**Q1 BPM – Online Agriculture Platform**

Goal: The goal is to build this online store is to facilitate farmers to buy seeds, pesticides, and fertilizers from anywhere through internet connectivity.

Inputs: The input is the amount (2 CR) invested plus the people or resources involved in building the platform also the time of 18 months for developing the project.

Resources: Mr Vandanam/ Mr Manish/ Ms Juhi/Mr Teyson/Ms Lucie/Mr Tucker/Mr Bravo/Mr Mike/Mr John/Mr Jason/Ms Alekya/

Output: Output for this would be a Platform where the buyers can place an order for the 3 products, sellers can add details of the product and also, they can sell products online.

Activities: Registration/login of the user, choosing of the product after reading the available information/ Adding the product to the cart/Placing the order after adding the complete address/ Payment gateway for payment options or COD option/Seller to add the product details.

Value created to end user: Information about the product on the application/Delivery of product (Fertilizers/Seeds/Pesticides) at their convenience at home,

**Q2 SWOT**

**Strengths**

Available talent pool for this project such as Project Manager, Java Developers, Business Analyst, Database admin, Tester etc.

**Weakness**

One of the weaknesses could be considers as only 2 Cr budget is allocated for 18 months so many resources are being utilized a single project

**Opportunities**

Opportunity for API IT solutions is to implement this project successfully before or on time (18 months) which can help them to generate the revenue of 2 Cr plus open the gate for getting more development projects from other companies as well.

Opportunity to expand its portfolio

Opportunity of more growth if this project is successfully implemented.

**Threats**

Since the timeframe is long and if this company fails to deliver the project as per stakeholders’ expectation than the client could go away to competitors from next time onwards.

Global economic instability may occur in this 18 months’ timeframe like covid pandemic or new virus (chpv) etc

**Q3 Feasibility Study (HW SW Trained Resources Budget Time frame)**

Hardware: APT IT solutions should have the laptops (sufficient Ram/ROM/Storage) / Database Infrastructure for handling data part of the project.

Software: Java/Development tools/Operating systems for developing the mobile application and Desktop site.

Trained Resources: APT IT solutions have Project Manager (Mr Vandanam), Business Analyst (Mr Manish), Senior Java Developer (Ms Juhi), 4 trained Java resources, Network Admin (Mr Mike), Database admin (John), Tester (Mr Jayson & Ms Alkeya), So he almost has everyone who is required in developing a project.

Budget: Since the project is allocated for a 2 Cr revenue so the APT IT Solutions have this much budget to allocate the resources according to their time properly.

Time Frame: Since the maximum time frame for this project would be 18 months but the company can try for completing the project as soon as possible and then try to test it accordingly to the deliverables and they should deliver the project.

**Q4 Gap Analysis**

**AS – IS**

Currently the farmers ned to visit the market to buy the Pesticides/Fertilizers/Seeds)

Currently the sellers need to sell their products to the local vendors or shops available/present in the market.

**TO – BE**

Farmers go through the Mobile application or the site to search for the product rad about the product information and order it from there.

Sellers can register themselves on the platform and add details about the product onto the website and sell the product through this portal.

**Q5 Risk Analysis**

**BA Risk**

Lack of Development training/Testing training/Technology training of the resources at the API IT solutions.

Getting the signoff from the stakeholders on the complete requirements for developing this project.

Change management - Since the project needs to be completed in 18 months timeframe and under the budget of 2 Cr.

Sometimes it might get difficult for the BA to coordinate between Developers and Testers.

**Project Risk**

Unmet Expectations of stakeholders: A risk involved with this project can be inaccurate estimations of time, cost and deadlines resulting in stakeholders not being satisfied.

Since the stakeholders involved in this project for sharing requirements are one’s actually the end user so they can manipulate or twick the requirements.

**Q6 RACI Matrix**

**Decision-Makers:**

* Mr. Henry**:** As the sponsor, he has the final authority/ right on project approval, budget, and key decisions.
* Mr. Pandu: Responsible for budget allocation and financial approvals.
* Mr. Dooku: Coordinates project activities and ensures alignment with organizational goals

**Influencers:**

* Peter, Kevin, Ben: Their input shapes the requirements, as they represent the end-users (farmers).
* Mr. Vandanam: Manages the project and influences technical and operational decisions.
* You (BA): As the Business Analyst, you influence the requirement gathering process and ensure that user needs are accurately captured and translated into the project.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Task/Activity | Sponsor | Financial Head | Project Coordinator | Farmer stakeholders | Project Manager | Developer | Tester | N/w Admin | DB Admin | BA |  |
| Project approval | A | R | C | I | I | I | I | I | I | I |  |
| Budget Allocation | A | R | C | I | I | I | I | I | I | I |  |
| Requirement Gathering | I | I | I | C | R | I | I | I | i | A |  |
| Design | A | I | R | I | C | R | C | I | I | I |  |
| Test Cases | I | I | I | I | R | I | A | I | I | C |  |
| UAT | A | I | R | C | I | R | I | I | I | C |  |
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**Q7 Business Case Document**

**Problem Statement:** The three Farmers in remote areas face significant challenges in procuring fertilizers, seeds, and pesticides due to lack of access and availability. This leads to reduced agricultural productivity and economic hardships.

**Project objective:** To create an accessible, user-friendly online platform for farmers to purchase agricultural products. To improve the supply chain of agricultural products to remote areas.

**Solution/Portal Development:** Develop an online agriculture product store that will:

* Allow manufacturers to list products including fertilizers, seeds, and pesticides.
* Enable farmers to browse, select, and purchase products with ease.
* Provide a delivery system to ensure products reach farmers in remote areas.
* Offer a communication platform for farmers to directly interact with manufacturers.

**Project Scope**: Designing and develop a user-friendly web and mobile application. Integrating features for product listing, browsing, purchasing, and order tracking. Also include a payment gateway for the customers.

**Timelines & Budget:**

2 Cr Budget

18-month timeline

Under CSR initiative

**Q8 4 SDLC Methodology**

**Sequential**

Sequential is like waterfall approach where the requirements are stated earlier and the process moves step by step ad changes in the requirements can’t be compensated in later stages of the methology so if the requirement changes from the farmers so it won’t be added.

**Iterative Methology**

This methology aallows for early detection of issues by iteratively developing and testing parts of the application. And as the same suggest multiple iterations occur so each iteration refines and improves the product, accommodating changes and new requirements. But the only problem is higher the iterations higher is the refinement and this require much more time and resources for utilization and this agriculture platform has a time constraint of 18 months and a budget of 2 Cr.

**Evolutionary Methodology**

As the name suggest that evolutionary methodology allows for evolving/changing requirements, which is beneficial given the changing needs of farmers and stakeholders. It also has frequent releases help gather continuous feedback from users, ensuring the product stays aligned with their needs. Only drawback that I feel with this methodology is Continuous development and refinement can increase project costs if not carefully controlled and for this portal we have budget constraint for 2 Cr.

**Agile Methodology**

Agile methodology is the most common used now a days because of its benefits as it provides mor flexibility and advantages than the other methods. Agile’s iterative approach allows for quick adjustments based on user feedback and changing requirements and since this methodology is more frequent interactions with stakeholders ensure the product aligns closely with their needs and expectations. So I feel this approach could be more useful here as stakeholders can bring few changes to requirements at later stage of time as the project progress and we can incorporate them if use agile and also deliver small product or feature to the stakeholders in smaller sprints time frame.

**Q9** **V Model and Waterfall Model**

Waterfall model is a sequential SDLC model where the development of the project or product happens in a step-by-step manner and all the requirement must be well defined at the start of the project and any new requirements cannot be accommodated in later stage of life cycle of the project or product.

RUP (Rational Unified Process) Isa methodology which allows for iterative development, which can accommodate changes and new requirements over time and it also focuses more on multiple aspects like business modeling, design, and testing but only issue I feel is RUP can be complex to implement, requiring significant documentation and process management.

Spiral methodology of project or product development focuses on risk assessment and mitigation at every iteration, making it suitable for high-risk projects and allows for iterative refinement of the product based on feedback and risk analysis.

Whereas the V-Model (Verification and Validation Model) is a type of Sequential SDLC Model. It is an extension of the Waterfall model, where each development phase is associated with a corresponding testing phase, forming a V shape.

Now since given the nature of the project we have most of the requirements at the start itself and any new changes to be bought at later stage would be difficult to develop at later stage as both the model are sequential SDLC model so if needed to choose from only two given model **V-Model** could be a slightly better choice than Waterfall due to its emphasis on early and continuous testing, but it would still pose significant challenges in managing changes and evolving requirements.

If as a BA I am given choice to choose I will go with **Scrum framework** as this give m more flexibility in terms of adding requirements at later stage of project lifecycle secondly regular sprints can ensure that stakeholder feedback is integrated, leading to a product that truly meets user needs and hence delivering such product could build a strong foundation or image of API IT solutions.

**Q10 Waterfall vs V Model**

|  |  |
| --- | --- |
| Waterfall model have fixed sequential phases | V model have parallel testing for each part of product formed. |
| Testing occurs lately in the phases | Testing is done from the starting phase |
| Changes can’t be incorporated at later stages of lifecycle. | Here also change can’t be added at later stages |
| Risk would be identified at later stage in testing. | Risks are identified earlier due to parallel testing. |
| Each phase delivers a fixed set of outputs before moving to the next. | Ensures that each phase meets its objectives before proceeding. |
| Stakeholder feedback is integrated late in the process | Stakeholder feedback is incorporated during testing phases at each stage. |
| Potential mismatch between final product and user needs due to lack of early feedback. | Continuous testing ensures a higher quality product |
| Costs are easier to estimate, assuming requirements don’t change. | Early testing can prevent costly fixes later in the project. |
| Testing happens only after development is completed. | Testing is broken down into smaller, manageable stages. |
| Limited visibility into the project’s progress until later stages. | Progress is more visible due to continuous testing and verification. |
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