

Roya Survey

Developers

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Roya Survey App

The Roya Survey App seeks to provide feedback to scientists working with long-term climate data to generate models predicting levels of risk for infection of coffee farms by the coffee rust fungus in Mexico. The app will allow coffee farmers to register and then provide several photos and a personal estimation of the degree of coffee rust infection in their farms that will then be compared to existing models predictions to help refine them. In exchange, farms will be able to send additional photos of other pests and diseases in their farms and a request for help in identifying them and obtaining suitable control measures.

Stakeholder Onion diagram

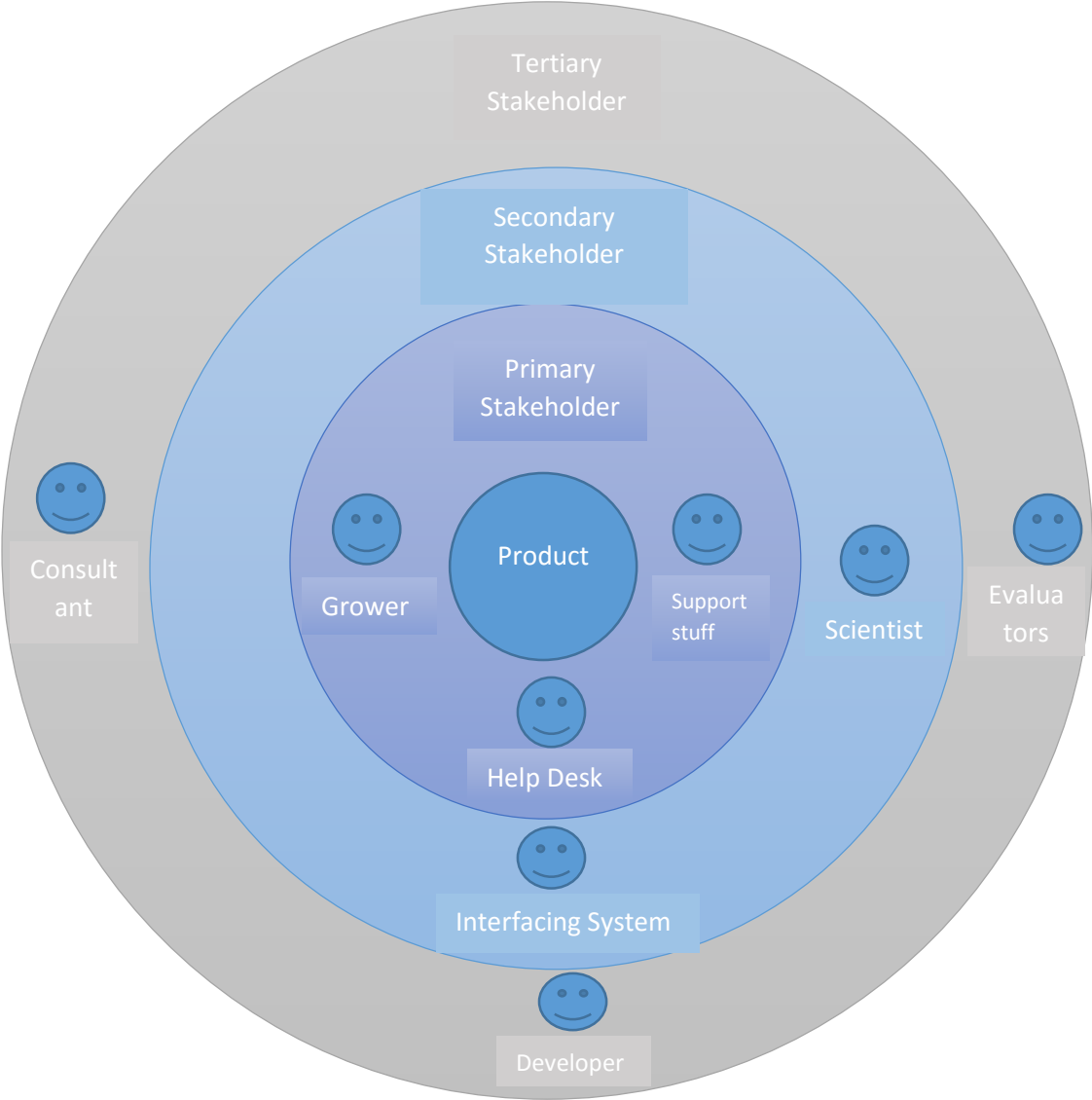


Figure: Onion diagram of Roya Survey App

Primary Stakeholder

Growers: Primary Stakeholders are the coffee growers of the Mexico. They register to the app and then provide several photos and a personal estimation of the degree of coffee rust infection in their farms that will then be compared to existing models predictions to help refine them.

Secondary Stakeholder

Scientist: Secondary stakeholder of the app are scientists. After gathering information from the growers they analyze the data and develop a model.

Tertiary Stakeholder

Developers: The undergraduate students involved in designing, creating, and supporting the application.

Consultant: The graduate students are tertiary user. They evaluate the app and give constructive feedback.

Stakeholder Goal Influence Table

Stakeholder	Goals	Influences	
		Contributing	Constraining
Scientist	Locate the infected firm	Mitigate the risk	Find the infected area
	Check how predictions come out compared to reality	Analyses	Farmers involvement to send data
	A well-established procedure	To assess the actual level of infestation	Data format
	Increase awareness	Advertising	Target audience access to technology
Growers	Send data	Production data	Access the technology
	Get feedback	Production data	Access to technology
Developers	Provide a finished product	Production data	Get full requirement
Consultants	Evaluate the app	Feedback	

Coffee growers are the primary stakeholder and they are the information gatherer. They provide data and feedback. They upload photos using this app. After getting this information scientist build the model. Hence scientists are the secondary stakeholder. Scientists check how predictions come out compared to reality - gives incentive by allowing them to take pictures of other diseases/pests get them analyzed by scientists as well. Developers, Evaluator and the consultant are the tertiary stakeholder of the app. The main responsibility of developing is to provide finished product to the secondary user according to their requirement. Evaluator and consultant check the app with the requirement. And then they evaluate the app and provide construction feedback to the developer. After that developer modify their app based on the feedback.

Personas

Persona1:

- ✓ Name: Shin Lee
- ✓ Gender: Male
- ✓ Age: 48
- ✓ Location: Mexico
- ✓ Profession: Coffee Farmer

Shin Lee work as a farmer and work at Lakepark coffee garden. He has been working here all his entire life. He was not concerned about the health related issues while working on the garden. Gradually he was affected by the virus. He spent all, the day infirm. He has a little idea about technology.

Persona2:

- ✓ Name: Rafiqul Alam
- ✓ Gender: Male
- ✓ Age: 30
- ✓ Location: Mexico
- ✓ Profession: Coffee Farmer

Rafiqul Alam lives in Mexico and work in a coffee garden. He is a very smart guy and he always tries to involve with technology. He has smartphone and comfortable with a smartphone. He surfs the internet using his smartphone.

Persona3:

- ✓ Name: Amani Bose
- ✓ Gender: Female
- ✓ Age: 48
- ✓ Location: Queens, NY
- ✓ Profession: Scientist

Armani Boss is a scientist and he works on the long-term climate data to generate models predicting levels of risk for infection of coffee farms by the coffee rust fungus in Mexico. She is comfortable with technology. She collects data from the internet for her research project.

Persona4:

- ✓ Name: Rahul Varma
- ✓ Gender: Male
- ✓ Age: 23
- ✓ Location: Houghton, MI
- ✓ Profession: Student

Rahul Varma is a graduate student at Michigan Technological University. He worked on different software development project. He also worked as a software quality assurer. He is a technophile person.

Simplified HTA

Home

Login page

Dashboard

View Post

Minimap

Pictures

Rating

Farmer comments

Scientist feedback/comments

Submission

Take photo button

Rating thing

Comments

Setting

Home page

Appendix

- Summary from scientist
 - **Building off prev app from last semester. Takes advantage of risk map for roya for coffee growers to locate their farm and locate and learn to mitigate the risk. Working on recommendations. Looking to get feedback, model needs to be constantly defined to get better feedback.**
 - **Allow growers to send pictures of the farm and plants and qualify the infestation on some scale. Have scientists check how predictions come out compared to reality - give incentive by allowing them to take pictures of other diseases/pests get them analyzed by scientists as well.**
 - **There IS a well-established procedure involving complex to measure a specific number of leaves on various parts of the plant for a certain number of plans to assess the actual level of infestation.**
 - **Coffee plant could be representative**
- How would you, as the scientist man, like to view the data?
 - List of unviewed/unclaimed pairs in app?
 - CSV dumps?
 - **Something easy to get into excel - CSV's work pretty well**
- Other than just pictures and guestimated ratings, what kind of data would you like to see?
 - Possibly GPS?
 - **Wants it confirmed with GPS - wants to compare geographical location with map predictions**
 - **pictures/scale**
 - **Personal information - contact info (phone, email, name, etc.)**
- How many pictures to you expect to be taken per entry?
 - **Multiple - maybe a close up and an an overall? 2 is a good goal**
 - **1 for overall plant**
 - **1 for individual leaves - check % that's affected by orang-y spots (don't do image processing, that'd be silly)**
 - **Maybe some photo instructions**
- Do you expect farmers to want to review/update their own entries?
 - Limited Time to update (24 - 48 hours)?
 - **Maybe tie reports with time**
 - **Maybe not necessarily updates - give them a solid reference on analyzing how high the level of the infestation is**
 - **We can probably get some images or references**
 - **Probably a 1-10 scale - might want to change to 1 - 5**
- Do you want registration or anonymity?
 - If registration what kind of info?
 - **Registration would definitely be useful - warning for future issues via text, email, etc?**
- How should we categorize non-rust submissions?
 - **Reward AFTER rust submission**
 - **Doesn't really sound like he really wants strict categorization**
 - **Wants detailed picture to identify - can ask for additional information later**
- Do you have pre-existing data you want to import?
 - **Read about roya**
 - **Link to scientists**

- Add an “About Us”?
 - **Could probably provide email - maybe a new email address for the app**
 - **Can probably get links to scientist webpages to get information on the app**