**Decode the case study**

**Project Idea** – Mr. Henry decided to make an online agriculture product store to facilitate remote area farmers to buy agriculture products

**Current Needs-** Online Web / mobile Application for Farmers to easily access and procure (Fertilizers, seeds and pesticides manufacturing Companies) & can communicate directly with each other. Farmers will browse through these products and select the products what they need and request to buy them and deliver them to farmers location.

**Overview of the project –** Upon seeing the challenges faced by his friends who are in farming (Agriculture sector) , Henry decided to analyze the current situation & planning to come-up with best possible solution not only for his friends but also for the entire group of people who are doing farming business. By providing Online Web / mobile Application. So with the support of his management staffs with the help of CSR Initiative (Corporate Social Responsibility initiatives) . They identified best vendor (APT IT SOLUTION) to handle this entire project and to deliver a web service/ mobile application.

**Current problem -**Difficulties in procuring fertilizers which are very important for farm. Buying seeds for farming certain crops.

**Know your team**

**Henry** – Successful Business

**Peter/ Kevin / Ben** his childhood friends– Farmers

**Pandu** is the financial head of SOONY (Henry company)

**Dooku** is the Project co-ordinator

These 3 gave this project to APT IT Solution for 2cr - 18 months duration under CSR Initiative

**Peter / Kevin/ Ben** – Helping the committee Stakeholder – Share requirement

**Karthik** is the delivery head in APT IT Solution

**Vandhanam** is the project manager

**Juhi** senior java developer

**Teyson / Ms Lucie / Mr Tucker / Mr Bravo** - are Java Developers.

**Mike** – Network admin

**John** – DB Admin

**Jason/ Alekya** – Are testers

**Deepak** – Business Analyst

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Question 1 – Prepare Business Process Model

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Goal – Bridge the gap between farmers and products which they intend to buy.

Input – Funds / Resource to implement the application

Output – Benefit for the farmers

Activities - To build Mobile application for farmers enabling them to easily access for placing orders for their agriculture products

Values – The value which is being delivered to the end user or the stakeholder is Farmers will get products on time with mobile app

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Question 2- SWOT Analysis

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Strength – Agricultural sector will never lose its demand

Weakness – Dependency / Accessibility

Oppurtunities – Implementing of new mobile application will gain popularity among farmers.

Threat – Technical Risk of how to operate the app among farmers. Competition among similar app

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Question 3- Feasibility Study

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Technology – Devlopment team and the senior IT team will work on preparing sketch on which progaring lanug must be used to create this app

Hardware –

* **Farmer accessibility** - Survey smartphone penetration among target farmers
* **Logistic & Delivery** - Enabled devices for delivery partners to enable real-time tracking.

Software – Server Issues/ Storages

Resource – Delivery head / Project Managers / Developers / Testers/ Bus Analyst

Budget – Various cost & overheads involved to built the app

Time Frame – 18 Months overall. However subject to resource & no.of features and functionality

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Question 4 – GAP Analysis

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Current State – Farmers are procuring their agriculture products & other necessary raw material from open market & sometime they find it very difficult to get their requirements on-time.

Harvesting cant be carried on-time if they didn’t get their required products quickly.

Desired State - Designing & Implementing of new app to get their required agricultural product within single click will make their job easier.

Their routine will not be will affected because of delay.

This will improve their efficiency / profit

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Question 5 – Risk Analysis

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**Internal Risk** – Farmers from rural side may be facing difficulties while handling the app (Unfamiliar with the technology) & how to operate / how to navigate to place their orders and to make payment

Scalability of using app is also a noticeable challenge.

* **External Risk** –Natural disasters (floods, heavy rains) disrupting the delivery timelines.Remote rural areas with poor road infrastructure will also cause delay in last-mile delivery.

**BA Risk –** Frequent changes in stakeholder requirements in regard to their demands

Limited Involment from the stakeholder during review meetings

Question 6 RACI Metrics (Stakeholder Analysis)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Role** | **Responsible** | **Accountable** | **Consulted** | **Informed** |
| Project Sponsor |  | **X** |  | **X** |
| Project Manager Team | **X** |  | **X** | **X** |
| Dev Team | **X** |  | **X** |  |
| Farmers (End User) |  |  | **X** | **X** |

|  |  |  |
| --- | --- | --- |
| **RACI** | **NAME** | **DESIGNATION** |
| Responsible  | Pandu | Financial Head |
| Doku |  Project Coordinator |
| Karthik |  Delivery Head in APT IT SOLUTIONS |
| Vandhanam |  Project Manager |
| Juhi |  Senior Java Developer |
| Teyson  |  Java Developers |
| Lucie  |  Java Developers |
| Tucker  |  Java Developers |
| Bravo |  Java Developers |
| John  | DB Admin |
| Mike | Network Admin |
| Deepak | Business Analyst |
| Jason  |  Tester |
| Alekya  |  Tester |
| Accountable  | Henry | HEAD of SOONY |
| Consulted | Kevin |  Stakeholders share requirements |
| Ben |  Stakeholders share requirements |
| Peter |  Stakeholders share requirements |
| Pandu | Financial Head |
| Doku |  Project Coordinator |
| Karthik |  Delivery Head in APT IT SOLUTIONS |
| Vandhanam |  Project Manager |
| Teyson  |  Java Developers |
| Lucie  |  Java Developers |
| Tucker  |  Java Developers |
| Bravo |  Java Developers |
| Informed | Henry | HEAD of SOONY |
| Pandu | Financial Head |
| Doku |  Project Coordinator |
| Karthik |  Delivery Head in APT IT SOLUTIONS |
| Vandhanam |  Project Manager |
| Kevin |  Stakeholders share requirements |
| Ben |  Stakeholders share requirements |
| Peter |  Stakeholders share requirements |

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**Question – 7 Business Case Document**

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Why is this project initiated

* Designing & Implementing of new app for farmers to get their required agricultural product within single click will make their job easier

What are the current problems

Limited availability – Farmers from remote areas have very less access to procure agriculture products

Price fluctuates often depending on the demand.

Product awareness – Farmers must see better alternatives in seeds

Travelling long distance to procure their products (Travelling cost / transit cost / time)

How Many Problems Would Be Solved Through This Project?

With the help of mobile application & Online access wide range of agriculture products will be available

Experts review/ ratings can be verified before procuring

Home delivery options are available

What are the resource required?

Product Owner / Agile Business analyst / Developers / Testers UI & UX Designers, Scrum Masters

What is the time frame to recover ROI

The approximate time for return on investment will usually be 3 years

How to identify stakeholders

|  |  |  |
| --- | --- | --- |
| **Role** | **Name/Department** | **Responsibilities** |
| Farmers | End-users | Provide feedback, use the app |
| Development Team | IT Department | Build and deploy app |

|  |  |  |
| --- | --- | --- |
| **SDLC** | **ITERATIVE (Rational Unified Process)** | **AGILE** |
| Requirement GatheringSystem Design / Implementation (Development)TestingDeploymentMaintenance | As an IT Business Analyst, the iterative approach ensures continuous feedback, adaptation, and incremental value delivery.  | Agile is flexible and accounts for experimenting with different directions. Rather than a fixed timeline. The Agile Manifesto states, “Our highest priority is to satisfy the customer through early and continuous delivery of valuable software. |

Question 8 SDLC Methodologies

SDLC typically includes the following stages:

1. Requirement Gathering
2. System Design
3. Implementation (Development)
4. Testing
5. Deployment
6. Maintenance
* **Requirement gathering** - Conduct meeting with farmers (like Kevin, Ben) to gather their challenges which they are facing everyday in regard to purchasing their required agricultural products.
* **System Design** - How a app should look like that should be designed with the help of UI/UX team and finally UAT must be done and farmers should get that familiarity on how to handle the app while placing orders.

 Plan for integration for payment gateway, SMS API, delivery tracking etc.

* **Implementation** – Implementing the functionality of the app by the development team . Developers start coding.

 Main menu will compraises of – Product (With sample pics) / Search bar/ Placing orders/ Adding to cart also removing or changing / Payment gateway

* **Testing –** Testers will test the functionality and will make sure is there any flaw or all the essential features are working appropriately

(Functional testing)

It also involves Non-Functional Testing such as Performance / Security

Performance – Can it handlea average of 2000 users at a time.

Security – Can the app maintain the security level during payment.

* **Deployment**

 Release the app for the end user (LIVE) after various stages of testing

 Release the app via playstore / app store

* **Maintenance**

The main goal of the maintenance - Support the app after launch by fixing issues and adding new features.

Release regular updates- Adding new features

Question 09 - Waterfall RUP Spiral and Scrum/Agile Models

Spiral / Iterative Cycle / Agile

### ****Iteration 1:****

As an IT Business Analyst, the iterative approach ensures continuous feedback, adaptation, and incremental value delivery.

**Objective**: Understand farmer needs, pain points

**Activities**:

* Conduct stakeholder workshops (farmers, suppliers, agri-experts).
* Validate requirements with farmers via surveys

**Iteration 2:**

**Objective**: Create intuitive UI/UX for app

* Develop wireframes and prototypes (e.g., simple navigation)
* Testing the app with farmers to make them familiar about the screen navigation

### ****Iteration 3:****

* **Objective**:  - Launch of the app into LIVE for people use.

**Activities**:

* Launch pilot with 100–200 farmers initially to check its stability
* Gather feedback (e.g., ease of use).

### ****Iteration 4:****

### Objective: Scale app to all users and ensure adoption.

**Activities**:

* Roll out app to all target farmers.
* Provide training sessions.
* Launch support service (helpline, customer-care)

### ****Iteration 5:**** Post-Launch Optimization

* Objective: Enhance features based on real-world usage.
* Activities:
* Add advanced features (payment gateways)

Agile : Agile is flexible rather than a fixed timeline It aligns with the **urgency** of farmers’ needs adaptable to market changes.

* **Project Name**: AgriProcure Mobile App
**Product Owner**: Henry (Sponsor)
* **Scrum Master**: Project Manager - Karthik
* **Development Team**: Mobile App Developers, Backend Engineers, UX Designers, QA Testers
**Stakeholders**: Farmers

### Creating Product Backlog

### Creating user story / Acceptance criteria / DOD

* Organizing Sprint meetings (Sprint Planning / Daily stand-up / Review / Retro)

Question 10 - Waterfall vs V-Model

|  |  |
| --- | --- |
| **Waterfall Model** | **V Model** |
| Linear, sequential phases (requirements design development testing deployment). | V-shaped, with development phases has corresponding testing phases. |
| Testing occurs only after development is complete (end of the cycle). | Testing is planned in parallel with development phases (e.g., unit tests linked to coding). |
| Waterfall model is rigid. | V Model is not rigid. Its flexible |
| Feedback is delayed until the testing gets completed | Feedback remains phase-specific. |
| Focuses on more documentation requirement gathering  | Team connects on aligning with tests early in the lifecycle. |

Question 11 – Justify your choice

As a BA, I prefer to go with V Model. Since the project is relatively small each phase testing and review process done

* Elicit requirement needs from farmers/suppliers
* Define functional requirements (e.g., payment gateway, delivery tracking).
* Create workflows for order placement
* Roll out the app to the end user after successfully tested both the Functional/ Non Functional & Integration of API

Question 12 – Gantt Chart

Mr Vandanam is mapped as a PM to this project. He studies this Project and Prepares a Gantt chart

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Phase / Task** | **Jan** | **Feb** | **March** | **April** | **May** | **June** | **July** | **Aug** |
| * Requirements Gathering
 |   |   |   |   |   |   |   |   |
| * UI/UX Design (Offline-First)
 |   |   |   |   |   |   |   |   |
| * Backend Development
 |   |   |   |   |   |   |   |   |
| * Testing
 |   |   |   |   |   |   |   |   |
| * Deployment
 |   |   |   |   |   |   |   |   |
| * Post-Launch Support & Updates
 |   |   |   |   |   |   |   |   |

Question 13 – Fixed Bid Vs Billing

A agreed total cost for the entire project, regardless of time/resources spent.

Scope, deliverables, and timelines are fixed

Client pays for actual time and resources used (e.g., hourly/weekly rates).

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Question 14– Preparer Timesheets of a BA in various stages of SDLC

Design Timesheet of a BA

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ACTIVITY** | 9am | 10am | 11am | 12pm | 1pm | 2pm | 3pm | 4pm | 5pm |
| Req Gathering | \* |  |  |  |  |  |  |  |  |
| Requirement Analysis |  | \* |  |  |  |  |  |  |  |
| Design 1 |  |  | \* |  |  |  |  |  |  |
| Testing 1 |  |  |  | \* |  |  |  |  |  |
| Design 2 |  |  |  |  | \* |  |  |  |  |
| Testing 2 |  |  |  |  |  | \* |  |  |  |
| Design 3 |  |  |  |  |  |  | \* |  |  |
| Testing 3 |  |  |  |  |  |  |  | \* |  |
| Design 4 |  |  |  |  |  |  |  |  | \* |
| Testing 4 |  |  |  |  |  |  |  |  | \* |
| UAT |  |  |  |  |  |  |  |  |  |

Development Timesheet of a BA

Developer team will write the code & will design the product.

Testing team will do testing of the product developed by development team

Finally UAT testing will be done by Business Analyst