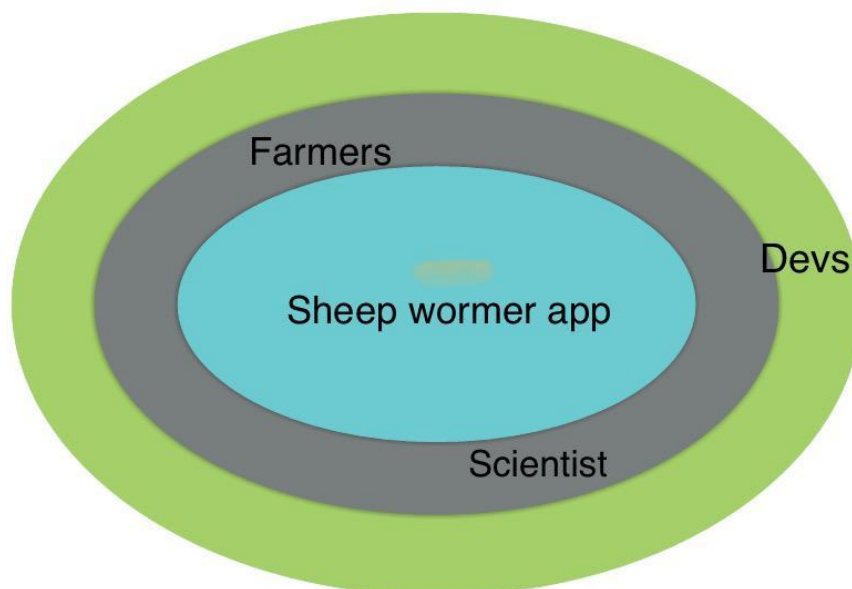


## Design Support Documents

The main idea of this app is to assist sheep farmers in managing internal parasites within their flock. Traditionally, all sheep in a flock were treated with anthelmintic agents at regular intervals, leading to the development of resistant worms over time. Now-a-days, it is advised to treat only those sheep that have parasites, allowing both resistant and non-resistant worms to coexist in the breeding population. This approach helps maintain the effectiveness of anthelmintics, and there is also a suggestion to cull animals that frequently require deworming to reduce the impact of internal parasites on the flock. The app enables farmers to monitor individual sheep for internal parasite issues, assess the effectiveness of deworming, and identify animals that may need to be culled.

### Stakeholder Analysis :

#### 1) Onion Model :



## 2) Description of each stakeholder :

### A) Farmers :

They will check the flock and each sheep will have the identification code. The display should be big and clear. Internet may not be available at all times. There should be a feature to store the data on the device, and then have it uploaded when internet is available. Farmer comes under the primary stakeholder.

### B) Scientist :

The scientist will analyze the data that was stored by the farmers. So that it will be helpful for the scientist to do research on them in the future. Every image is a valuable resource for the scientist. They can combine the images and can make it as a dataset in future. Scientist also comes under the primary stakeholder.

### C) Developers :

Here the developers are the secondary stakeholders as they take inputs from the both farmers and scientist and make the changes they asked for.

## 3) Stakeholder Goal Influence table :

Stakeholder	Goal	Influence
Farmers	They will check the flock and each sheep will have the identification code. There should be a feature to store the data on the device, and then have it uploaded when internet is available.	The images uploaded by the farmers will be very helpful for the scientist for their further research.

Scientist	The scientist will analyze the data that was stored by the farmers. So that it will be helpful for the scientist to do research on them in the future	The research done by the scientist will have great impact in the future.
Developers	The developers will create a good web app to ease the workload of scientists and farmers and the app will be thoroughly tested by the UX consultants.	The developers may influence the application by fulfilling the needs of both farmers and scientists. Also they may influence the UX/UI elements according to their needs.

**Persona 1 :**

Name	Christian
Role	Primary Stakeholder
Age	26
Residence	Montana
Education	Agricultural Science
Occupation	Farmer
Goals	He should be able to use the app according to his needs while deworming the sheeps
Review about application	Satisfied

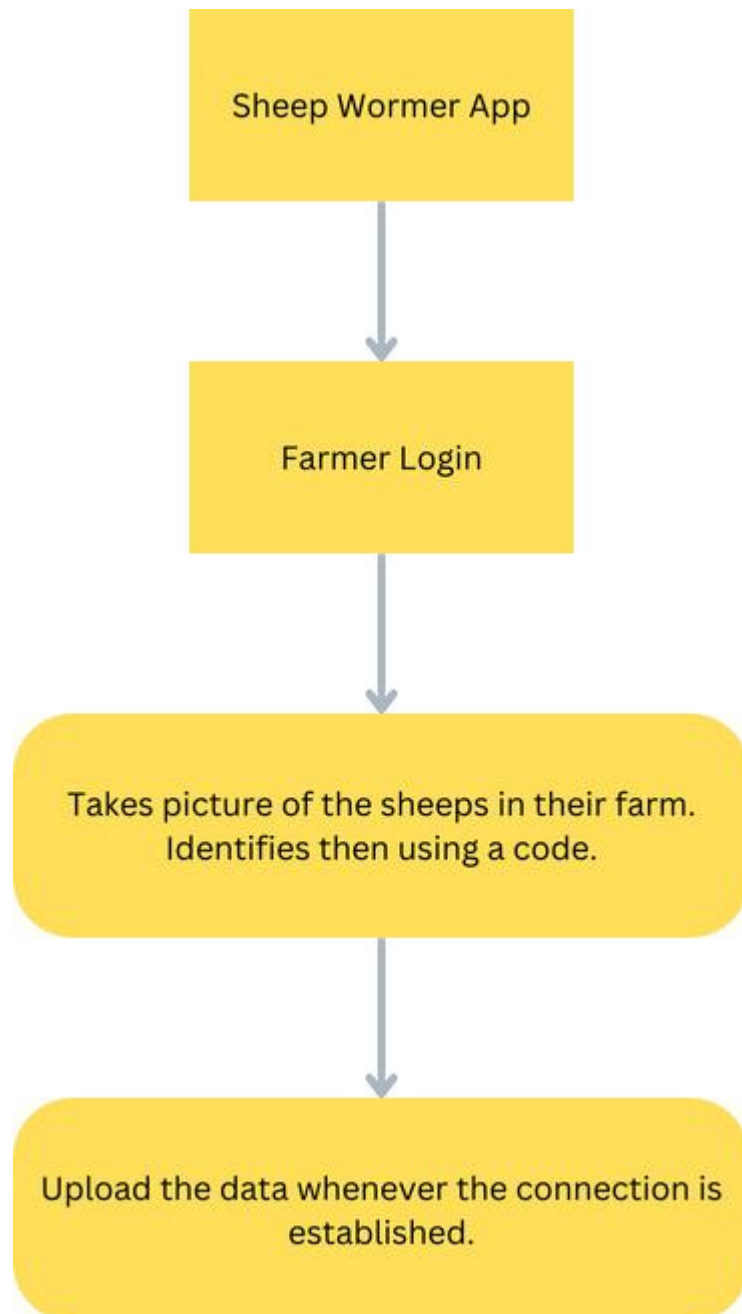
**Persona 2 :**

Name	Andrew
Role	Primary Stakeholder
Age	23
Education	Ph. D in Agricultural Science
Residence	North Carolina
Occupation	Scientist
Goals	He should be able to use the images for his research.
Review	Satisfied

**Persona 3 :**

Name	Henry
Role	Secondary Stakeholder
Age	27
Education	Computer Science
Residence	Michigan
Occupation	Application Developer
Goals	He should have access to the code.
Review	He needs to change code and UI whenever primary stakeholders asked.

## Hierarchical Analysis:



## **Post Interview Notes :**

The shepherd discussed an update during the last meeting, noting that, besides the initial spreadsheet, they've diligently reviewed and entered additional data from the past year into the system. The newly added columns primarily focus on registration information, which can be disregarded. The shepherd emphasized their practice of "charting by exception," meaning notes were taken only when issues arose. For instance, on 11/24, four ewe lambs were wormed out of 15 checked, indicating a targeted approach. The absence of FAMACHA scores suggests a likely consistent worming approach at level 3. The limited data underscores the importance of the envisioned app, aiming to streamline comprehensive data recording for better analysis.