Online Agriculture Products Store

1.BPM

Goal:

Create a Profitable online agriculture store that facilitates farmers to buy Agricultural Products from Manufacture's from their area.

Inputs:

Products and their information (Seeds, fertilizers, details, pricing, etc.) from manufacturers

Orders from farmers

Delivery Location where the product is delivered

Payment information from farmers

Resources: -

Online Platform (App/website)

Servers - (Data Base and Network Infrastructure)

Payment Gateway

Budget 2 Cr

Human Resource (Developers & Testers…)

Logistics Team

Output

Products are accessible to farmers

Farmers can order Product.

Product Tracking and Delivery conformation.

Payment Information

Activates

Farmers Registration in the portal

Farmers can Browse the product

Manufactures registration and product catalogue

Order placement and payment processing

Order Fulfilment and Delivery Support

Customer Support for any enquires

Value Created to End Customer

Direct contact between Farmers and Manufacture's

Middle Man Elimination

Easy access to wide range of products

On time Delivery

Time, effort and Money savings by avoiding travel to physical stores.

2. SWOT Analysis: - Mr. Karthik Should consider the following aspects

Strength

Strong Technical team in APT IT Solution

Will Experienced Project Manager (Mr Vandanam)

Availability of Talent pool

Weakness

Lack of Domain knowledge i.e. Agriculture

Project timeline 18 months may be challenge

Stakeholders(farmers) lack of technical knowledge

Opportunities

There is a great market for online agricultural product

Expanding their market into similar segment

Hiring the new talents

Building strong relationship with the company SOONY

Threat

Competition from existing players and new entities

Poor Internet connectivity in remote areas.

Potential Challenges through logistics from delivering to remote areas.

3.Feasibility Study

Hardware Requirements

Development Servers

Production Servers

Connectivity Servers

Database Servers

Backup and Recovery systems

Software requirements

Java Development kit

Testing Tools (….)

Project Management Tools.

Data Analytics tools (Excel, MySQL, python, Power BI)

Data base management Tools(SQL, etc)

Web Application and mobile Application tools Android/IOS

Connectivity(Internet)

Trained Resources

Java Developers (Ms. Juhi, Mr. Teyson, Ms. Lucie, Mr. Tucker, Mr. Bravo)

Testers (Mr. Jason, Ms. Alekya)

Network Admin (Mike)

Business Analyst

Project Manager (Mr. Vandanam)

Database Admin (Mr. John)

Budget

Project Budget 2Cr

Team salary for 18 Months

Budget allocation for Hardware and Software

Maintenance cost Post and Pre

Timeframe

Project Deadline 18Months

Time allocation for requirements gathering, design, development, testing

Post Implementation support planning

Gap Analysis

Current Process:

In above case study there is no availability of online store.

The store does not have any online presence resulting limited customer reach

Middle Man between Farmers and Manufacturer

In store there is no customer data base management

Communication gap between Farmers and manufactures

Improper inventory Management

Future Process

There is great market for Online store to serve farmers

online store have wide customer reach, smooth online shopping, payment gateway integration

but in online store there is customer data base management

Direct Communication Between farmers and manufactures

Automatically Inventory Management

4.Risk Analysis

Incomplete requirement gathering from stakeholders

Misinterpretation of farmer needs due to domain knowledge gaps

Inadequate communication with technical team

Scope creep during requirement analysis

Improper documentation of requirements

Budget overruns due to unforeseen technical challenges

5. Stakeholder Analysis (RACI Matrix)

Stakeholder	Responsible	Accountable	Consulted	Informed
Mr. Henry		Accountable	Consulted	Informed
Pandu			Consulted	Informed
Mr. Dooku			Consulted	Informed
Mr. Karthik	Responsible			Informed
Mr. Vandanam	Responsible	Accountable		Informed
(Peter, Kevin, Ben)	Consulted			Informed
Manufacturers	Consulted			Informed
Business Analyst	Responsible		Consulted	Informed

Question 7 – Business Case Document

Summary

The Online Agriculture Products Store will create connecting farmers with manufacturers of agricultural products (fertilizers, seeds, pesticides). This initiative addresses the challenges faced by remote farmers in accessing essential agricultural inputs, which directly impacts agricultural productivity in rural areas.

Problem Statement

Facing difficulties in procuring fertilizers, Pest, seeds etc which are very important for farm.

Proposed Solution

Developing an online Agricultural store.

Market analysis

There will be huge demand for online agricultural store

Competitive analysis

There will be huge competition from existing players in the market which include Wholesalers and Retailers.

Technical Feasibility:

The document demonstrates that the project is technically feasible, with a clear understanding of the technology stack and development approach.

Financial Analysis: -

Project Cost: 2 Crores INR over 18 months

Return on Investment: While primarily a CSR initiative, the platform has potential for monetization through service fees or subscription models in the future

Risks and Mitigation:

Technology adoption challenges: Address through intuitive design and user training

Connectivity issues: Develop offline functionality where possible

Delivery logistics: Partner with local distribution networks

8. SDLC Methodologies

Sequential: Linear, step-by-step approach (e.g., Waterfall).

Iterative: Develop in cycles, with each iteration improving the previous one.

Evolutionary: Continuous development and release of features.

Agile: Flexible and iterative, with emphasis on collaboration and customer feedback.

9: Waterfall, RUP, Spiral, and Scrum

Waterfall: Linear, sequential phases with strict documentation.

RUP (Rational Unified Process): Iterative, with phases like Inception, Elaboration, Construction, and Transition.

Spiral: Risk-driven, with iterative cycles and prototypes.

Scrum: Agile framework with short sprints, daily stand-ups, and focus on delivering working software.

10: Waterfall vs. V-Model

Feature	Waterfall	V-Model
Approach	Linear, sequential	Verification and validation at each stage
Testing	Done after development	Integrated throughout the process
Flexibility	Limited	More flexible to changes
Risk Management	Less emphasis	Stronger focus on risk management

11: Choosing a Model

For this project, the V-Model seems most suitable. It provides a structured approach with clear verification and validation points, which is important for a project with a

fixed budget and timeframe. The emphasis on testing throughout the process helps mitigate risks and ensures a higher quality product.

12: Gantt Chart

Task	Duration	Resources
Requirements Gathering (RG)	2 weeks	BA, Requirements Stake holders
Requirements Analysis (RA)	3 weeks	BA, Java Devs
Design	4 weeks	Java Devs, BA
Development (D1, D2, D3, D4)	8 weeks	Java Devs
Testing (T1, T2, T3, T4)	4 weeks	Testers
User Acceptance Testing (UAT)	2 weeks	Testers, stakeholders

13: Fixed Bid vs. Billing

Fixed Bid: A predetermined price for the entire project, regardless of actual costs.
Billing: Payment based on time and materials used, with potential for variations in the final cost.

14: Timesheets

Development Time sheets

Task	Time Spent	Description
Requirements Analysis	4 hours	Analysing user stories and creating use case diagrams
Design	3 hours	Collaborating with developers on UI/UX design
Development Support	2 hours	Clarifying requirements and answering developer queries

Timesheet: -

Testing Time Sheets		
Task	Time Spent	Description
Test Case Review	2 hours	Reviewing test cases and providing feedback
Defect Tracking	3 hours	Logging and tracking defects
UAT Support	1 hour	Assisting users during UAT

UAT Timesheet:

UAT Testing time sheets		
Task	Time Spent	Description
UAT Planning	2 hours	Preparing UAT test plan and scenarios

Deployment Timesheet:

Deployment n Implementation Timesheet of a BA		
Task	Time Spent	Description
Deployment Planning	4 hours	Collaborating with the technical team to create a deployment plan, including timelines, environments, and rollback strategies.
Environment Setup	3 hours	Working with the DB Admin and NW Admin to ensure the necessary infrastructure is in place for deployment.
Data Migration	2 hours	Overseeing the migration of data from any existing systems to the new platform.
Go-Live Support	4 hours	Providing support during the initial go-live period, monitoring for issues, and troubleshooting as needed.
Post-Implementation Review	2 hours	Conducting a review of the deployment process to identify areas for improvement in future deployments.

Design Timesheet

Design Timesheets		
Task	Time Spent	Description
Requirements Gathering & Analysis	4 hours	Reviewing user stories, creating use case diagrams, and documenting functional requirements.
Process Modelling	3 hours	Developing process flows and diagrams to visualize the system's processes.
Data Modelling	2 hours	Creating entity-relationship diagrams (ERDs) to define the data structure and relationships.
User Interface (UI) Design	4 hours	Collaborating with UI/UX designers to create wireframes and mock-ups for the user interface.
Prototyping	2 hours	Developing interactive prototypes to demonstrate the user flow and functionality.
Documentation	1 hour	Documenting design decisions and specifications.