# SELCO Solution Design

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| Date | Version | Person | Comments |
| 19 Feb 2024 | V1 | Atul Gupta | Signed off |
| 22 Apr 2024 | V1.1 | Atul Gupta | Updated to clarify on Tenancy information |

This document is to be used as a reference to design decisions made for SELCO Incident Management System V1.

## Platform

SELCO IMS will be based on

1. DIGIT 2.9
2. PGR Service 2.0
3. Inbox Service 2.0
4. MDMS Service 2.0
5. HRMS Service 2.0
6. Other related services from DIGIT Platform

## Key Solution Design Points

#### 2.1 Tenancy Configuration

1. Root tenant - State. States will be configured as root tenant
2. Sub-tenant - PHCs. A PHC will be a sub-tenant of a state. The hierarchy is State.District.Block.Center, For example
   1. Karnataka.Raichur.Devadurga.Alkod
   2. Karnataka.Raichur.Manvi.Ganadinni

#### 2.2 Actors and Tenancy Access

1. CRM (SELCO users) - Will be setup at the state level with access to all sub-tenants/PHCs. They can view aggregated data in their Inbox and can navigate to specific sub-tenant/PHC to view or act on relevant data
   1. DIGIT Setup
      1. When a new CRM user is added to a state, customize the current logic to also add them to each sub-tenant i.e. each PHC within that state, so that they can access PHC data.
      2. Auto-update their user access each time a new sub-tenant (PHC) is added in the state
2. Vendors - Setup at state level and add access to other sub-tenants based on on-ground PHC responsibility assigned to them.
   1. DIGIT Setup
      1. In V1 vendor will be created via a backend script, which will also add them to the required PHC sub-tenants.
      2. In V2 we will need to build a UI to be able to assign PHCs.
3. PHC personnel - Setup as sub-tenant within a State tenant.
   1. DIGIT Setup
      1. Created at sub-tenant level, where they need to be given access, so that they can view and work with that PHC.
      2. They can be re-aligned to another PHC if they more from 1 PHC to other.
      3. Add address to the PHC tenant during configuration

#### 2.3 Login Screen Customization

Along with proving user name and password, the login screen will be modified to select the tenant. There are various options to do it as listed below.

Option1:

One drop down to show the root tenant i.e. the state to log into. In V1, It will show only Karnataka in the list. In later versions more states will be added to the list. Login will verify that the user has access to this root or any child tenant (something like validating against ka.\*). After successful login, the tenant, sub tenant list will be fetched for the user and will be shown in the tenant drop down on the top right menu bar.

1. A CRM user who has access to State and all sub-tenants will be defaulted to the state level view
2. A Vendor user will default to show the first PHC from all accessible PHCs
3. A PHC user will default to the PHC he/she has access to.

Pros:

* Simple list to show on the login screen
* No change in login screen visuals

Cons:

* Modification to existing authentication login
* Login no longer accounts for specific tenant access, but works with root tenant
* May become difficult to scale as access may need to be setup at district and block levels

Option2:

There will be two drop downs on the login screen. The first one showing the root i.e. the state tenant (eg. Karnataka) and the second drop down will be a searchable and will show center names, prefixed with district and block name (eg. Raichur.Devadurga.Alkod) to ensure uniqueness. The search will be free text search i.e. if the system user types “ar”, the list will filter to display all items who have ‘ar’ in them like ‘Arahalli’, ‘Arkera’ and ‘Aroli’.

The authentication logic will remain as is, as the two values from the two drop downs will be used to create a specific tenant name, to which the user will be logged into. Since the user may have access to more than 1 tenant, the steps after login will remain the same as in Option1

Pros:

* Dual drop downs helps reduce data to be loaded, as second drop down will be loaded based on the selection in the first one
* The dual drop downs also helps scale the system, when more states are added

Cons:

* Modification required to existing login screen to add another drop down

Option3:

This option uses concepts from both the earlier options. It will have a single drop down, will be searchable and will display the full center name (eg. ‘Karnataka.Raichur.Devadurga.Alkod’) or the state name (eg. Karnataka). Everything else remains the same as Option 2.

Pros:

* No change required in login logic
* No change in login screen visuals
* Simplest of all options

Cons:

* As the system scales, will end up loading a long list, like for 25K health centers, this will mean loading 25K items in the list
* Will impact load time of the login screen

#### 2.4 Inbox Customization

1. For a CRM user, the inbox should have a unified view of incidents across all centers within the state. They can also search, or filter incidents based on types, or centers etc.
2. A vendor should see only those incidents that are assigned to him/her. As the vendor logs in, the Inbox will show data for a specific PHC. A search or unified view needs to be provided to see incidents across PHCs
3. The top drop down, from where we select the tenant/sub-tenant, will be made a searchable drop down

#### 2.5 Create Complaint

1. When a CRM user creates a complaint, need to show a drop down of all PHCs, from which 1 is selected to raise a complaint against. On selection of PHC, related fields like address details should get auto populated.
2. When a PHC user logs in and raises a complaint, the drop down should auto select the specific PHC (and no other PHC should be shown in the list).

#### 2.6 Reject Complaint

1. When a complaint is rejected, there should be mandatory ‘reason’ text box that should capture the reason. Also there should be at least a minimum text length validation like at least 16 characters etc.

#### 2.7 HRMS

1. When creating users via HRMS, the ‘add assignment’ section will allow selection of district, block and then the center. The state selection will happen from the top right corner, which will show all states for the Admin user (the user who has right to add new users).
2. Remove ‘assignment’ related details from the employee creation screen. This can be done after the first deployment of the pilot.