

Cropin Farmer App

PRD

Apr 19



Business Case

Use Cases Summary

Users of Feature (Actors)

Overall Use-Case Diagram

Use Case Details

AS_S21_UC_01: Farmer On-boarding

Basic Flow

Details of each component

AS_S21_UC_02: Task Data Capture

Basic Flow

Details of each component

AS_S21_UC_03: Push Notifications

Basic Flow

Details of each component

AS_S21_UC_04: Climate Sense Integration

Basic Flow

Details of each component

AS_S21_UC_05: Plot Health Information

Basic Flow

Details of each component

AS_S21_UC_06: Product Usage Stats

Details of each component

AS_S21_UC_07: Change Notification Label

Details of each component

AS_S21_UC_08: SmartFarm - Adding Farmer , Registration Link & Account Activation

Basic Flow

Details of each component

AS_S21_UC_9: SmartFarm - Climate Sense Notification channel selection

Details of each component

Version	Date	Owner	Comments
1.0	01Apr2019	Abhishek Jain	

Business Case

As a company, we are moving towards a point where bringing Farmer (one of the important stakeholders of Agriculture) into our product circle is crucial for the following reasons.

1. A lot of contract farming and input companies work directly with Farmers to get on field reports.
2. Cropin as a company, in the long run, aims to move towards a B2C model where we sell our solution directly to the farmer.

The current scope of AcreSquare limits to just sending basic advisories to the farmers. With the upcoming releases, we aim to establish easy information access to the farmers, 2-way communication between farmer and company and farmer-to-farmer communication.

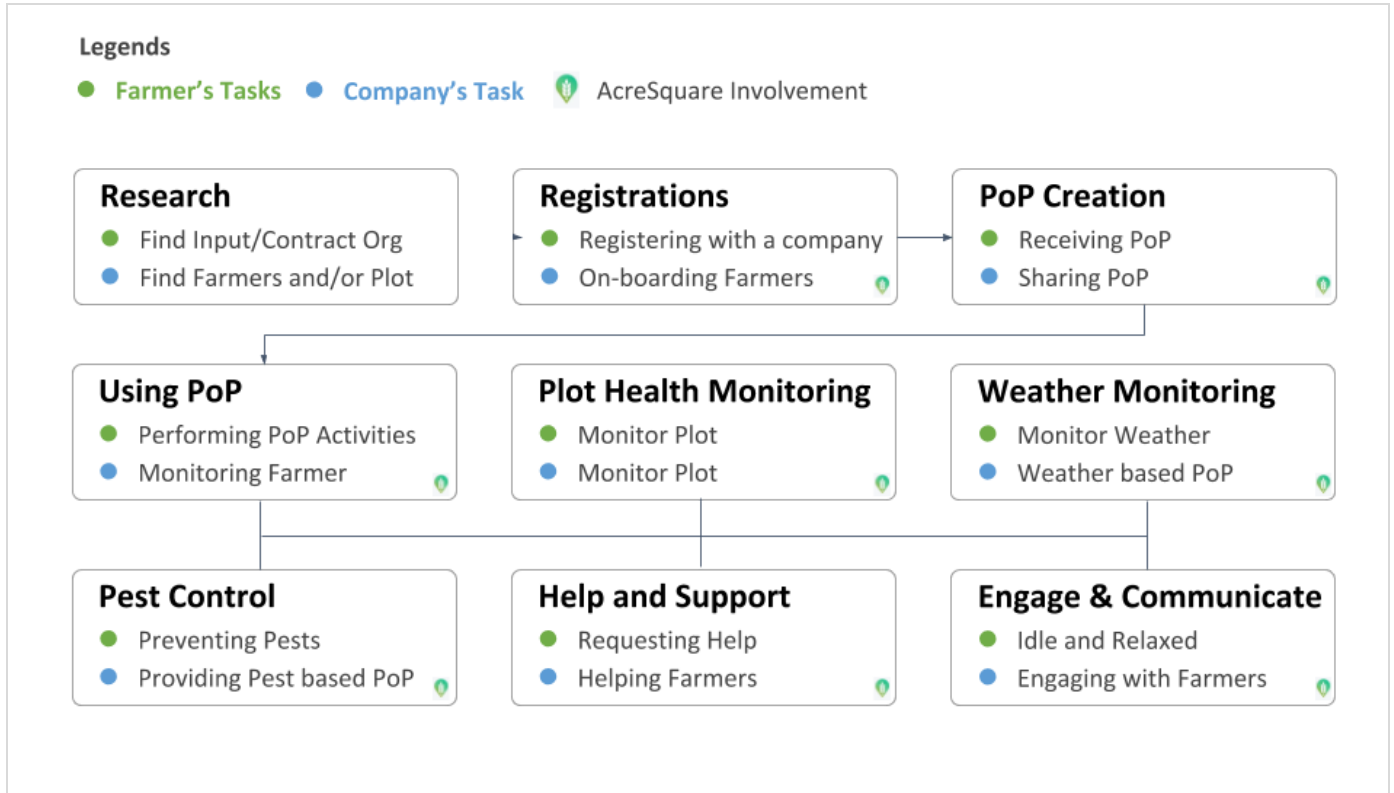
Use Cases Summary

Use-Case Id	Use-Case Description	Type of feature
AS_S21_UC_01	Farmer On-boarding and GDPR Consent	Enhancement
AS_S21_UC_02	Task and Data Capture	New
AS_S21_UC_03	Push Notification	New
AS_S21_UC_04	Climate Sense Integration	Enhancement
AS_S21_UC_05	Plot Health Information	Enhancement
AS_S21_UC_06	Product Usage Stats	New
AS_S21_UC_07	Change Notification Label	Enhancement
AS_S21_UC_08	SmartFarm - Adding Farmer , Registration Link & Account Activation Basic Flow	Enhancement
AS_S21_UC_09	SmartFarm - Climate Sense Notification channel selection	Enhancement

Users of Feature (Actors)

ACTORS	OBJECTIVE/ NEEDS
Strategy team of the company	
Operations team of the company	

Overall Use-Case Diagram

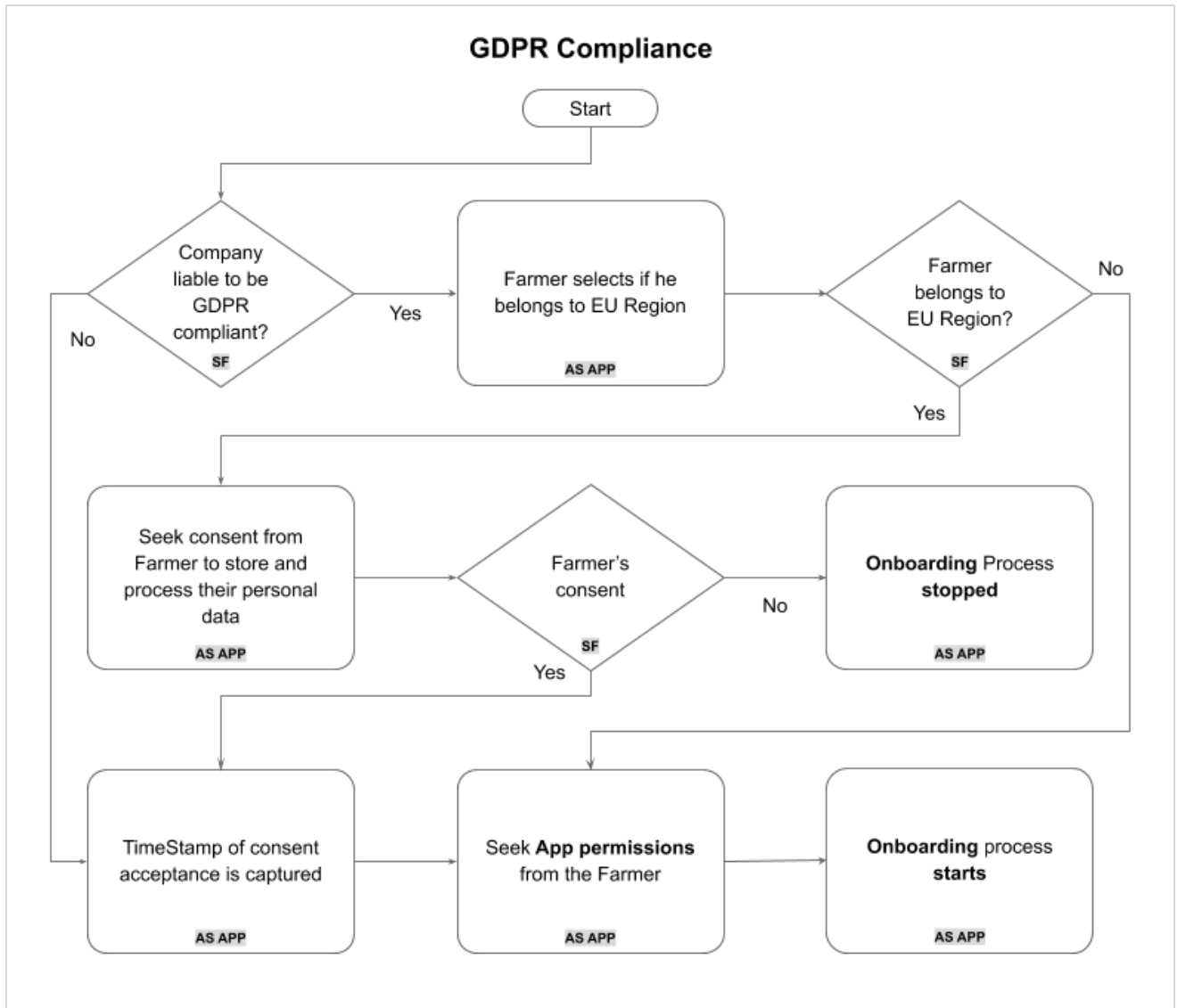


Use Case Details

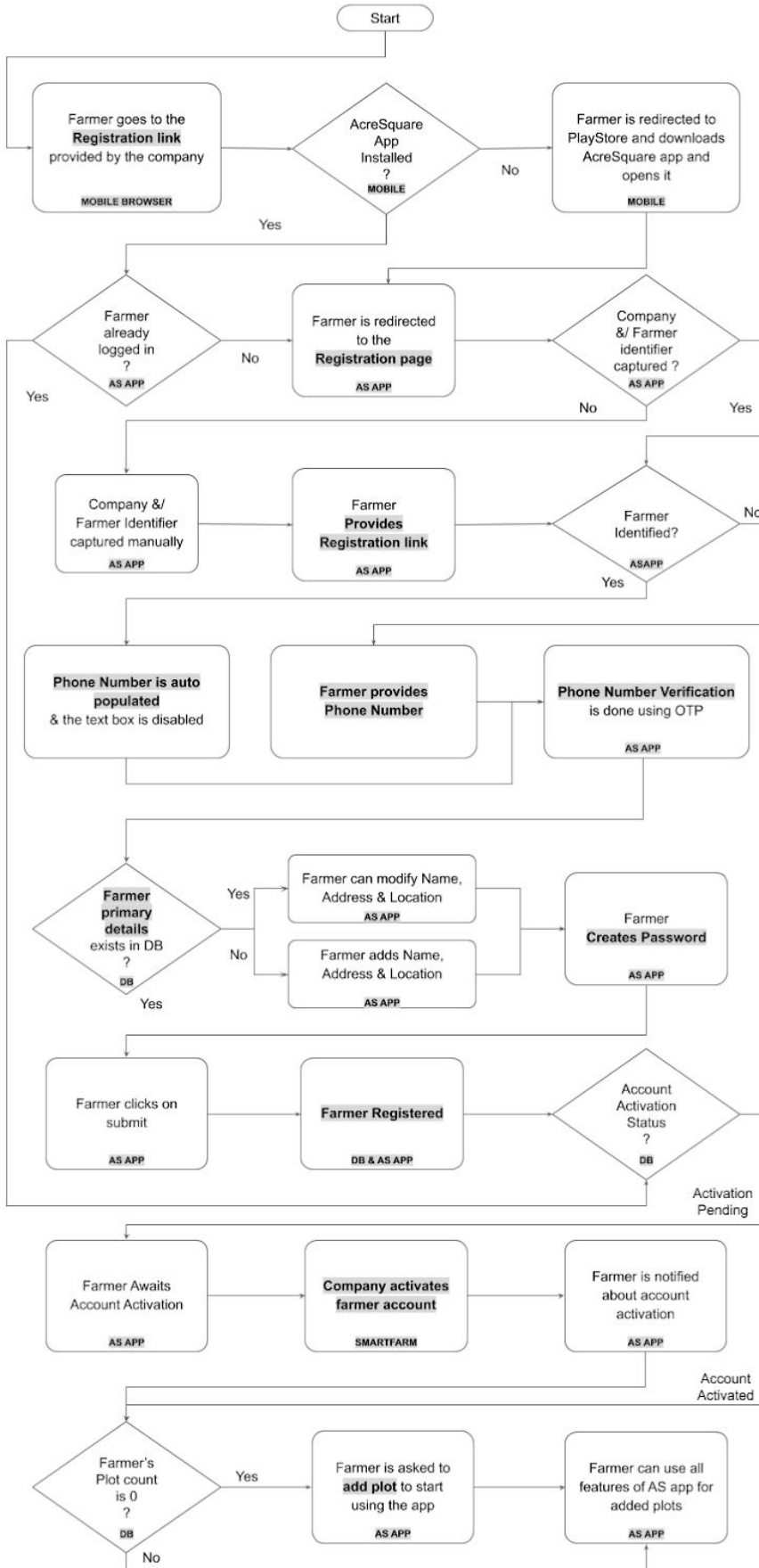
AS_S21_UC_01: Farmer On-boarding

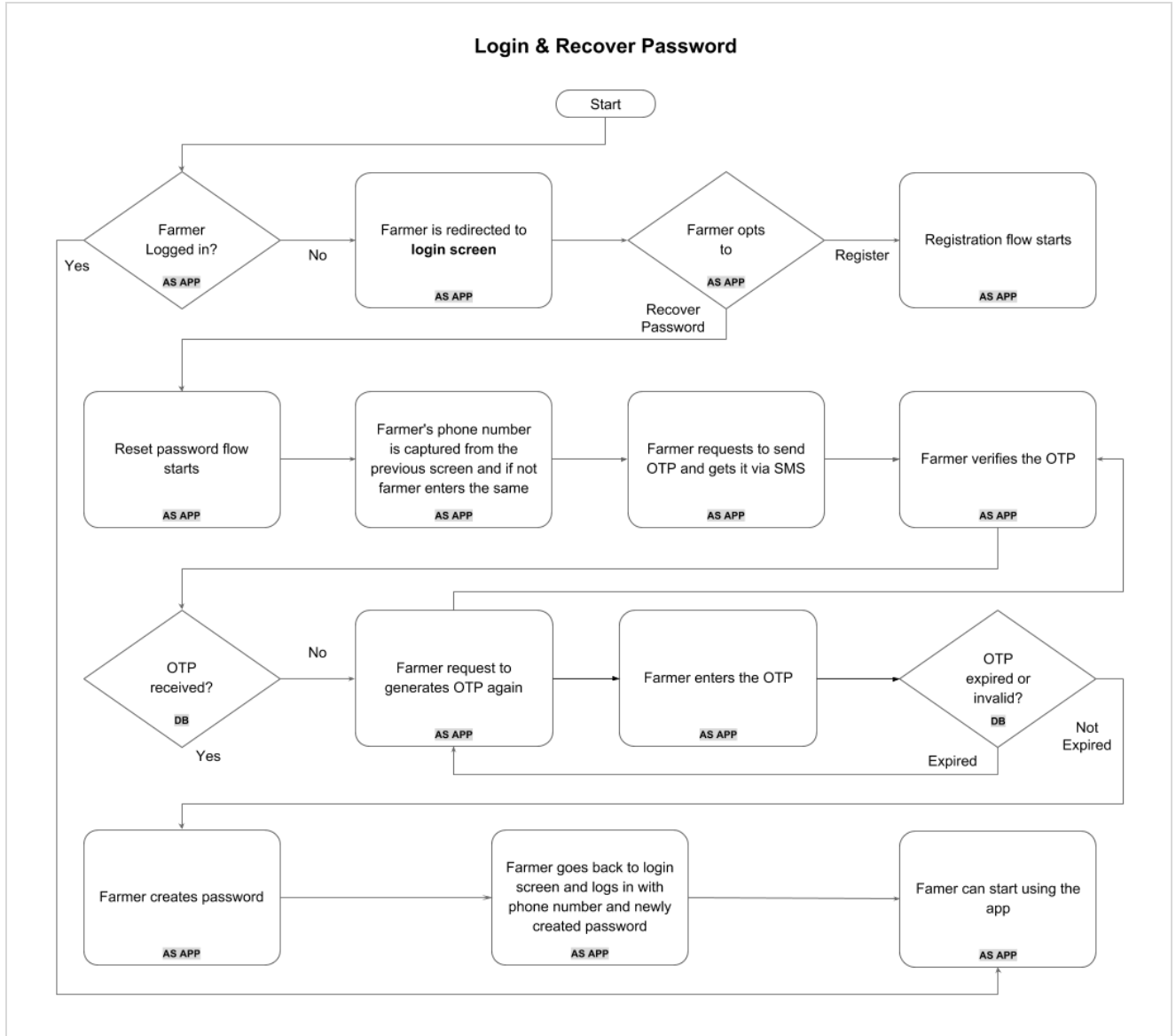
Topic	Description
Objective	On-boarding all the farmers in a secured approach
Who is the Feature for?	Primarily companies and then farmers
Pre-Conditions	<ol style="list-style-type: none">1. The company should be configured in SmartFarm2. Crops should be configured in SmartFarm
Functional Module Affected	Onboarding
Core Components	<ol style="list-style-type: none">1. GDPR Screens - 1 screen with interaction and error handling2. Registration Screen - 6 screen with wizard route for registration3. Login & Screen - 1 screen with interaction and error screen4. Reset Password - 1 screen with interaction and error screens

Basic Flow



Registration





Details of each component

- **GDPR Compliance**

The company has to first accept the Data Processing Terms. All the farmers under such company will have to go through GDPR Flow.

Based on the selected country we determine if data processing consent from the farmer is required.

List of Screens

- GDPR Consent Screen

- **Registration Link**

Company can send registration link in 2 ways

1. After adding farmers in SmartFarm and sending registration link via SMS
2. By distributing registration link manually.

In both cases, farmer clicks on the registration link and the registration process starts.

[See more details about registration link here](#)

This link then redirects to Google PlayStore with a reference parameter containing company id. This Google PlayStore link is also registered as [DeepLink](#) in the app.

Using this approach, the company id can be captured both cases of AcreSquare app being installed or not.

- **Registration Flow**

Registration page captures the following information based on matching conditions

1. Farmer's Phone number
2. Farmer's Primary Info
3. Company Id
4. Login Password

List of Screens

- Phone Number Verification
- Capture Farmer's Primary Details
- Create Password
- Registration Successful
 - List of plots post registration screen.
- Awaiting Account Activation as blank state

- **Provide Registration Link Manually**

In the cases where farmer separately downloads the app from PlayStore to register, the company id will not be captured. In this case, the farmer will have to enter the company ID manually.

An instruction to find the company id will be provided just below the company id input field.

A [help link](#) will also be provided in case the farmer cannot find the company id.

List of Screens

- Manual Registration link capture screen.

- **Capture Farmer's Primary Details**

If the farmer primary details are added by the company already, then the farmer is asked to cross verify and modify the details if needed.

If the farmer primary details are not added by the company then the farmer simply provides the following details

1. Name
2. Residential Address
3. Plot Location

The farmer can edit these details in “Farmer Profile” section.

List of Screens

- Capture Farmer’s Primary Details

- **OTP Verification**

An SMS is sent to the farmer which is then Auto Read.

If the farmer hasn’t received OTP in 60sec, “Resend OTP” button is activated.

A [help link](#) is also provided in case the farmer is not able to receive OTP.

List of Screens

- Phone Number Verification

- **Create Password**

The farmer has a choice to create a password of any choice. The minimum and maximum character limit can be defined by the tech which needs to be mentioned in the create password screen.

List of Screens

- Create Password

- **Farmer Registered**

“Registration success” screen is shown once the app receives confirmation from the backend. If there is any error, relevant error information is shown and [help link](#) is provided for the same.

To be noted that in this version, the farmer can be associated with more than one company.

List of Screens

- Registration Successful
 - List of plots post registration screen.

- **[Company Activates Farmer Account](#)**

If the company has not added the farmer details using SmartFarm and the farmer has registered using registration link, then the company has to activate these farmers’ account. Until then the farmer cannot exchange any communication/data with the company and vice versa.

The company is notified and easy access to activate all the farmers will be provided in SmartFarm.

The waiting screen in the AcreSquare app will be provided.

List of Screens

- Awaiting Account Activation as blank state

- **Add Plot details**

If there are no plots added, the farmer is asked to add a plot and its details.

Following are the plot details

1. Crop Name
2. Crop Variety
3. Sowing Date
4. Sowing Area

The farmer can edit these details in “Farmer Profile” section and can add more plot later. Show the same in after adding the first plot

List of Screens

- Add Plot Details as blank state
- Add plot details screen

- **Farmer profile**

Farmer can edit both “Primary Details” and “Plot Details” here.

The farmer can also add new plots.

List of Screens

- Farmer Profile Screen
 - Add more plot
 - Edit farmer details
 - Name
 - Address
 - Logout
 - Change Password

- **Login**

App by default opens login screen starting second-time use.

Along with login, the farmer is provided with an option to either reset password or register as a new user.

List of Screens

- Login Screen

- **Reset Password**

Farmer's phone number is captured from login screen if it is provided. If not, farmers are asked to enter the phone number in the reset password screen.

The farmer receives an OTP and verifies in the app. Once

AcreSquare app.

The OTP is expired after 24hours or after it is used once for resetting the password.

List of Screens

- Create Password

- **One Farmer to Many Company Mapping**

Data Model

There will be a Farmer Master Table and farmer phone number will be foreign key in Company Table.

The farmer can use the app for all the companies that he is associated with.

List of Screens

- UI to select company before getting into the app
- UI to change company within the app.
- Registered with the company screen.

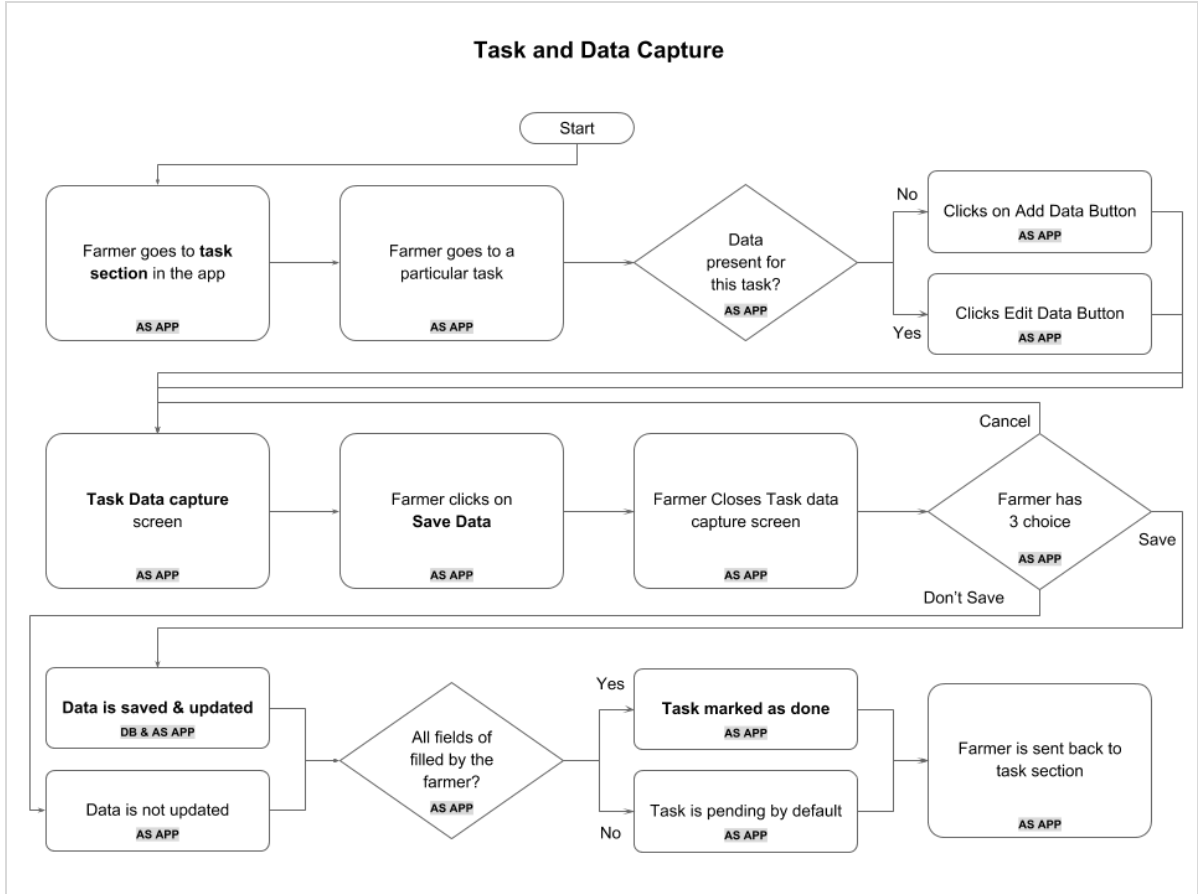
Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/6d1d34c697f82b199caba238
Frequency of use	MEDIUM
Post Conditions (Acceptance Criteria)	Farmer session should never expire.
Success Criteria	Make sure deep link works 100% of the time.
Data Elements	Farmer Phone Number Farmer Name Company ID
Out of Scope	-

AS_S21_UC_02: Task Data Capture

Topic	Description
Objective	Easily help farmers record data for every task they perform.
Who is the Feature for?	Primarily companies and then farmers

Pre-Conditions	1. Input plan 2. Harvest plan 3. Activity plan
Functional Module Affected	Data Capture
Core Components	Task Module - 3 screen containing all different types of input elements, error handling, and offline handling

Basic Flow



Details of each component

- **Offline Handling of Task Module**

Rendering of the task list, task details and capturing of data at the task should work offline.

List of Screens

- A banner showing offline status

- **Task List**

Task list contains only Scheduled Plans.

The task list has 2 tabs, one showing all the pending tasks and the other showing all the completed tasks.

The task date now shows a date range calculated using Start Date and Interval Days

List of Screens

- Task List with tabs
- Blank state for no completed task

- **Task Details**

The task detail contains a task name, suggestion, and all the data capture fields.

List of Screens

- Task Details

- **Data capture for every task**

All the data capture fields that are created in the SmartFarm for Activity, Input and Harvest plan are rendered here and the farmer can capture the data and send it to the company.

When this feature is used offline, a banner is shown regarding the same. Once the internet is available the banner starts showing sync status.

If a field agent has entered the data before the farmer, all the data is shown in the respective input boxes which farmer can edit.

No approval is required after the farmer submits these data.

List of Screens

- Offline Task Screen
- Syncing Data Task Screen

- **Marking Task as done**

If all the input element are filled by the farmer, then that task is automatically marked as done in AcreSquare app.

If there are no data to be captured, an option to manually "Mark Task as done" is shown

List of Screens

- Task Detail
- Mark task as done

- **Task Submit Process Flow**

Once the task is submitted, the tasks goes for approval if the company has opted for approval.

The farmer can edit the data until it is approved.

If any other user has captured the data before the farmer, then the farmer cannot edit the data and is informed about the same.

List of Screens

- Approval Pending Screen banner
- Submitted by other user banner

- **Inclusion of Application and Harvest Survey Form**

Survey forms will be included in the task data capture is enabled in SmartFarm

List of Screens

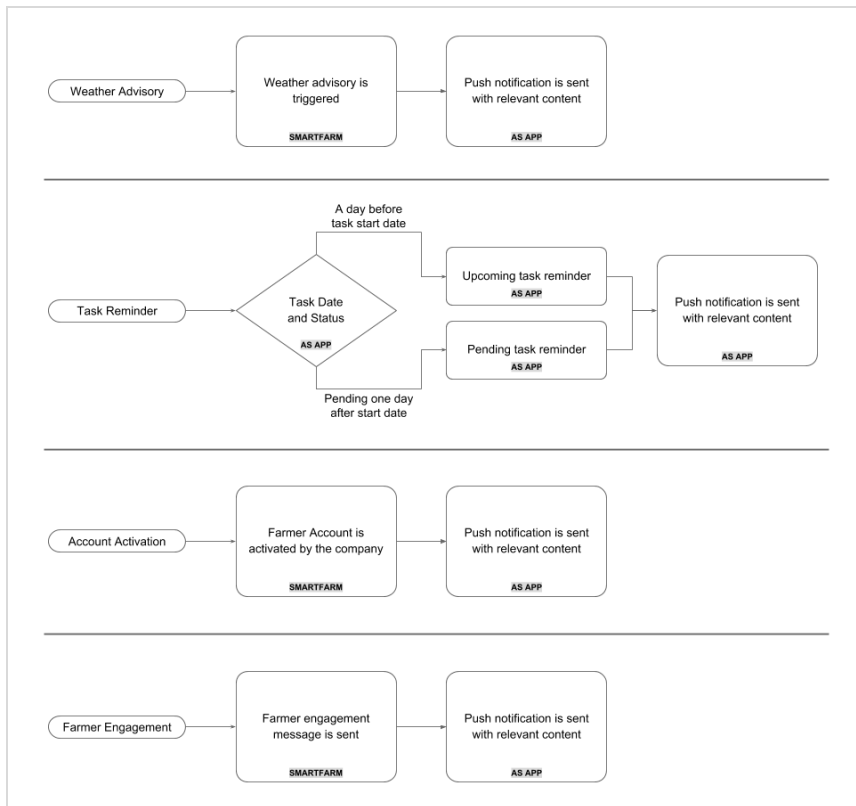
- Survey Form Screen

Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/6d1d34c697f82b199bac3424
Frequency of use	HIGH
Post Conditions (Acceptance Criteria)	Data is stored offline as well for quick access and synced when internet is available. Internet access should not be criteria for data capture.
Success Criteria	0% data loss
Data Elements	Task Details Task Status Task Fields
Out of Scope	-

AS_S21_UC_03: Push Notifications

Topic	Description
Objective	Notifying farmers with important events.
Who is the Feature for?	Farmers
Pre-Conditions	1. Option to select push notification as a channel in Farmer Engagement and Climate Sense section.
Functional Module Affected	Onboarding
Core Components	1. Push Notification - 1 template for push notification

Basic Flow



Details of each component

- **Weather Advisory Notification**

When: A weather advisory is triggered

OnClick: Redirection to that particular section of the weather

Notification: Weather Advisory

Notification Text: Advisory content

List of Screens

- Push notification template

- **Task Reminder - Upcoming**

Trigger: A day before the task start date

Redirect: Task detail page of the notified task.

Notification Title: Task Name

Notification Text: Start "Task Name" tomorrow and make sure to complete before "end date"

List of Screens

- Push notification template

- **Task Reminder - Pending**

Trigger: If the task is not marked as done after the start date

Redirect: Task detail page of the notified task.

Notification Title: Task Name

Notification Text: "Task Name" pending since "no of days past start date". Make sure to finish this before "end date".

List of Screens

- Push notification template

- **Farmer Engagement**

Trigger: When a message is sent via the farmer engagement module

Redirect: Detailed view of that message

Notification Title: Campaign Name

Notification Text: Campaign Text

List of Screens

- Push notification template

- **Account Activation**

Trigger: When a farmer's account is activated

Redirect: Dashboard

Notification Title: Account Activated

Notification Text: Congratulations! Your account is activated. You can now start using the AcreSquare with "Company Name".

List of Screens

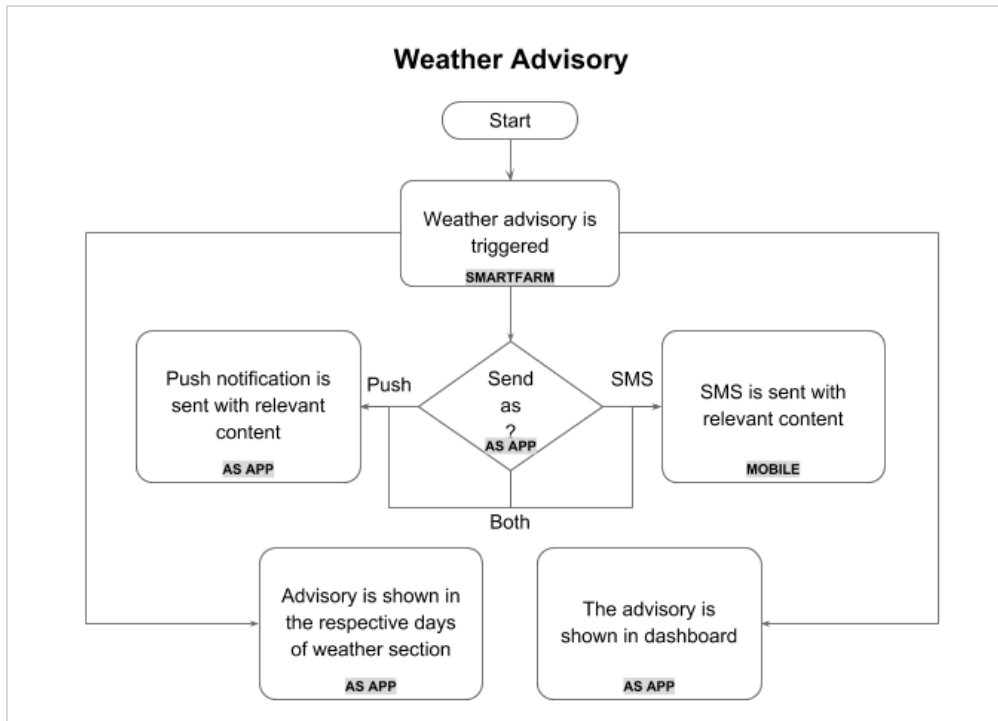
- Push notification template

Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/6d1d34c697f59395gkd495359
Frequency of use	HIGH
Post Conditions (Acceptance Criteria)	Following usage stats of push notification should be captured <ol style="list-style-type: none">1. Push notification sent time2. Push notification received time3. Push notification action (opened, not opened)4. Push notification action time
Success Criteria	0% miss rate of push notification
Data Elements	Notification Title Notification Text
Out of Scope	-

AS_S21_UC_04: Climate Sense Integration

Topic	Description
Objective	Advising farmers about tasks they should perform because of weather conditions
Who is the Feature for?	Farmers
Pre-Conditions	1. Climate sense configuration should be done by the company
Functional Module Affected	Weather Module and Dashboard
Core Components	1. Weather Module - 1 screen 2. Dashboard - 1 screen 3. Push Notification - 1 template screen for push notification

Basic Flow



Details of each component

- **Advisory in Weather Module**

This advisory is shown on the respective date in the weather section.

List of Screens

- Advisory in the weather section

- **Advisory in Dashboard**

The dashboard shows advisory that is active.

List of Screens

- Advisory in the dashboard

- **Push Notification**

When: A weather advisory is triggered

OnClick: Redirection to that particular section of the weather

Notification: Weather Advisory

Notification Text: Advisory content

List of Screens

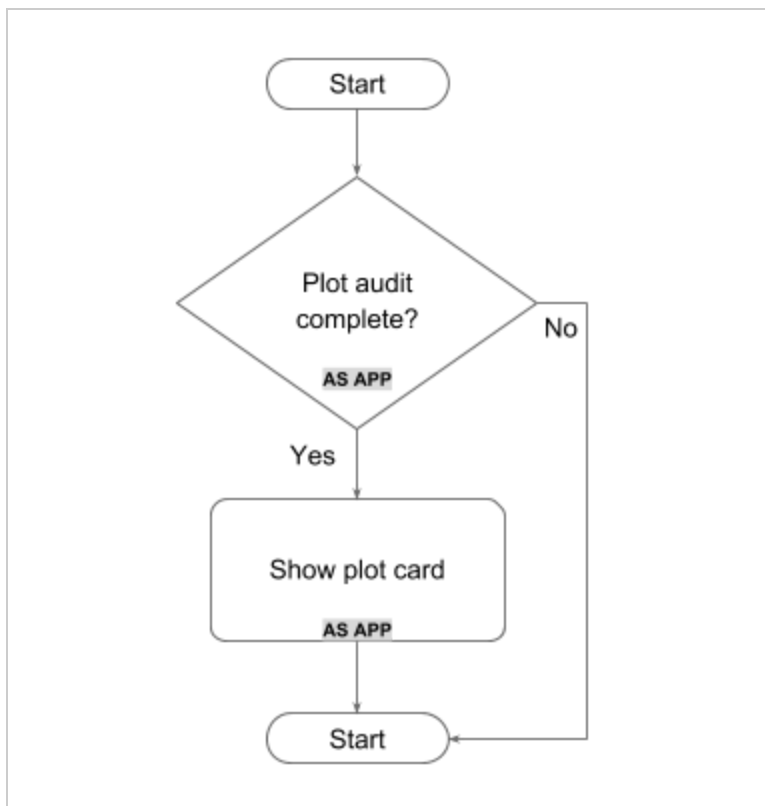
- Push notification template

Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/4996848t404bcer9t9e9359vv30504
Frequency of use	Low
Post Conditions (Acceptance Criteria)	NA as Dependent on external module
Success Criteria	NA
Data Elements	Weather Advisory Date
Out of Scope	Mapping an advisory to a particular task in PoP

AS_S21_UC_05: Plot Health Information

Topic	Description
Objective	To help the farmer easily understand what is plot health based on processed satellite images.
Who is the Feature for?	Farmers
Pre-Conditions	1. Plot audit/mapping should be done by the farmer
Functional Module Affected	Plot health card in the dashboard
Core Components	1. Plot Card - 1 screen with various states

Basic Flow



Details of each component

- **Plot Card**

Plot card contains the following information

1. Plot size
2. Crop Stage
3. Expected Harvest Date
4. Crop Health
5. Last Updated Date

List of Screens

- Push notification template

Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/39596600285gj945932fjd295jd349
Frequency of use	High
Post Conditions (Acceptance Criteria)	NA as dependent on other module
Success Criteria	NA
Data Elements	<ol style="list-style-type: none">1. Plot size2. Crop Stage3. Expected Harvest Date4. Crop Health5. Last Updated Date
Out of Scope	-

AS_S21_UC_06: Product Usage Stats

Topic	Description
Objective	To understand usage patterns and take product decision
Who is the Feature for?	Cropin
Pre-Conditions	Google Analytics Setup New Tables in the Database to support mentioned metrics
Functional Module Affected	-
Core Components	-

Details of each component

Following user interaction needs to be tracked.

- Android Version
- App Usage Country
- App Crash Stats
 - Time
 - Reason
- App Load Time
- Data Latency Time
- App Open Timestamp
- App Session Duration
- App Session Interval
- All Pages Stats
 - Session duration
 - Dashboard
 - Task
 - Task Details
 - Notifications
 - Profile
 - Alerts
 - Session interval
 - Dashboard

- Task
- Task Details
- Notifications
- Profile
- Alerts
- View count
 - Dashboard
 - Task
 - Task Details
 - Messages
 - Profile
 - Alerts
- Notification stats
- Clicks on News Module
- Clicks on Plot Health Card
- Clicks on Task

AS_S21_UC_07: Change Notification Label

Topic	Description
Objective	To discard confusion
Who is the Feature for?	Farmer
Pre-Conditions	-
Functional Module Affected	-
Core Components	Push Notification

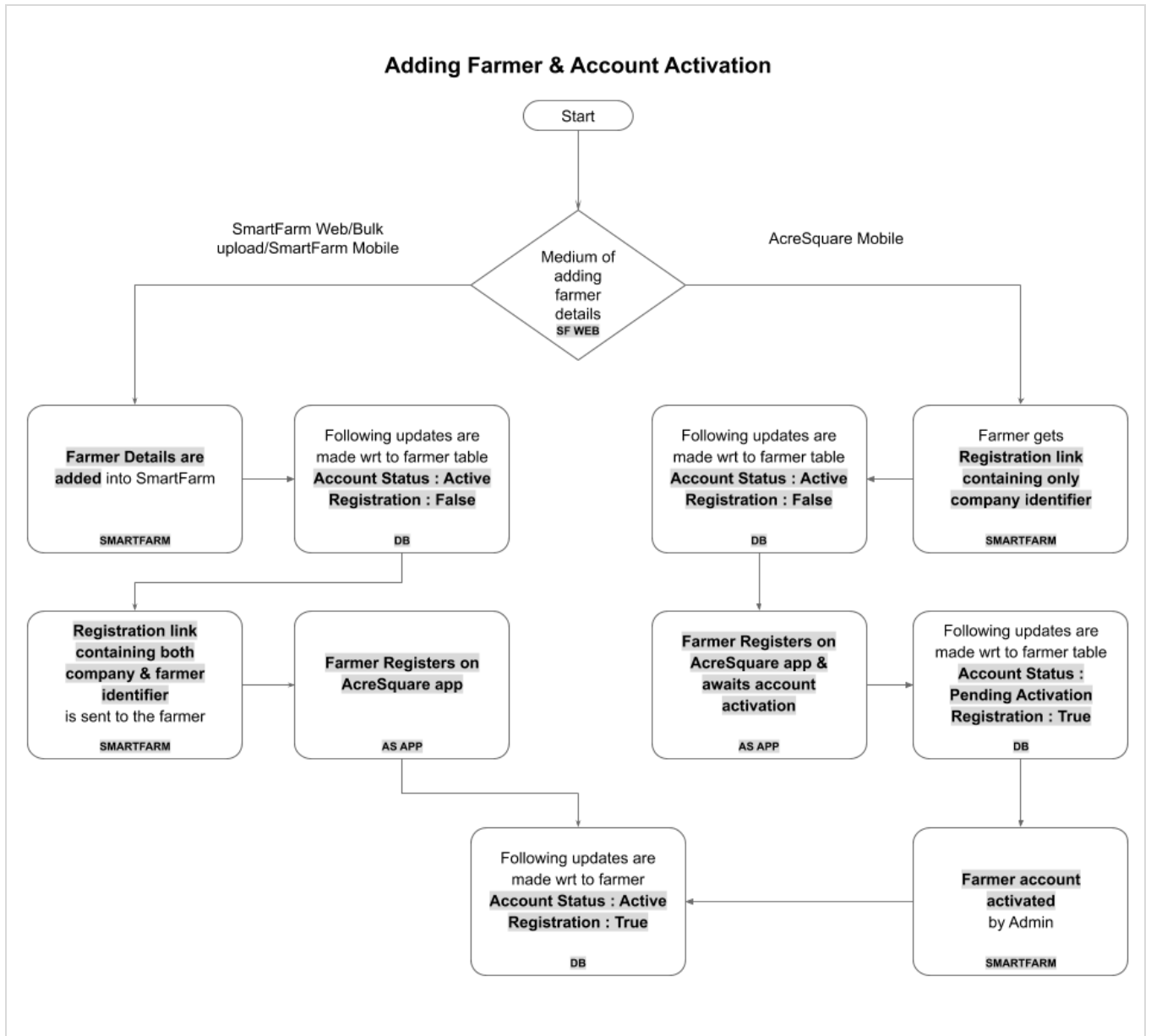
Details of each component

Change "Notification" label to "Messages"

AS_S21_UC_08: SmartFarm - Adding Farmer , Registration Link & Account Activation

Topic	Description
Objective	To help companies allow only authorized farmers from accessing AcreSquare App
Who is the Feature for?	Admins
Pre-Conditions	The farmer must have registered.
Functional Module Affected	Farmer Details
Core Components	1. Farmer Details - 1 screen

Basic Flow



Details of each component

- Account Status Updation

A new column is added which shows account status.

A farmer whose details are added using SmartFarm is by default in "Active" state.

A farmer who registers using AcreSquare is by default in "Pending Activation" state.

An admin can manually both activate and deactivate farmers' account using SmartFarm

List of Screens

- Farmer List
 - Registration Medium
 - Account Status
 - CTA: Number of Activation Pending Status/New Activation
 - Account Activation Process
 - Farmer Details Page in SmartFarm
- **Sharing Unique AcreSquare Registration Link**
Admin can send a registration link to all the farmers which are added using SmartFarm. If the farmers not using SmartFarm are selected, the system will send the registration link to only those farmers which were added using SmartFarm. The system will then inform the admin about the farmers who have not been sent the registration link.

List of Screens

- Send Unique Registration Link SMS/Email
 - Confirmation screen - Post sending the registration link
- **SMS Content**
The company registration SMS contains the following details
1. Company Name
 2. Unique Registration Link
For Example
[acresquare.cropin.com/register/?cid=**companyidentifier**&fid=**farmeridentifier**](https://acresquare.cropin.com/register/?cid=companyidentifier&fid=farmeridentifier)
 3. Helpline number/email

List of Screens

- Registration SMS preview screen.
- **Sharing Generic AcreSquare Registration Link**
Farmer clicks on AcreSquare Registration Details button
Downloads the pdf containing registration link and shares it.

List of Screens

- AcreSquare Registration Details button
- **Company Registration Card**
The company registration card contains the following details
1. Company Name
 2. QR Code to register
 3. Generic Registration Link
For Example
[acresquare.cropin.com/register/**companyidentifier**](https://acresquare.cropin.com/register/companyidentifier)

4. Helpline number/email

List of Screens

- Registration Details PDF design
- **Farmer-Manager Mapping**
By default, every farmer is assigned to Admin.
- **Country code mandatory for Farmer Phone Number**
Country Code Validation needs to be added for farmer phone number

Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/493959558330df0340550gfk3339
Frequency of use	Low
Post Conditions (Acceptance Criteria)	NA
Success Criteria	NA
Data Elements	Farmer Account Status
Out of Scope	Usage stats in SmartFarm Dashboard for Admin

AS_S21_UC_9: SmartFarm - Climate Sense Notification channel selection

Topic	Description
Objective	Let admin make the choice of the medium by which they want to communicate with Farmers
Who is the Feature for?	Admin
Pre-Conditions	-

Functional Module Affected	Climate Sense
Core Components	-

Details of each component

- **Turn on/off Push Notification and SMS**

On/off switch option can be used to configure the Climate Sense Advisory Medium. Explicitly show that this notification is sent to AcreSquare App.

List of Screens

- Climate Sense

- **Farmer-Advisory Mapping**

Farmer and advisory will have to be mapped so that advisories can be shown within AcreSquare app.

Zeplin Links	https://app.zeplin.io/project/6a28d3264a399c047128d791/screen/39455303055efje935599rgdd48385593
Frequency of use	Medium
Post Conditions (Acceptance Criteria)	NA
Success Criteria	NA
Data Elements	AcreSquare License Flag
Out of Scope	Smart channel selection which sends either push notification or SMS based on certain predefined conditions