator has access to features like membership management, event management, payment management and reporting.

The **PSF** administrator has access to the entire member database. The features provided are for example membership management, event management, payment management and reporting.

The system architecture and the required features are specified in the following sections.

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4.2 Organizational Structure

[Cust. Req. 2] Organizational Structure

The system shall reflect the following organizational structure:

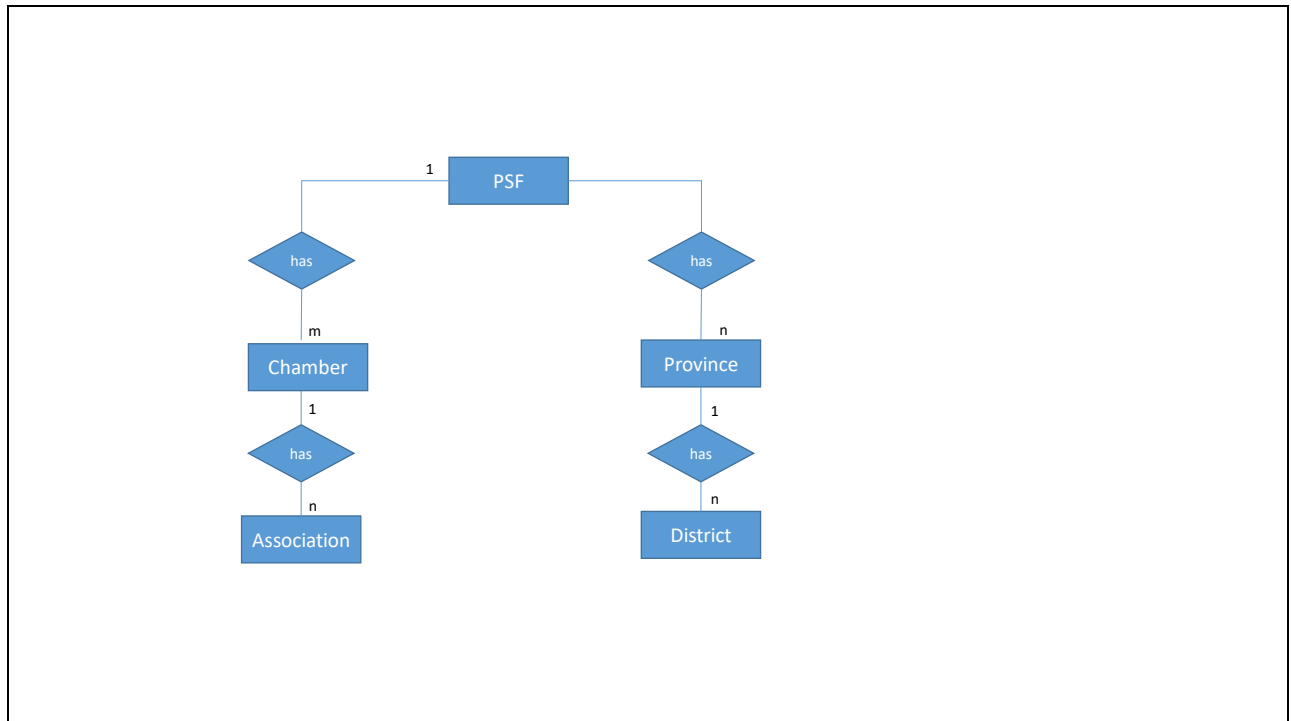


Figure 3 Organizational Structure

Explanation:

- Chambers and Provinces are always part of PSF
- Each association is part of exactly one chamber.
- Each district is part of exactly one province.

Currently there are

- X Chambers
- X Associations
- X members in total registered at PSF including chambers and associations

[Cust. Req. 3] Districts

It shall be possible to assign a member to one or more districts.

- List of Districts

[Cust. Req. 4] Provinces

Districts are assigned to the following provinces:

- List of Provinces

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[Cust. Req. 5] Leadership Information

The system shall store all leadership information of PSF, Chambers, Associations, Provinces and Districts, such as:

- Director
- Staff
- Chairperson
- Board
- Election terms
- Last election
- Contact details

[Cust. Req. 6] Reminder on Elections

The system shall display on the dashboard for the administrators when the next election will take place. In addition, an email shall be send out as a reminder.

5 Functional Specification

5.1 Membership Management

5.1.1 Membership Categories

[Cust. Req. 7] Membership Types

The following membership categories are reflected in the system:

- Ordinary member
- Indashyikirwa member
- Golden Circle Member

A member can be registered at different places depending on sector and location.

| | Association | District | PSF HQ |
|-----------------------------|-------------|----------|--------|
| Ordinary Member | 1..n | 1..n | 1 |
| Golden Circle Member | 0..n | 0..n | 1 |
| Indashyikirwa Member | 0..n | 1 | |

Table 1 Membership Categories

Explanation:

Ordinary members are member of one or more associations and/or member of one or more district offices. In certain cases (association too weak, no association in place), an ordinary member can also be member of PSF HQ.

Indashyikirwa members are always member of a district office. In addition, they can be members of one or more association.

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Golden Circle members are always member of PSF HQ. In addition, they can be members of one or more association and/or one or more district.

[Cust. Req. 8] Membership Number

Each registered member shall get a unique membership number according to the following scheme: XX – YY – ZZZZ – A

- XX = Membership Type (GC = Golden Circle, IN = Indashykirwa, OR = Ordinary Member)
- YY = District Number
- ZZZZ = Year of Registration
- A = serial number

[Cust. Req. 9] Membership Status

In addition, the following membership status are available:

- Active member: access to all member services
- Inactive member: only access to membership payment functionality
- Potential member: internal category

[Cust. Req. 10] Labelling of Members

A member shall be able to be categorized with labels (i.e. VIP etc.) that can be freely configured in the system.

[Cust. Req. 11] Change of Association/District

The system shall allow the change of the association/district of a member by the system admin.

5.1.2 Registration of Members

[Cust. Req. 12] Registration Process

The registration of new members shall be available through two options:

1. Online self-service on PSF/Chamber/Association website
2. Manual registration through PSF/Chamber/Association/District administrator in the system

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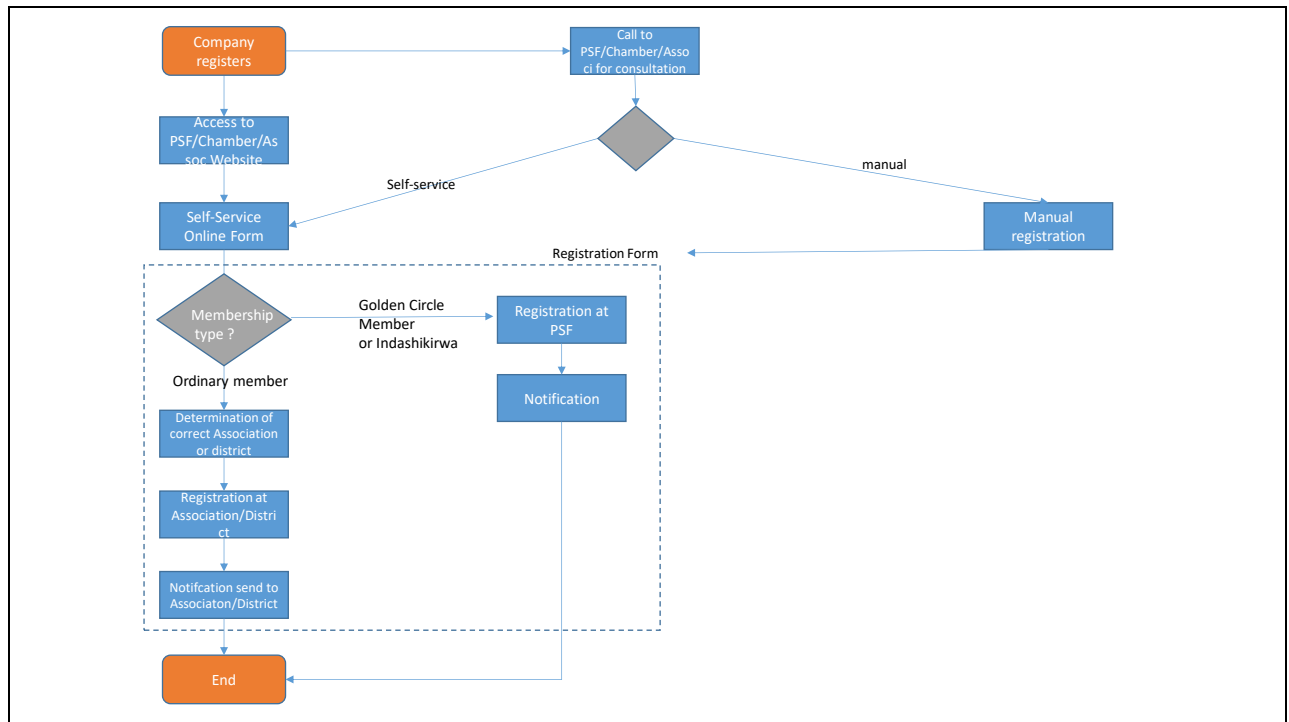


Figure 4 Membership Registration

The following rules apply for member registration:

1. Golden Circle members always register at PSF HQ
2. Indashikirwa members always register at District Level
3. Ordinary members register at the appropriate association, in district offices or PSF HQ. The association is determined through the member profile. However, the self-service shall be able to register also those members through the PSF website with a notification to the association/district after the successful registration (no need to redirect the potential member to a different website/self-service).

[Cust. Req. 13] Online Self-Service

The self-service is available for all potential members. The self-service form shall be integrated into PSF/Chamber/Association websites.

However, it shall be possible also for ordinary members to register through the PSF website by choosing an association or district within the self-service form. In that case, the association or district office is notified through the system and via e-mail about the new member.

The form shall request the following information from the potential member:

- Membership Type
- Company Name
- Address
- Contact details
- Desired association

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- Desired district
- Scan of RDB certificate

In addition, a help-line number is displayed in case a member needs support to fill in all necessary details.

After the successful registration, a notification (e-mail) is send to PSF/Chamber/Association/District (depending on member category) about a newly registered member. The landing page of the system will also display the newly registered member upon login of the administrator.

The new member is provided automatically by a welcome message and additional information about its membership type and other details such as membership fees (configurable in the system), system access, access to services etc.

[Cust. Req. 14] Manual registration

The process described in the online self-service requirement shall also be available for manual registration by PSF/Chamber/Association/District administrator. In that case, the data is entered manually by the administrator directly into the system.

[Cust. Req. 15] Export of Member data

Member data shall be exported to CSV or an excel compatible file format for further processing the print-out of membership cards.

5.1.3 Handling of Potential Members

[Cust. Req. 16] Potential Members

Potential members shall be registered in the system by the PSF/Chamber/Association/District administrator. The history of contacts shall be stored in the system:

- Day/Time of contact
- Contacted by whom
- Contact details
- Description
- Attachments

For each contact, several of these entries can be created.

[Cust. Req. 17] Forwarding of contacts

An administrator can forward a contact of a potential member to PSF/Chamber/Association/District/Province.

[Cust. Req. 18] Upload of potential members

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A defined CSV or excel compatible format shall be able to be uploaded to create potential members in the system.

5.2 Finance

5.2.1 Membership Payment Status

[Cust. Req. 19] Payment Status

The following categories for membership payment status are available:

- Paid: member has paid the membership fee
- Not paid: member has not yet paid
- Paid to PSF member has directly paid to PSF
- Not paid by PSF PSF has not paid 10% to the association
- Not paid by Association Association has not paid 10% to PSF/chamber
- Not paid by District District has not yet paid 10% to PSF/province

[Cust. Req. 20] Payment Due Date and Fees

Membership fees have to be paid during a certain period of the year (configurable in the system per entity).

The membership fee is calculated the following way depending on the due date:

1. Member has signed up the year before: full membership fee
2. Member has signed up the same year: membership fee divided by 12 and multiplied by the number of months of membership

[Cust. Req. 21] Payment Reminder

A first payment reminder will be sent three months before due date. Afterwards a monthly reminder is send until due date.

If the member has not paid until due date, weekly reminder will be sent to the meber.

[Cust. Req. 22] Payment Status Changes

If a member has not paid after the third reminder, the membership status will be automatically set to inactive. As soon as the member has paid, the status will be automatically changed back to active (a member will be informed of all status changes)

5.2.2 Payment of Membership Fees

Membership fees can be collected through various channels based on the membership category and associations or districts. Fees are collected either by PSF directly, an association (sector specific) or a district. The membership fees are paid according to the following process:

[Cust. Req. 23] Payment Membership Fees

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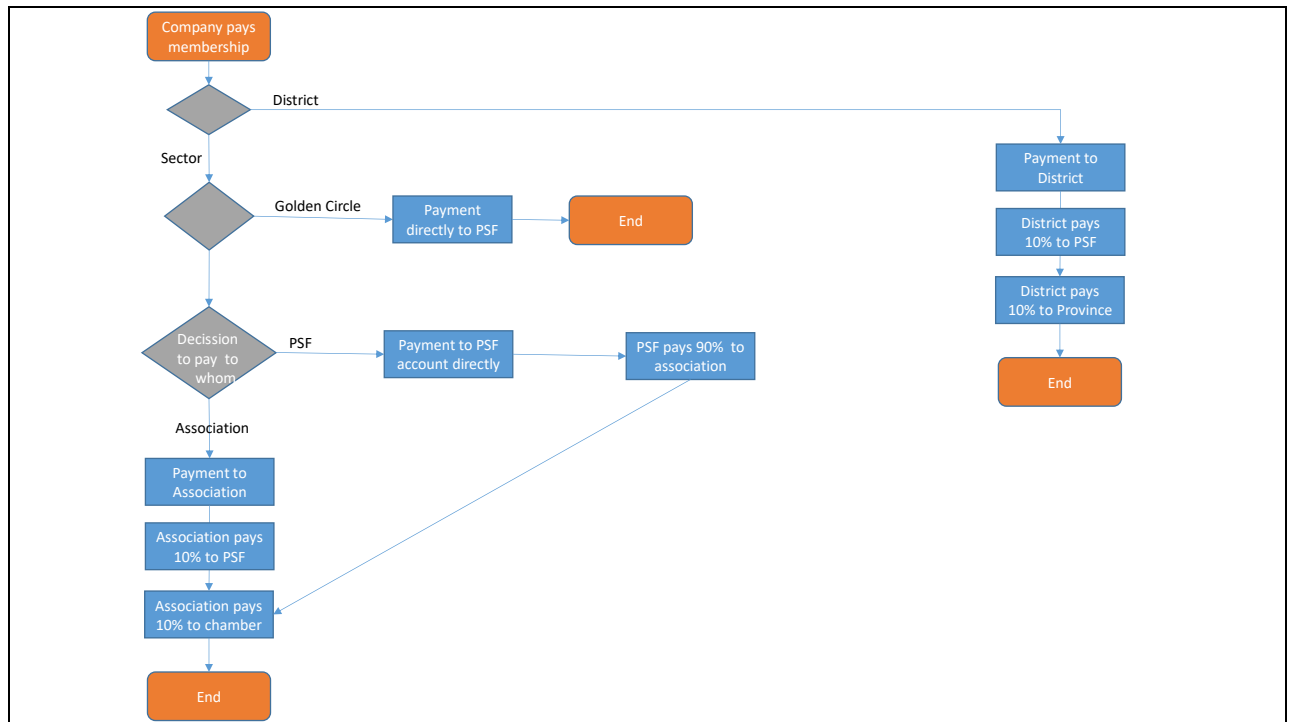


Figure 5 Membership Fee Payment – Sector

Explanation:

As indicated before, members sign up on sector and/or district level.

In case of sector level, the following rules apply:

- **Golden Circle** members always pay to PSF. In case a Golden Circle member is also part of an association, it can pay either to PSF or to the association.
- An **ordinary member** has the decision to pay either to PSF or to the association to which the member belongs. In case the ordinary member pays to PSF, PSF will pay 80% of the membership fees to the association. In the other case that a member pays to the association, the association will forward 10% of the fees to PSF.
- In any case, the association is paying 10% of the membership fee to the chamber.

In case of district level, the following rules apply:

- Any member who has signed up at district level pays directly to the district. 80% of the membership fees will stay at the district, 10% will be sent to PSF and 10% to the province.

The aforementioned payment status shall be used to document this payment processes within the system to assure transparency.

[Cust. Req. 24] Payment Information

A member has access to detailed information about the membership fees. This includes

- Information about amount to pay
- Account information where to pay the fee

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➤ History of paid fees

[Cust. Req. 25] Online Payment – Bank slip

The system shall provide an online payment functionality by providing a feature to upload a bank slip as proof of payment. After a member has paid the membership fee to the bank account number of PSF or the association, the member will upload the bank slip to the system. The administrator is then confirming the payment and sets the status to “paid” in the system.

[Cust. Req. 26] Online Payment – Credit Cards

Members shall be able to pay with credit cards.

[Cust. Req. 27] Manual Payment

An administrator shall always be able to manually set the payment status in case the proof has been provided by email/scan. A proof of payment can then be uploaded to the system.

[Cust. Req. 28] Membership Fees

The system shall allow to set the membership fees individually per association and district. Also the fees for Golden Circle and Indashikywa shall be configurable. In addition, it shall always be possible to manually change the fees also per member.

[Cust. Req. 29] Administrator Dashboard

The administrator of PSF/Chamber/Association/District/Province has a dashboard to retrieve information about the membership payment status based on the requirements above. In addition, reports can be created out of the system (see chapter Reporting).

5.3 Services

5.3.1 Events Management

PSF, chambers and association shall be able to plan events and send invitations through different channels. Members and non-members can register online or offline including payment of registration fees:

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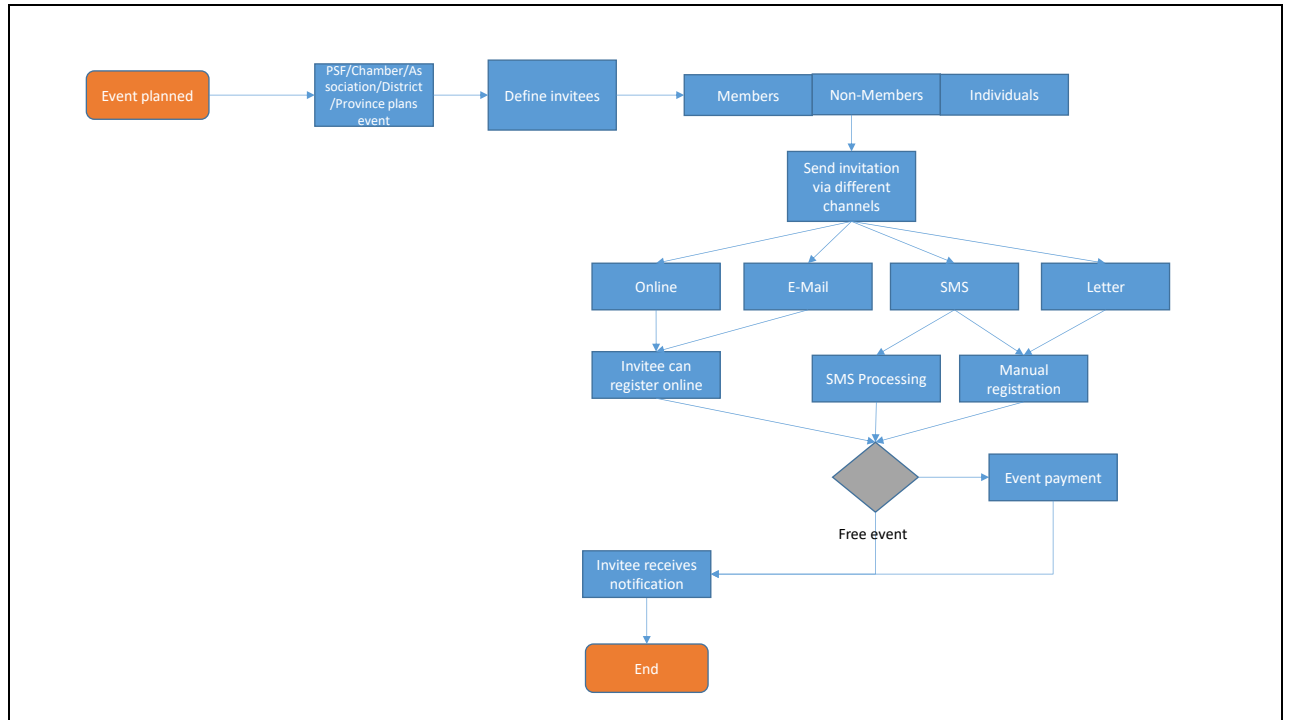


Figure 6 Events Planning

[Cust. Req. 30] Event Planning

Events shall be planned with the system with the following information:

- Event Name
- Event Description
- Event Date
- Event logo
- Event venue
- Event sponsor (e.g. donor)
- Maximum number of participants
- Free event or amount of fees
- Deadline of payment

[Cust. Req. 31] Event Invitation Channels

Event invitations shall be sent through the following channels:

- E-Mail
- Online (website integration)
- SMS
- Letter

[Cust. Req. 32] Event Invitation Member selection

The event-planning feature shall allow selecting with different search and filtering criteria a pool of relevant members to who the invitation shall be sent out.

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[Cust. Req. 33] Event Invitation of non-members

Non-registered members, inactive members and potential members shall also be able to be invited for events.

[Cust. Req. 34] Invitation to individuals

Invitations shall also be sent out to individual participants.

[Cust. Req. 35] Event Registration

Members and non-members shall be able to register for an event online through the system. In addition, offline registration through PSF/Chamber/Association administrator shall be available.

[Cust. Req. 36] Event Registration of non-members

Non-members can register through the website or manual through administrators.

[Cust. Req. 37] Event Registration through SMS

If the invitation has been sent out via SMS, the registration can either be handled manually (e.g. by providing a call back number in the SMS), or automatically through processing of the SMS reply (e.g. reply with YES = confirmation of registration).

[Cust. Req. 38] Serial Letter

Serial letters can be created out from the system. A template for the invitation can be saved and filled automatically with the addresses from the system. Afterwards, the serial letter can be printed out.

[Cust. Req. 39] Event Payment

Members and non-members shall be able to pay online for the event by providing proof of payment with an uploaded bank slip or credit card.

A payment reminder can be configured in the system.

The fees for the event can be configured depending on the status of the invitee (e.g. members pay reduced fee, non-members full fee).

[Cust. Req. 40] Notification and Updates

Event managers can send notifications updates on already planned events.

[Cust. Req. 41] Event Calendar

The system shall provide an event calendar.

[Cust. Req. 42] Integration into Websites

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Published events shall be automatically displayed on the website of PSF/Chamber/Association with event date, event description and event logo. A link provides the feature to pay online for the event.

[Cust. Req. 43] Profiles of Individuals (address book)

Individuals can be created in the system with contact details (address book). For each event, the profiles of individual participants are tracked with profile data (e.g. name, contact, gender etc.).

[Cust. Req. 44] Export of registered invitees

The data of registered invitees shall be exported to CSV or excel compatible file format for further processing with a card printing software.

[Cust. Req. 45] Import of event

From a defined CSV or excel compatible format, an event shall be able to be uploaded into the system.

[Cust. Req. 46] Import of Address Book

An address book containing contact details of individuals can be uploaded into the system from a CSV or excel compatible format.

[Cust. Req. 47] Event Templates

Events can be stored as templates in the system to be used for future events.

[Cust. Req. 48] Event Feedback

The event function is linked to the survey function to ease the gathering of feedback after an event.

5.3.2 Advocacy

The system shall implement a case management according to the following process diagram:

[Cust. Req. 49] Advocacy – Case Management

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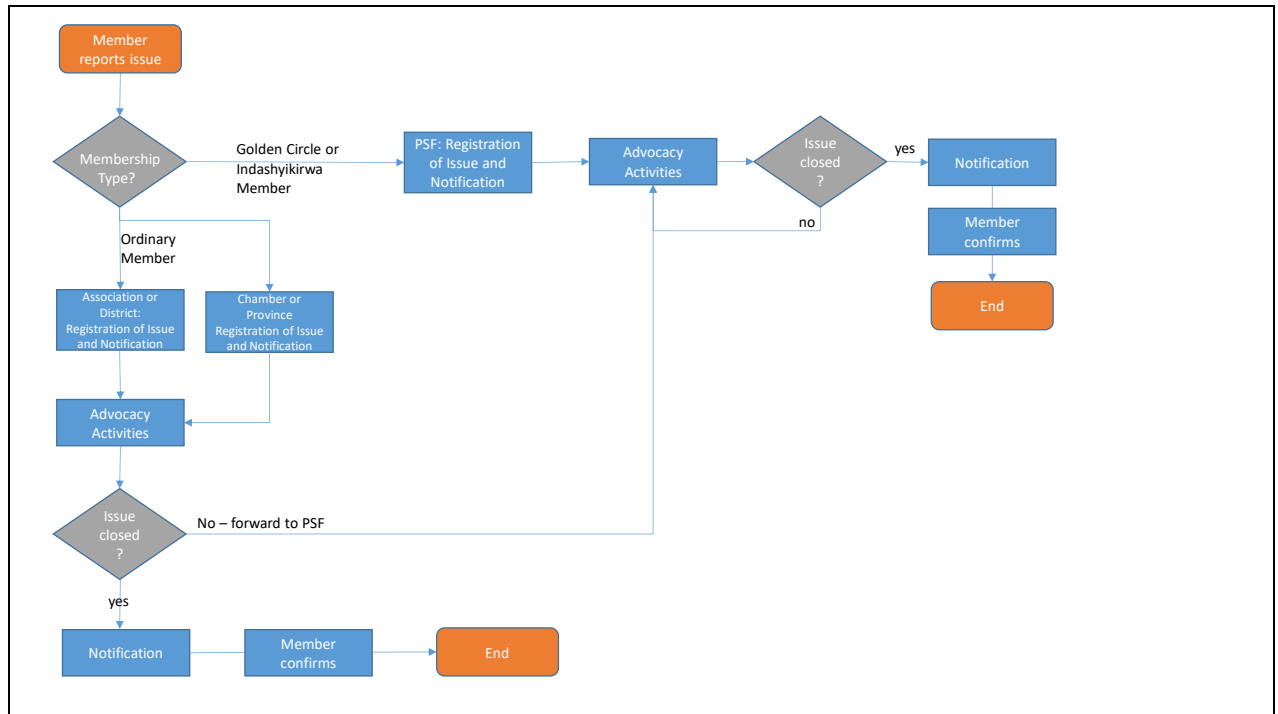


Figure 7 Case Management

Process Description:

1. An issue is reported by a member to either PSF (Golden Circle/ Indashyikirwa) or the association/district or chamber/province to which the member belongs.
2. Case PSF:
 - a. The issue is registered and a notification is sent to the member who has reported the issue.
 - b. The PSF Advocacy team will carry out advocacy activities.
 - c. Afterwards, the issue is solved if the member confirms after a notification, or the issue is further processed by PSF.
3. Case Association/District or Chamber/Province:
 - a. The issue is registered and a notification is sent to the member who has reported the issue.
 - b. The association/district or chamber/province will carry out advocacy activities. If the issue is solved, the member needs to confirm after receiving a notification.
 - c. If the issue cannot be solved by the association/district or chamber/province, the case is forwarded to PSF with a notification to the member.

[Cust. Req. 50] Issue Reporting by Member

The system shall provide a form where companies can formally report an issue to PSF/Association/District. The form shall contain the following fields:

- Issue subject
- Issue description

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- Priority low/medium/high/very high (only to be seen and set internally, not visible to the member)
- Attachments

The submitted issue is then received by the administrator of PSF/Chamber/Association/Province/District and a notification is send. They can comment on the issue and send it back with comments to the member for further input.

[Cust. Req. 51] Issue status

The following status are used:

- New issue has been reported
- In process issue is processed by PSF/Chamber/Association
- Solved issue has been solved
- Forwarded issues has been forwarded
- Member action issue is with the member and waiting for input

[Cust. Req. 52] Processor of issue

The system shall always display which organization is currently working on the issue:

- Association
- Chamber
- PSF
- District
- Province

In case the issue is send back to the member for further input, the member name is displayed.

[Cust. Req. 53] Issue Documentation

The current processor of the issue shall be able to add the following documentation to the issue:

- Date/time
- Processors
- Activity performed
- Comments
- Attachments

[Cust. Req. 54] Issue forwarding

The issue can be forwarded anytime to PSF, association, chamber, district or province. Anytime the processer can send back to issue to the member for further input.

[Cust. Req. 55] Notification

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The current issue status is always displayed within the system and accessible by all parties involved. Notifications are automatically sent to the member or processor in case there is a change of the issue status.

[Cust. Req. 56] Issue History

The issue history is kept in the database and is available for reporting features (see chapter Reporting).

[Cust. Req. 57] Privacy

The processor shall be able to enter comments to the issue that are not visible to the member who has reported the issue.

[Cust. Req. 58] Proactive Advocacy

Similar to the case management from the figure above, PSF can also carry out proactively advocacy without a member submitting an issue. In that case, all activities can again be documented by PSF according to the description above.

[Cust. Req. 59] Publishing of solved Advocacy Cases

The system shall allow deciding if a solved advocacy case can be shared with the public. In that case, a notification can either be send out via email to all or a range of members or solved advocacy cases can be published on the webpage of PSF.

5.3.3 Surveys

Surveys are conducted according to the following process:

[Cust. Req. 60] Survey Functionality

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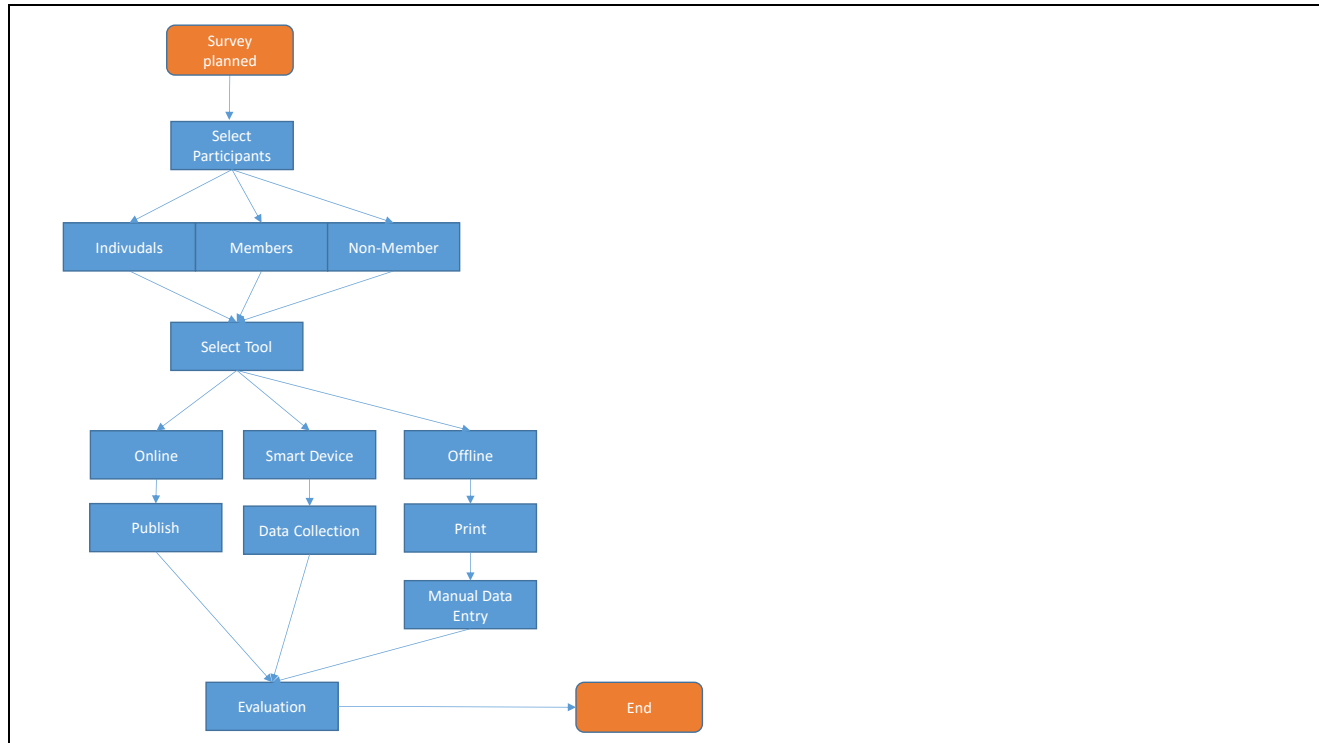


Figure 8 Surveys

Explanation:

1. A survey is planned at PSF
2. Participants of the survey are selected:
 - a. Individuals
 - b. Members
 - c. Non-Members
3. The survey is either conducted online, with a smart device or offline
 - a. Online: The survey is sent out to participants and/or published on the website
 - b. Smart Device: for example tablets are used to collect data during an event
 - c. Offline: the survey is printed and feedback collected. Afterwards the data is manually entered into the system
4. After data collection, the data is consolidated and evaluated automatically.

For the same survey, data can be collected online, by smart device and offline at the same time (multiple tool support).

[Cust. Req. 61] Online Surveys

The system shall allow creating customized online surveys to send out to members and/or individuals to gather feedback about certain topics such as events, services, advocacy etc. Members will receive the survey via email and are able to report back their feedback through the service.

[Cust. Req. 62] Offline Surveys

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The system shall allow creating offline surveys. An offline survey can be printed out and can be filled out on paper. Afterwards, the collected surveys can be manually entered into the system. The system will then provide evaluation features to analyse the results of the survey.

[Cust. Req. 63] Usage of mobile devices

Mobile devices (e.g. tablets) can be used to directly gather feedback during events.

[Cust. Req. 64] Anonymous Surveys

It shall be configurable if the survey is anonymous or associated with the member name.

[Cust. Req. 65] Survey Status

The system shall also provide an overview of the survey status:

- In process (not sent out yet)
- Published
- Completed

In addition, the number of already received surveys is displayed.

[Cust. Req. 66] Survey Evaluation

The system shall provide built-in features to evaluate the result of a survey.

[Cust. Req. 67] Survey History

The history of all surveys is stored in the database and accessible for reporting purposes.

[Cust. Req. 68] Raw Data Export

The raw data of the surveys shall be able to be exported into CSV or excel-compatible file format.

[Cust. Req. 69] Survey Templates

Templates of surveys shall be configurable in the system to ease the creation of surveys in the future.

[Cust. Req. 70] Multi-Language Support

Surveys shall be created in English and Kinyarwanda with the option of having both languages for the same survey.

[Cust. Req. 71] Sharing of Survey Results

It shall be possible to share the result of a survey by email (to selected members) or on the PSF website.

[Cust. Req. 72] General Feedback Form

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There shall be a general feedback form on PSF website where feedback is collected continuously from members and the public. The collected data can then be evaluated anytime by specifying a certain timeframe for the evaluation period.

5.3.4 Tax Clearance Certificate (Quitus fiscal)

PSF with the authorization of the Rwanda Revenues Authority (RRA) currently issues to PSF registered members an annual tax clearance certificate. This is a certificate issued to tax compliant tax payers. It is meant for taxpayers with a record of honouring their tax obligation. It is valid for a period of one year from the time it was issued. It is commonly known as "quitus fiscal".

[Cust. Req. 73] Quitus fiscal

The recommendation letter for the quitus fiscal can be printed out of the system with the correct address of the member, or can be sent via email to the member.

The criteria are (documented in the system):

- Member has paid membership fee
- Member is exempted by RRA (track record provided)

5.3.5 Other Services

Other services apart from event management, advocacy and surveys are offered by PSF (including chambers, associations, districts and provinces). However, these services cannot be easily categorized. Therefore, the system shall provide the functionality to document what activities have been performed.

[Cust. Req. 74] Recording of other services

PSF/Chamber/Association/District/Province can maintain in the system any other service. For that, activities can be recorded to document the provided service. Therefore, the system shall store the following information:

- Service Name
- Service Category
- Number of Participants
- Date
- Activities
- Attachments

In addition, this information can be shared to stakeholders of the service.

5.4 Reporting

The reporting is based on the membership database of the system and restricted by the level of system access of PSF/Chamber/Association/Districts/Provinces as described above.

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For all reports, various search and filter features shall be available.

[Cust. Req. 75] Financial Reporting

The following reports are available for financial reporting:

- Overview of status of membership fee payments
- Overview of payments between PSF, chambers and associations / Districts & Provinces

[Cust. Req. 76] Membership Management Reporting

The following reports are available for membership management reporting:

- Overview of all members with selected properties (to be decided)

[Cust. Req. 77] Surveys

The following reports are available for survey reporting:

- Overview of all surveys send out to companies

[Cust. Req. 78] Event Management

The following reports are available for event reporting:

- Overview of all performed events

[Cust. Req. 79] Advocacy

The following reports are available for advocacy reporting:

- Overview of all members issues

[Cust. Req. 80] Other Services

The following reports are available for other services:

- Overview of all performed services

[Cust. Req. 81] Export Functionality

The membership database/all data shall be exportable into CSV and MS Excel file formats. Filter criteria shall be available for the export process.

[Cust. Req. 82] Report Templates

Templates of report shall be configurable in the system to ease to creation of reports in the future.

6 System Environment

[Cust. Req. 83] Development and test system

The development and test system is used for non-productive usage. All developments and configurations are first done in this system. Only after a successful user test, the changes are transported into the productive system.

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[Cust. Req. 84] Productive System

The productive system is only used for productive purposes. Any changes (either configuration or development) are first applied and tested in the development/test system.

7 Usability

Usability is defined by the ease in which a user can perform a function through their relevant access channel.

[Cust. Req. 85] Multi-Browser Support

The system shall support multiple browsers such as Firefox or Chrome.

[Cust. Req. 86] Mobile Responsiveness

The system shall allow access from any device with a mobile responsive design.

[Cust. Req. 87] Online Help

Various online help features and documentation shall be available for end-users.

8 Supported languages

[Cust. Req. 88] System language

The system language shall be English and Kinyarwanda. During the login, a user can choose between the languages.

9 Configurability and Enhancement of the System

[Cust. Req. 89] New Chambers/Associations

The system shall be configurable so that new chambers and associations can be added to the system without any changes to the program. The process of adding a new chamber/association shall be performed by the PSF administrator without need for development support.

10 Integration and Interfaces

[Cust. Req. 90] Public Access

Public access to the system shall be granted through a website integration into the existing PSF/Chamber/Association website. Without the need of a user login into the system, general member data shall be retrieved from the database and displayed on the website as a searchable and browseable catalogue of member information.

Available Features:

- Integration into PSF/Chamber/Association website

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- Browsing of member database of public information (PSF all members, Chamber/Association respective members only)
- Search field
- Filter criteria

[Cust. Req. 91] Website Integration

The following features of the system shall be integrated into the PSF/Chamber/Association website:

- Online self-service for registration
- Display of upcoming and historic events
- Login link to the member's access
- Solved Advocacy Cases

The system shall provide easy to implement interfaces for these integration points with the flexibility for configuration.

11 Roles and Authorization

[Cust. Req. 92] Roles

The following roles have to be defined in the system:

| Role Name | Description |
|---------------------------|---|
| Super Administrator | All privileges. Can perform changes on the software. Can apply patches. Can change the organizational structure. |
| PSF Administrator | Full user access to the system Can add/remove members |
| PSF Staff | Full user access to the system limited to PSF members |
| Chamber Administrator | Full user access to the system limited to Chamber Can add/remove members of Chamber |
| Association Administrator | Full user access to the system limited to Association Can add/remove members of Association |
| Province Administrator | Full user access to the system limited to Province Can add/remove members of Province |
| District Administrator | Full user access to the system limited to District Can add/remove members of District |

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|-------------------|---|
| Chamber Staff | Full user access to the system limited to Chamber members |
| Association Staff | Full user access to the system limited to Association members |
| District Staff | Full user access to the system limited to District members |
| Province Staff | Full user access to the system limited to Province members |
| Public | Background user for public interface |

Table 2 Roles

[Cust. Req. 93] Roles and Authorizations

The system shall allow configuring different roles and authorizations based on the organizational structure of the federation.

12 Migration

The existing membership databases of PSF, the chambers, district, provinces and the associations have to be imported into the system. The migration process will be semi-automatic, i.e. PSF, each chamber and each association or district/province has to bring their data into a defined CSV file format (not a system requirement). This file format can then be imported into the system (system requirement).

[Cust. Req. 94] Import of data

Legacy data shall be imported into the system with a defined CSV file format.

[Cust. Req. 95] Export of data

Data of the system shall be able to be exported into a CSV file format.

13 System Installation, Operations and Maintenance

[Cust. Req. 96] Hosting

The system shall be hosted in Rwanda.

[Cust. Req. 97] Updates and Patches

Updates and patches shall be implemented regularly to the system.

14 Initial Capacity and Performance Planning

Number of Users: 10,000 to 15,000

Number of members: 15,000 to 20,000

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Number of chambers: 10
Number of associations: 73

15 Scalability

Scalability requirements address the need for the system to satisfy anticipated increases and/or decreases in processing demand. This includes increases and/or decreases in the number of clients, size and number of data records, and additional processing functions.

[Cust. Req. 98] Scalability

The system shall automatically be able to scale in case of new users, new chambers, associations entering the system, and in case, the membership base is growing.

16 Availability, Stability and Reliability

Availability is fundamental to the successful deployment of the functional processes. A system that is unreliable and subject to frequent disruption will ultimately affect the bottom line of the organization. Therefore, availability is aligned to the fundamental success criteria for the system implementation.

The table below shows the amount of unplanned downtime allowed by different availability levels measured over 24 hours x 7 days/week open hours.

| % Uptime | Downtime/ year | Downtime/ week | Downtime/ day |
|----------------------------|----------------|----------------|------------------|
| Single 9s | | | |
| 90 | 36.5 days | 16.9 hours | 2.4 hours |
| 95 | 18.3 days | 8.4 hours | 1.2 hours |
| 98 | 7.3 days | 3.4 hours | 28.8 minutes |
| 98.5 | 5.5 days | 2.5 hours | 21.6 minutes |
| Two 9s (High Availability) | | | |
| 99 | 3.7 days | 1.7 hours | 14.4 minutes |
| 99.5 | 1.8 days | 50.4 minutes | 7.2 minutes |
| 99.8 | 17.5 hours | 20.2 minutes | 2.9 minutes |
| Three 9s | | | |
| 99.9 | 8.8 hours | 10.1 minutes | 1.4 minutes |
| Four 9s | | | |
| 99.99 | 52.5 minutes | 1 minute | 8.6 seconds |
| Five 9s | | | |
| 99.999 | 5.3 minutes | 6 seconds | 864 milliseconds |

Table 3 Availability

[Cust. Req. 99] Availability

The system shall guarantee an uptime of 99.5%.

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17 Backup and Recovery

[Cust. Req. 100] Backup requirements

- Daily incremental backup with a retention of 1 month.
- Weekly full back-up with a retention of 3 months
- Regular verification of backups

Further requirements will be written down in SLAs.

18 Security

[Cust. Req. 101] Security Patches

The system shall be provided with regular security patches. The system administrator is informed about released patches and able to apply the patches on the system.

[Cust. Req. 102] Internal Audit

The system shall record all changes of the DB and who accessed when which information in the system.

19 Acceptance Criteria

The acceptance criteria are based on the customer requirements.

C. Appendix

20 List of Customer Requirements

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