Solution Analysts

Analysing needs, delivering solutions

Feed Farm management Android App Development

Project Proposal

For

Eric Hager (iSabel.io)

Version 1.0

23 February 2019

Disclaimer

This document and the information in it are provided in confidence, for the sole purpose of Solution Analysts, and may not be disclosed to any third party or used for any other purpose without the express written permission of Solution Analysts.

Table of Content

1. Document Revision & Sign-off 3
   - Revision History 3
   - Reviewer 3
   - Document Properties 3
2. Executive Summary 4
3. Project Scope & Information 4
   - Project Approach 4
   - Systems & Users 4
   - Project Scope 5
   - Mobile App (Native Android) 5
   - Admin Panel (Web App) 7
   - Technology Stack – Android Application 7
   - Technology Stack – Backend Admin Panel 7
   - Project Milestones 8
4. Size Specification – Mobile Application 8
5. Assumptions 8
6. Cost and Timeline: 9
7. Terms & Conditions 9
   - Payment Terms 9
   - General Terms 9
8. Intellectual Property Rights and Ownership 10
9. Terms of Agreement 10
10. Termination 10
11. Entire Agreement 10
   - Work Methodology 11
   - Escalation Matrix 13
12. Approval & Agreement 14

Document Revision & Sign-off

Revision History

#	Date	Author	Version	Remarks
1	21/02/2019	Ketan Kandoriya	1.0	Based upon the requirement shared

Reviewer

#	Name	Position	Email
1	Vivek Shah	Sales Director	Vivek.shah@solutionanalysts.com

Document Properties

#	Particulars	Details
1	Document ID	#RM_Feb_001
2	Document Type	Proposal

Executive Summary

ISABEL is a group of hydroponic experts, software engineers, designers, manufacturers and innovation consultants with a combined 30+ years of experience in controlled environment agriculture & technology.

As of now the groups of farmers we have been working with are using WhatsApp to report this information to us. However, recalling and/or analyzing this information is difficult and hence **Mr. Eric Hager** who is the founder of Isabel.io has shown an interest in creating a farm management app in Android platform.

This would be an offline-first, platform agnostic mobile application to assist farmers of various types in documenting process, managing inventories of inputs and crops as well as troubleshooting crop health issues given a combo of photos, real-time and historic climate information that is provided by sensors and/or weather satellites via API's.

UI/UX design and working prototype is prepared and shared with SA team. It is accessible at
https://invis.io/VMQJUI2GBCU

Project Scope & Information

Project Approach

The project scope of work will be limited to the below Scope. The development of the scope will be performed based upon the waterfall software development methodology.

Systems & Users

- **Android Mobile App – For Users**
- **Web Application – For Admin (Owner)**

Project Scope

Mobile App (Native Android)

Details regarding Front End Application:

Mobile Application: The mobile app will have the features like;

1.0 Splash Screen

- The app will be initiated once clicked on the app icon from the user's mobile device. The user will be able to download the app from the respective App store and Google play store.
- The user will be able to see the Splash screen which will display the logo of the app and background image/animation (image, animation and logo will be provided by client).

2.0 Sign in

- The user will be able to login screen with the view of app logo and background image.
- This screen will have the login fields like Email Address and Password.
- The user will be able to click on the login button to login to the application.
- The user will also have the option to user the "forgot password" link to access the "forgot password" feature.
- The user will have the option to go to registration/sign up screen from the login / sign in screen.

  2.1 Forgot Password
    - This feature will ask user to provide registered email id, in order to get their account verified and to send a link to access the reset password screen.
    - The user will be shown an error message, if the user enters non registered email id in

3.0 My Farm

- After successful login, the user will be taken to this screen.
- The home screen will display showcase the list of farms registered along with the button to add a new farm
- User will also be able to edit thee farm and go to the setting by an option on top right corner.
- Once the farm is created, user can click on that particular farm and can add a zone on farm detail page.
- Farm detail page will have following 2 sections in it
    - Crops
        - User can add crop details by entering details like Variety, Planting date and units and can submit it. Once this is created, it will appear under CROP section on Farm detail page.
        - User can also add a new variety from the dropwodn list under variety by providing variety details like name, vendor name, plant type, Units, seeds/ transplants etc and can submit to make it appear in dropdown.
    - Activities
        - List of activities on farm will be displayed here along with date/ day
        - User can also click on Add activity button where he can find suggested activities and can add activities under Nursery, Vegetative, and Reproductive.

        - User can see suggested activities under these options and can click on any suitable activity for eg. Transplant seeding and can click on that which will redirect his to camera page where he/she can scan the QR code insider the farm area.
- User can also invite other users from top right corned by providing details like Fullname, number and by assigning the Role (Owner/ Worked etc)
- User can also access settings from this screen from top right corner and can change password and profile picture.

4.0 Crop Health Report

- User can review list of health reports under this page and can create new one which will be shared to Admin. Admin can also review the same and revert him/her back and conversation can take place by this way. Once the issue is resolved of required consultancy is received, he/she can mark it as resolved.
- User can select one particular farm and can click on ADD button which will open the camera and user can scan QR code for the crop and can send actual pictures of the crop.
- User can select multiple pirctures, can mention details such as healthy / unhealthy, part of plants affected and description which will be shared to Admin.

5.0 Inventory

- User can review farm, review and change selected zone and can find following 2 sections under this page.
    - Harvests
    - Inputs
        - User can select type of inputs such as verities, Fertilizers etc. and can add new inputs in the list.

6.0 Data and Performance

- Climate:
    - User can click on ADD button to add Air sensor or to subsrate sensor
    - Clicking on any of this option will ask him/her to search for new sensor, name it, and to assign a role
    - Once added, the data will be displayed under Climate section.
- Operations

7.0 Static pages

- FAQs: User can find out relevant questions and their respective answers available on this screen.
- Policy: Will give you the highlight of policy
- Contact us: Contact information

8.0 Sign Out

- The user will be taken to the login screen of the app.

Admin Panel (Web App)

A. Login
- The user will be able to login using Email Address and Password
- **Forgot password:** Password resetting link will be sent on registered email address.

B. Farm management

C. User Management

D. Content Management
- View the content of informative pages such as about us, privacy policy and contact us.
- The admin will be able to edit the content of these informative pages and save them.

E. Reports and Statistics
- View the user report, and filter these reports by specific account, dates and transaction type, amount etc...

F. Sign Out
- The user will be logged out of the admin panel and will be taken to the login screen.

Technology Stack – Android Application

Native Android	
Programming Language	Native – Kotlin
Device support	Samsung, LG, Google Pixel, Google Nexus mobile devices
Operating system	7.0+
Device orientation support	iPhone App: Portrait Only

Technology Stack – Backend Admin Panel

Firebase

Project Milestones

Actualy project plan and milestones will be mutually defined by project manager and client.

Disclaimer: Above is the estimated time duration. This has direct dependency on approvals, feedback, preparation of data, etc. and subjective to get revised based on any other unforeseen situations.

Size Specification – Mobile Application

#	Size Category	Portrait Size Specification (w*h) (in dpi)	Landscape Size Specification (w*h) (in dpi)	Device Type
Android				
1	Xhdpi	720x1280	1280 x 720	Android
2	Xxdpi	1080x1920	1920 x 1080	Android
3	Xxxdpi	1440 x 2560	2560 x 1440	Android

Yellow indicates Landscape support not included in scope.

Assumptions

- ✓ The design will be provided by ERIC in PSD format.
- ✓ The app will only support English language.
- ✓ The application will support offline mode and will work in absence of internet.
- ✓ The application will work in size specifications mentioned in the technology stack.
- ✓ Any third party API cost will be borne by the client if applicable.
- ✓ The application require internet to access to work
- ✓ All image, videos, content will be provided by client.
- ✓ The application will work in the portrait mode only.

Cost and Timeline:

- ✓ USD 8,000 (Including Upwork Fee of $850)
- ✓ Timeline: 10-12 Weeks

Terms & Conditions

Payment Terms

Client will follow the payment schedules as below via PayPal or Wire transfer:

- **Milestone 1**: 30% of total cost as advance
- **Milestone 2**: 40% of total cost at partial delivery o
- **Milestone 3**: Rest 30% of total cost at the time of project completion.

Note:

- Wire transfer actual cost will be borne by client.
- Above cost does not include commercial license fees of third party services and extensions packages.
- After final approval of design mock-ups any fundamental design revisions will be considered as extended scope and incur additional hourly charges.
- Paid materials cost borne to client.
- Client will have to follow the technical instruction and procedures to smoothly administration the back office operations.

General Terms

In the Project Terms and Condition, it covers consideration of the mutual promises between both the parties. It has mutual disclosure of Project and Payment related Terms and Conditions for both the parties. It says each undersigned party agrees as to below:

Definitions:

- **Solution Analysts Pvt. Ltd**, a business unit (Referred as SA)
- **Eric Hager,** means the legal entity using services Solution Analysts Pvt Ltd (Referred as Client)
- Solution Analysts Pvt Ltd. and Client are sometimes referred to herein individually as a "Party" and collectively as the "Parties"
- **Project:** "Project" shall mean the website, web application, mobile app or product to be developed by Solution Analysts Pvt Ltd. for use by Client in accordance with this Agreement. As used herein, the term "Project" includes the source code, object code, executable files, graphics and any supplemental files needed to maintain or operate the Project and any documentation relating to the Project including without limitation all relevant commentary, flow charts, algorithms, and subroutine descriptions, memory and overlay maps and other documentation of the source code.
- **Statement of Work (SOW):** "Statement of Work" means the full list of services provided by Solution Analysts Pvt Ltd. to Client under this Agreement.
- **Technical Specification:** "Technical Specification" means the specifications that describe the architecture and programming of the Project.

- **Deliverables:** "Deliverables" means all items to be produced and delivered by Solution Analysts Pvt Ltdor Client hereunder, including the associated documentation.
- **Milestones:** "Milestones" means any task to be completed by Solution Analysts Pvt Ltd. or Client by a specified date in accordance with the Deliverables Schedule.
- **Deliverables Schedule**: "Deliverables Schedule" means the description of the Milestones and Deliverables to be delivered and the dates by which each Milestone is to be completed and each Deliverable is to be delivered to Solution Analysts Pvt Ltd. and Client.
- **Beta Version:** "Beta" means the close to completed Project, except for the final fixing of any remaining bugs and optimizing the code for better performance.
- **Launch**: "Launch," means the first general release of the Project in a form fully accessible and operable by users of Client.

Intellectual Property Rights and Ownership

All Intellectual Property (including Source Code, Documentation, and Application Package) during the project is owned by the Customer, and will be turned over to the Customer at the conclusion of the project by Developer and after the fulfilment of all commercial obligations by the Customer.

The customer is the sole owner of the developed software with full IPR.

Terms of Agreement

This Agreement commences on the date it is executed and shall continue until full performance by both parties, or until earlier terminated by one party under the terms of this Agreement.

Termination

The Customer shall, in the event of Developer committing any breach of any of the terms and conditions ofthis agreement or for any other reason considered as sufficient, be entitled to terminate this agreement bygiving 3 weeks' notice in writing and it is applicable only when the project is not completed. If the customer terminates the agreement, then the payment accrued or payable to Developer up to the date of the termination will become accrued or payable to Developer only up to that date. The customer shallcompensate the Developer up to the date of termination with a fee calculated on Pro-rata basis. Developermay also terminate this Agreement by giving 3 weeks' notice in writing to Customer. It is applicable only when the project is not completed. In case Developer terminates the agreement, it shall handover the entire project related IPR, work done till date, and source code to the customer.

Entire Agreement

This agreement supersedes all oral and written representations and agreements between the parties including, but not limited to any earlier agreement relating to the subject matter thereof any other Agreement between the parties in relation to the subject matter thereof.

Work Methodology

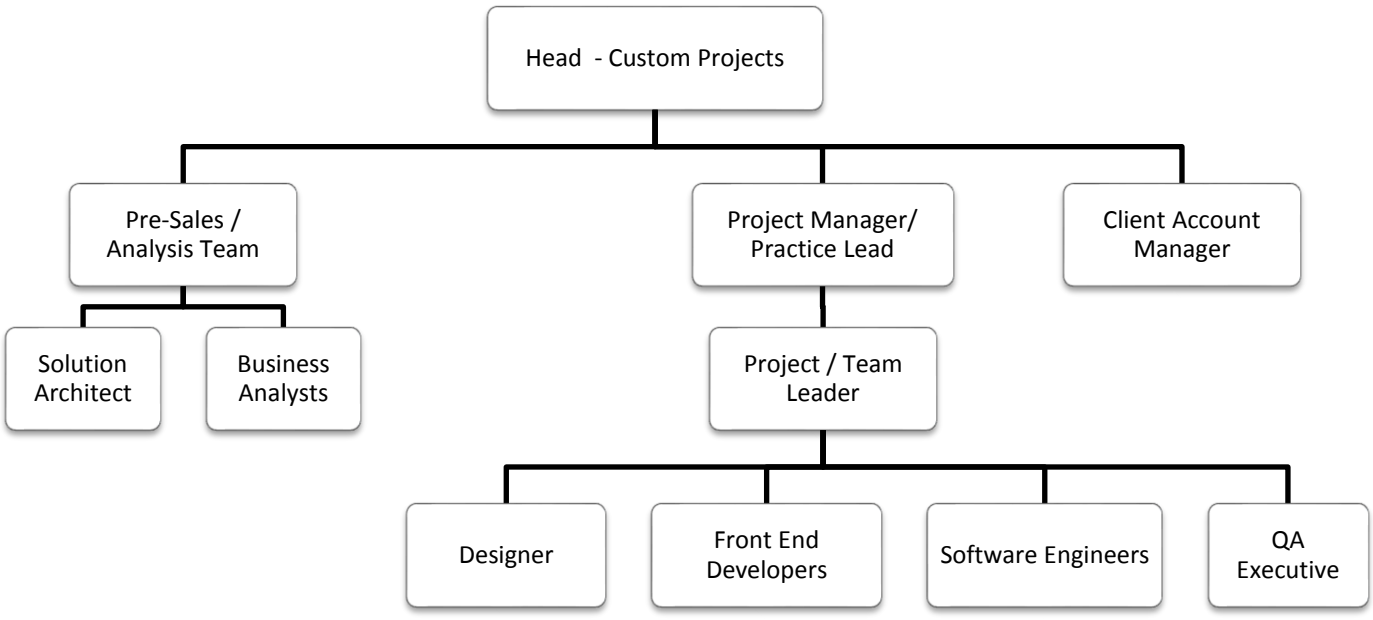
Project Flow:

Business Development	Initial Exploration	We seek to gain an initial understanding of your business to craft it as project. We research and document potential solutions, and then deliver them in the form of a proposal. At the end of this scope, you and we can make a choice to go further looking at lump sum estimation of work and budget.	- Business Brief - Estimation (Proposal) - Contract - Project Charter
Pre-Development	Discovery	In discovery, we start delving into the details of the project and spend the time that is actually necessary to flesh out the requirements and solutions for the project. We focus not only on the creative, functional, and technical requirements. It is important that we go through this discipline of planning so that we propose and ultimately deliver a solution that is in line with your requirements, timeline, and budget.	- Project brief - Proposal (for approved scope) - Content brief - Creative brief - Technical brief - Marketing brief
	Solution Design	We focus on creating an ideal user experience through the process of creating wireframes, which then guide the graphic design for the theme, on a parallel track; we engineer the third-party integrations and custom functionality which becomes the blueprint for the development stage.	- Site map - Wireframes - Graphic designs - Technical specification - Development cost & timeline
Development	Development	The plan created in pre-development comes to life as our developers build the mobile application, custom functionality, and third-party integrations.	- Initial site preview on stage server - Customized training for your team
	Testing & QA	We thoroughly test all custom development and third-party integrations to ensure that they function as defined in the technical specification. We ensure that all code adheres to our strict best practices. We run a suite of test to ensure that the frontend functionality works in all supported browsers and matches the graphic designs.	- Fully-tested mobile app on stage server
	Launch	We deploy the fully-tested mobile app to your production environment.	- A mobile app that accomplishes your objectives - Plan for ongoing maintenance/development
Ongoing Relationship	Improve & Grow	We work with your team to continually improve and support your product through our marketing, creative, and development support services.	- A long term relationship or an as-needed support agreement

At one particular time, more than one phase can be executed depending on project type, level and length.

- **Communication & Reporting:** Since the project is offshore development activity, the project commands the best in communication and any lacking in the communication results in detrimental implications on the project, client and Solution Analysts relations, image and reputation of Solution Analysts.
  Based on the lessons learnt in the past, it is a primary objective for Solution Analysts to have a well-established channel and setup for communications. The project communication will be based on the systems that have proven effective in the past projects. The project communication plan include the below mentioned approach.
- Internal Reporting:
  At Solution Analysts the hierarchy system is evolved in such a fashion that there are daily reports being generated by the team members to their immediate team heads. It is also a primary responsibility for team leaders to keep track and reporting status available for anytime update to the management. For the project, team is composite of a project manager, team leader and developers, the internal communication will be kept internal and the project coordinator / project manager will be kept updated for all developments. Record will be managed through PMS and Emails. No further document of internal communication will be generated.
- External Reporting:
  The external communication mechanism involves the project manager / project leader and the team from the client end. All communication will be based in electronic mailing and calling and messaging based as explained in the below mentioned tools. Weekly or periodic reporting will be presented to client during the each project phase. All communication will be recorded for later reference and record purpose.
- Reporting Tools:
  Project management systems, E-mail as well as Skype (Instant Messenger Systems)

Ideal Team: Below is the ideal formation of team structure we plan for each project in custom solution services at SA



*Note:*From above diagram, client can understand job roles of each personnel who are making a team to complete your requirements. At the same time, it helps in knowing escalation matrix (written below), if needed. Head – Custom Projects reports to CEO

- Head Projects: a person who is accountable for project division of company. He is solely responsible for each aspect of project
- Business Analyst: a person who is responsible for understanding client needs, suggest right solution, documentation, designing of wireframes, etc. He is responsible for explaining requirements to rest of the departments as well
- Solution Architect: a person who is responsible to suggest technical solution/ test project feasibility and estimate time required for development of project. Being technically sound this person also suggest infrastructure required to run particular project. He is also a guide to development team regarding approach of development.
- Practice Lead: The Practice Lead ensures that the Solution Development Teams work in a consistent way, that the project is technically coherent and meets the desired technical quality standards. The role provides the glue that holds the project together while advising on technical decisions and innovation
- Project Manager: he is responsible for all aspects of the delivery of the solution. As well as providing high-level management direction to the project team(s). The Project Manager co-ordinates all aspects of management of the project at a high level, and leave the detailed planning of the actual delivery of the project to the Team Leader and members of the Solution Development Team.
- Project Leader: a person who leads the team of designer, front-end developers, programmers and QA. He is responsible for converting requirements into reality. He will submit reports, periodic updates and resolve queries of client. He will also take care of change in requirements.
- Designer: is responsible for conceptualization and implementation of design of solutions that meet marketing strategies from concept to completion. A person who is responsible for designing UI / UX for each project
- Mobile App Developer: a person who is responsible for converting designs into the mobile app and code them as per standards. He will work in close coordination with programmer and designer both. Mobile app developers will be responsible to develop the mobile app
- Software Developers: people who are responsible for coding, documenting, integrating and customization of platform. They work as team and completes the project as per guideline / standards set in requirement document / SOW
- QC Engineer: a person who checks the coding and performance of project. He is an internal auditor of project. He is responsible for durable, bug-free and robust delivery of project
- Client Account Manager: a person who is responsible for managing client experience. He takes feedback from client on regular intervals so that we can fine-tune our processes. He is also responsible for payment schedules, invoicing and escalating client queries to top management

Escalation Matrix

I. At SA the Project Leader as the main accountability for project execution and results to be produced, then the Project Manager and then the Head-Projects should follow. SA must obtain from the Client, the identification of the main persons for escalation. The escalation is formalized by email and phone. And we expect client to give 2 working days to resolve any escalations. status, legal formalities shall be initiated

Approval & Agreement

This is to declare that we have gone through above proposal and we agree to it,

Vivek Shah, Solution Analysts Pvt. Ltd.
Sign: _____
Designation: Sales Director
Location: Ahmedabad, India

Eric Hager, Isabel.io
Sign: _____
Designation: Owner
Location: USA