# Phase II: Business Process Modeling (Related to MIS)

## Objective

In this phase, you will model a business process relevant to Management Information Systems (MIS). The goal is to visualize how information flows within a system, how different entities interact, and how decision-making is supported through MIS.

## Tasks and Deliverables

### Define the Scope

* Clearly outline the business process you are modeling.
* Ensure the process is relevant to MIS, such as order processing, inventory management, patient record handling, employee payroll, or customer service management.
* Define the objectives and expected outcomes of the process.

### Identify Key Entities

* List and describe all key actors, departments, or systems involved in the process.
* Explain their roles, responsibilities, and interactions within the system.
* Examples of entities: users (employees/customers), databases, applications, managers, automated workflows.

### Use Swimlanes for Clarity

* Organize your diagram using swimlanes to separate different actors or departments.
* Ensure the swimlanes make it easy to understand who is responsible for each step of the process.

### Apply UML/BPMN Notations

* Use UML (Unified Modeling Language) or BPMN to represent your process visually.
* Maintain consistency with proper symbols and conventions.
* Include key elements such as start and end points, tasks, decisions, and data flows.

### Ensure a Logical Flow

* The process model should clearly flow from start to end with all interactions properly mapped.
* Highlight decision points, inputs, outputs, and system interactions.
* Ensure that dependencies between steps are correctly structured.

### Prepare an Explanation

* Write a brief description of your diagram (one page maximum).
* Explain the main components and their interactions.
* Describe how the process supports MIS functions (e.g., improves decision-making, streamlines operations).
* Explain why this process is important for organizational efficiency.
* Refer to diagramming tools like Lucidchart or draw.io for visuals.

## Process Workflows

Below are the two parts of the business process for the Agricultural Management System.

### Individual Farmer Module

* Register Farmer: Enter name, ID, and contact details, then click "Farmer Registered".
* Asset Registration: Add Crops (name, variety) and Livestock (species, breed).
* Season Management:
* • Start/Continue Season: Select an asset to view or start an ongoing season.
* • Planting/Stocking Plan: Enter quantity (kg or headcount), date, and area/pen.
* • Activity Log: Choose activity type (Vaccination, Fertilization, Pest Control, Disease Control, Feeding, Health Check), enter amount and date.
* • End Season & Harvest/Production: Input harvested quantity or production metric; system computes gain or loss against expected values.
* • Season History: View chronological record of all entries for planning future seasons.

### Cooperative Module

* Register Cooperative: Enter name, ID, location, and member farmer list, then click "Cooperative Registered".
* Asset & Season Oversight: Browse all crops & livestock across member farmers and their seasons.
* Review & Feedback:
* • Inspect plans, activity logs, and outcomes for each farmer-asset season.
* • Provide Feedback: Enter agronomic or livestock management advice and optional training schedules.
* Aggregate & Analyze:
* • Combine data across seasons to identify trends and issues.
* • Prepare group reports for input purchasing or training.

## BPMN Diagram

Insert the BPMN diagram here

## Brief Explanation of the BPMN Diagram

* 1. Swimlanes & Actors: Swimlanes separate the Individual Farmer and Cooperative roles; the MIS system operates implicitly between tasks.
* 2. Start Event: Begins in the Individual Farmer lane, indicating the initiation of a new process instance.
* 3. Farmer Registration: Captures farmer profile details; invalid entries loop back for correction.
* 4. Asset Registration: Farmers record crops and livestock assets, feeding into season planning.
* 5. Season Management Sub-Process: Includes planting/stocking plan input, activity logging via decision gateways, and harvest outcome entry with gain/loss computation.
* 6. Cooperative Review & Feedback: Cooperatives view and assess seasons; a gateway checks if feedback is needed, routing to advice entry or aggregation.
* 7. Aggregation & Analysis: System aggregates performance across seasons, analyzes KPIs, and supports resource planning.
* 8. End Event: Concludes after resource planning, closing the MIS-driven cycle of data capture, processing, and decision support.