

Q.1 BPM - Identify Business Process model for Agriculture Store.

- Goal - To bridge the gap between farmers & manufacturers.
- Inputs - Customer data, Seeds, fertilized, Pesticides data.
- Resources - office space for IT employees, Application / Software, Warehouse.
- Outputs - Sales Revenue, Purchase of Seeds / Pesticides by farmer, delivery at farmer location.
- Activities - Customer Satisfaction through User friendly Application & timely delivery / service, Selection of material by farmers, Upload of stock by farmer.
- Value -
- ✓ Delivery of Product at farmer location - Customer Satisfaction.
 - ✓ User friendly Application - farmers can use Application easily & can choose required material in required quantities which can be termed as Remote ordering.
 - ✓ Direct to Customer - manufactured goods will be sold directly to customer.

Q.2 SWOT - Mr. Karthik is doing SWOT Analysis before Accepts Project.

- Strengths - Talent Pool, Online Platform for details, Budget, Duration.
- Weakness - Domain Experience (Agri), New BA, Waterfall Model.
- Opportunities - Large number of farmers market, Business Expansion.
- Threats - Geographic / Climatic changes, Changes in requirement from farmers in terms of brands or other product requirement.

Q.3 Feasibility Study

(A) Hardware requirement

- ✓ Servers - For hosting Java based application, Application Servers required. Database Servers are required for storing product, user data.
- ✓ Networking - High Speed internet connectivity, for remote access & API Integration.

(B) Trained Resources

- ✓ Developers - Juhi (Senior), Tejson, Bravo.
- ✓ DB admin - John
- ✓ Network admin - Mike
- ✓ Tester - Tejson, Alekys
- ✓ BA - myself.

Resource feasibility is strong.

③ Budget - Considering hardware, software, license, development & testing for 18 months, 2 crore budget is sufficient.

④ Time frame - 18 months. Time line is realistic.

Requirement Gathering - 2 months

Design - 2 months

Development - 8 months

Testing - 3 months

Deployment & testing - 1 month

Buffer & Contingency - 2 months

⑤ Software Requirements

Database - SQL

Application Servers, Deployment, security is considered in feasibility study.

Q.4 Gap Analysis:

Aspect	As-Is (Current Process)	To be (Future Process)
Product	Farmers travel long distance to buy seed, fertilizers	Farmers can order online using web / mobile App
Procurement	Limited stock in shop	Wide Range of Product Available online from diff. manufacturers
Availability	Farmer depends on middleman	Real time order tracking & delivery status through App
Order Tracking	No tracking, farmer wait without updates	Multiple Payment Options
Payment method	Cash based transactions	UPI, Net banking, COD
Support & Guidance	No expert advice	Access to product details, details, instructions on App

Q.6.

Gaps Identified:

- ✓ Lack of digital platform for procurement
- ✓ Absence of real time tracking
- ✓ No online payment option

Risk Analysis

Q.5

Internal Risk

- ① Skill Gap - Team may lack domain knowledge in agriculture
- ② Communication Gap - misalignment between internal teams can lead to rework.
- ③ Resource Unavailability - Key team members may be reassigned or leave mid project.

External Risk

- ① Farmer Tech Literacy - Farmer may not be familiar with Apps
- ② Internet Connectivity - poor or no Internet in remote areas
- ③ Market Competition - similar platform may emerge.

BA Risk

- ① Incomplete Requirement - Farmers may not express their needs clearly.
- ② Changing Requirement - stakeholders may change requirement mid-project.
- ③ Improper Prioritization - failing to identify critical vs non-critical features.

Project Risk

- ① Timeline Delay - It might be due to Scope Creep or tech. Issue
- ② Deployment & testing related challenges

Q.6.

Stakeholder Analysis

AACE Matrix

Activity

Project Vision & Funding

R

Mr. Henry

A

Mr. Padmini

I

All

Mr. Dooku

Development
Efficient
App.

is considered

Process

order online

/mobile App

Product Availability

diff-manipulation

tracking &

through App

Payment Options

ing, COO

well details,

actions on App

Q.6. Stakeholder Analysis:

Activity	R	A	C	I
Project Vision	Mr. Henry	Mr. Henry	Mr. Pandu	All
Requirement Gathering	BA (me)	BA	Mr. Dooker, Peter, Kevin,	PM
Budget Allocation	Mr. Pandu	Mr. Pandu	BA	Dooker
Technical Architecture	Mike, John	Inhi	Mr. Henry, BA, PM, Developer	PM
Development	Developers	Inhi	BA, PM	Testers
Testing & QA	Jason, Alekya	PM	BA	Developers
Deployment	PM	Karthik	Network & admin	BA & Sponsor

7. Business case

- (A) Why this project is initiated
To empower farmers by providing easy access to essential agricultural products through user friendly web/mobile App
- (I) What are current problems
Limited access to agricultural products
Lack of direct communication
Low awareness about product availability.
Manual procurement process

(C) How these problems will be solved.

Problem	Solution
Difficulty in Procurement	Direct listing & order from map
No direct communication	In-App messaging or inquiry
Delivery Challenges	Integrated logistics & tracking
Lack of transparency	Online availability & details

(D) Sources required

Resource	Details
Human	BA, Dev, tester, PM, Admin.
Tech	web & mobile Dev tool, Server
Finance	Budget (2 cr)
Input	Stakeholder, farmer
Training & support	Helpdesk, tutorials

I

All

PM

Dooku

PM

Fertile

Developers

BA & Sponsor

essential

b / mobile App

from manuf
ing way
tracking
& details

- ② Organizational change required to adopt technology.
 Farmers - moderate change - Need basic training to use technology.
 Manufacturer - Minimal change. Need to prepare & upload
 catalogue.
 App IT Solutions - Alignment across departments

- ③ Frame to recover ROI
 ROI can be measured in terms of Social Impact &
 platform sustainability
 Type Time frame
 Social ROI - 6 to 9 months post launch
 Operational ROI - 12-15 months
 Financial ROI - 18-24 months

④ Identify Stakeholders

Method	Stakeholder
Problem Interview	Peter, Kevin, Ben (Farmers)
Team Structure	IT solution team member
End User Analysis	Farmers
Organization mapping	Henry, Pandu, Dooku
Vendor Engagement	Fertilizers, Seed, fertilizer & pesticide Manufacturer.

8. SDLC Methodologies

- SDLC - structured process used by software development
 teams to design, develop, test & deploy software with high
 quality
- ① Waterfall (Sequential)
 Linear & step by step approach where each phase must be
 completed before moving to next
 Best fit - ① Projects with well defined & unchanging req.
 ② Government systems

- Pros
- ① Simple to manage
 - ② clear documentation & milestones.
- Cons
- ① No flexibility of change.
 - ② Late discovery to issues.

② Iterative - system developed in iterations or parts of each part is improved upon successive cycles based on feedback.

Best for - Projects where requirement may evolve.
- system needing frequent updates.

Pros

- ① Easy to manage
- ② Early working versions

Cons

- ① Can be costly
- ② Requires good planning

③ Evolutionary - Combination of Iterative & Incremental development. Product evolves over time with continuous user feedback & enhancement.

Best for - Complex systems with unclear requirements.
- Prototypes & Research based projects.

Pros

- ① High User Involvement
- ② Flexible & Adaptive

Cons

- ① Cost & timeline
- ② Scope Creep

④ Agile - Adaptive & collaborative approach where project is broken into sprints (2-4 weeks). A team delivers working software frequently with continuous feedback.

Best for

① Dynamic project & changing requirements

② Cross functional teams & fast paced environments

Pros

① High Customer Satisfaction

② Quick delivery

Cons

① Require Exp team

② Less documentation

Q. 9.

Waterfall & Spiral Scrum models

Waterfall is suited for well defined requirements

whereas V model each development phase has a

corresponding testing phase so it is suited for quality management projects where requirements are clear.

For current project 'V' model is recommended.

- ① SME preferred V model because structured approach & emphasis on validation
- ② Testing is not left at end. It happens parallelly which improves product reliability.
- ③ Core features are already defined. Such as, fertilizer, pesticides which makes 'V' model stable & understood.
- ④ App will be used by farmer so usability testing is critical or it will lead to loss of trust & low adoption.

8.10 write down diff. between waterfall & V model.

	Waterfall	V model
Approach	Linear & Sequential	Extension of waterfall & parallel testing
Process	Each phase follow previous	Each development phase has testing phase
Testing	Begins after development is complete	Testing is planned & executed along side development
Risk	Identified at late stage	Risks are identified early due to parallel validation.
Documentation	Heavy documentation required	Lesser as compared to waterfall.
Time to detect defect	Late in cycle	Early in cycle.
User Involvement	Minimal after requirement phase	Minimal but testing is more better alignment with expectations.
Cost of fixing	Low	High.

Q.11. Model for this project.

As a BA, I would suggest/recommend using 'V' model for this Online Agriculture Product store.

- ① This product will be used by farmers so usability testing using 'V' model will improve product reliability.

- ② Core functionalities such as browsing products, placing orders, delivery tracking are well defined. V model works best when requirements are elaborated & unlikely to change.
- ③ 'V' model include parallel testing which will help in early defect detection.
- ④ SME's are also advocating V-model & it's due to strong validation process. Aligning with SME's expectations will help smoother collaboration.

Q12 Gantt chart

Q13 Fixed Bid Vs Billing

Fixed bid → In this type of project scope, timeline and cost are agreed upfront. The vendor commit to delivering the project within fixed budget regardless of actual effort or time taken.

Billing → In this type of project client pays based on actual time & resources used.

	Fixed Bid	Billing
Cost	Fixed	Variable
Scope	Well defined	Flexible
Risk	Vendor	Client
Change management	Difficult	Easy
Client Involvement	Low	High

Q14 Timesheet - Design Timesheet for BA.

Activity	Description	Estimated Hrs	Remark
① Requirement Validation	Ensure reqs are complete & Ready for design	6 Hrs ^{week}	Prepares for design hand off
② Design Collaboration	Work with UI/UX team to shape system design	8 hrs	Align design with Business needs.

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in Business
needs

Activity

1. Wireframe-
Mockup Review

2. Use Case & Process
Creation

3. Design Review
meeting

4. Traceability
matrix

5. Documentation
Update

6. Requirement
clarification

7. Change
request analysis

8. Review
Technical Design
Document

9. Defect Triage
Support

10. Stakeholder
Communication

11. Documentation
Update

Description

Review &
Refine

Create Use Case &
Detailed Flow

Participate in
walkthrough &
provide feedback

Map requirements
to Components

Update BRD/
FRD

Development timesheet for BSA

Support developers by
clarifying Business
Rules & logic

Evaluate Documents

Scope changes or
Enhancements

Validate Design against
Business Requirements

Assist in analysing
defects raised during
Unit testing

Provide updates &
gather feedback

Update BRD/FRD
based on development
feedback

Estimated Time/Week

6 Hrs

6 Hrs

5 Hrs

4 Hrs

3 Hrs

10 Hrs

6 Hrs

4 Hrs

5 Hrs

4 Hrs

3 Hrs

Remarks

Ensure clarity

Support Design &
development

Ensure stakeholder
Alignment

Ensure coverage &
Completeness

Document updates

Ongoing support

may vary on
Project Type

Logic is
in track

Identify
root cause

Keep stakeholders
Informed

Real time
change

Estimated
time in / out

Activity	Description	Estimated time in / out	Remarks
② Testing timesheet of BA		6 hrs	Ensure Alignment
Post-case Review	Review test cases prepared by QA team	4 hrs	Coverage
✓ Requirement Tracability	Validate test cases Against Req.	8 hrs	Critical for defect
✓ Defect Analysis & triage	Analyse defect, clarify logic & support Resolution	6 hrs	Real world coverage
✓ Functional Validation	Participate in functional testing to validate Business scenarios	5 hrs	Final Acceptance Criteria
✓ UAT preparation	Prepare UAT Scripts & Co-ordinate	4 hrs	Refuel Change
✓ Documentation Updates	Update BRD / FRD		
③ UAT Timesheet of BA			
✓ UAT Planning	Co-ordinate with Stakeholders for scope & AC	5 hrs	Check list of Environment Setup
✓ Script preparation	Create detailed UAT Script & scenarios	6 hrs	Business Requirements
✓ UAT Execution support	Assist Users during UAT Execution & clarify doubts	8 hrs	on call support for
✓ Defect logging & Analysis	Document Issues & Root Cause	6 hrs	Priority Issue
✓ Sign Preparation	Compile UAT Results & prepare Sign off Document	4 hrs	Formal Closure
✓ Document update	BRD / FRD upon UAT Finding	3 hrs	Final Docs

Activity
⑤
Go-Live planning
Release documents
Stakeholder Communication
Product validation
Document up date

Activity	Description	Estimated Time Hrs/Week	Remark
⑤ Go-Live planning	Deployment and Implementation timelinet co-ordinate with tech 7 PM's for deployment schedule	4 Hrs	Go-Live Manning
Release documentation	Release notes, user guides, checklin-	4 Hrs	
Stakeholder Communication	Notify Stakeholders about Go-live	4 Hrs	Ensure transparency & readiness
Producting validation	Validate deployed schedule in live Environment	6 Hrs	Ensure system behaviour as Expected.
Document update	BRD / FRD update.	4 Hrs	For audit & future Reference.

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Plan

Gantt Chart

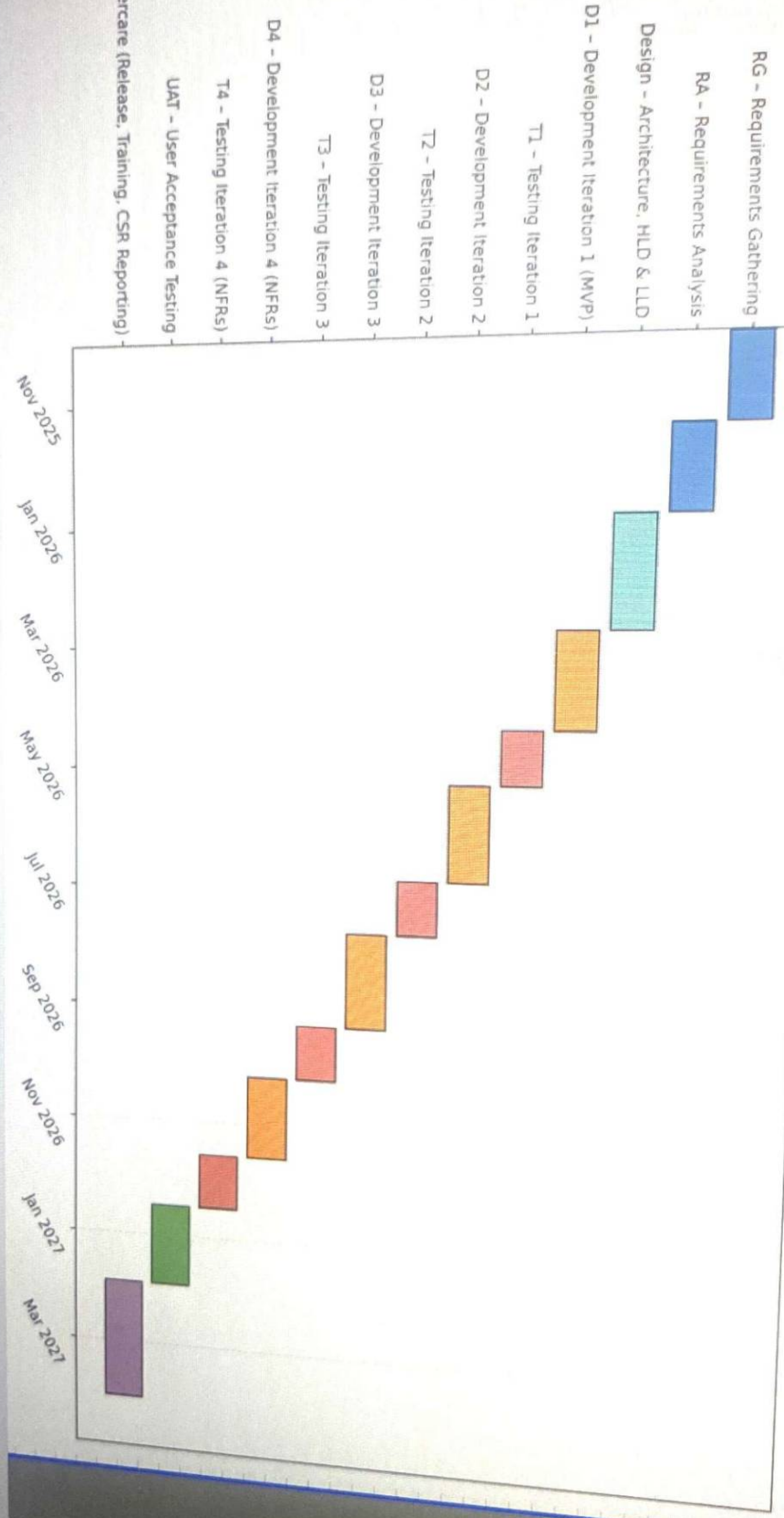
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Ready Accessibility: Good to go

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Online Agriculture Products Store - V-Model Gantt (18 Calendar Months)
Start: 2025-10-01 | Finish: 2027-03-30 | Span ≈ 18 calendar months



Plan Gantt Chart

Ready Accessibility: Good to go



Search

