AI Employee Swimlane Diagram

1. Sales Order Creation and Validation - SORDER

DATA ENTRY SIMULATION

Customer/Salesmen	E-Comm/Tender/SM/CRM Platform	AI Order Agent	AI Sales Agent	AI Planning Agent	Human Review / Work	ITEM	QTY	RATE	TOTAL
Enters Sales Order	Receives Sales Order or Works Contract	**Validates Order:**				EPC Plant	1	10000	10000
	Sends Order to AI Order Agent	**Checks Completeness/Accuracy w.r.t Customer Reputation and History**							
Gets Clarification Email and sends reply to it unless satisfied		If Invalid → Sends for Human Review	Sends clarification email to customer		Sales Department Manually updates Order by filling missing information				
Gets OA - Order Acceptance		If Valid → Approves Order	Reviews Order w.r.t Quotation	Creates Fulfillment Process	Sales Department gets Notification for incoming Sales Order				
TABLES	RETAILORDER	SORDER			PRODUCT AND PRICELIST				
TASK SCHEDULAR	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET				

2. Project Fulfillment Process - PROJECT

Customer/Salesmen	AI Accounts Agent	AI Fulfillment Agent	AI Project Agent	AI Planning Agent	Human Review / Work	ITEM	QTY	START	END
Accepts OA	**Performs Credit Check**	**Verifies Delivery BOM for Product/Contract:**	**Prepares Project Delivery Plan**	**Runs Fulfillment Process on Weekly Basis**	**Monitors Fulfillment Process**	EPC Plant	1		
Customer receives email to clear outstanding	If Credit Check Fails -> Send email to customer to do outstanding payments	If Project ITEM Delivery BOM Missing → Issues Ticket to PLM Department	Project Delivery Items are created if not available	*A. Runs PERT/CPM Planner module to estimate Delivery Dates, Deadlog and Critical Path to execute Order*	PLM Department Creates Delievy ITEM and BOM for Products	A. BILLING ITEM - PRODUCTDET	10	01-01-2025	01-01-2026
Receives email to send Billing Schedule Acceptance	If Credit Check OK --> Send Order to Fulfillment Agent and send email to customer to accept Billing Schedule	If Valid Delivery BOM Available -> AI Project Agent creates PROJECT with ATP Delivery Dates	Project Created with Project Delivery and Billing Items, ATP Dates & PERTCPM Plan	*B. Runs Service Delivery Scheduling Process planner as per BBU Steps*	Project Department checks project and manually update ATP Dates & Project PERT/CPM Delivery Plan	B. BBU ITEM FOR Project Item - PMDET	Supply 40% - 5/5/2025	Install 40% - 7/9/2025	Test 20% - 31/12/2025
Sends Billing Schedule (BBU)	**Do COPA: Costing Profitability Check**	If BBU Ok -> Send to Project Department for entry	Project BBU Created with separate Process for each BBU Type	*C. Creates PRIMAVERA Actual Delivery Plan with actual Delivery Dates, Deadlog and Critical Path to execute Order, This contains Inventory Items and not Project Items*	Project Department enters Billing Schedule (BBU) against Project Items	C. PRIMAVERA DELIVERY ITEMS - PRIMAVERADET	SUPPLY: PR, INSTALL: WO, Test: Task	01-02-2025	03-03-2025
Receives email to solve issues in order	If COPA NOT OK: Send Ticket for Human Review	If BBU NOT OK: Send Ticket for Human Review	Montly Plan is created for entire Project	*D. Runs Project, MPS, MRP & ROP Process to generate accurate requirements and ATP Dates based on PRIMAVERA Demand Plan*	Sales Department Gets Ticket and resolves Ticket	D. Inventory Items PROJECT, MPS, MRP, ROP ITEM AS PER Item master	4	01-02-2025	04-05-2025
Receives Order Ack with ATP Dates	If COPA OK--> Send OA to Fulfillment Agent	If all OK: Sends Order Acknowledgement to Customer with ATP Dates	Weekly Plan is created for entire Project	*Combine all above plans into one single Project Sheet*	Sales Department receives Project Sheet for review				
TABLE	SORDER	PROJECT BOM	PROJECT	*PRIMAVERA*	BBU-PM, ITEM, BOM MASTER				
TASK SCHEDULAR	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET				

3. Delivery Scheduler Agent - PRIMAVERA

AI Planning Agent	Procurement Agent	Manufacturing Agent	Construction Agent	Subcontracting Agent	Human Review / Work	ITEM	QTY	ORDER DATE	DEL DATE
Triggers Daily at 8 AM	Runs MRP & ROP Process to create PO	Runs MPS Process and triggers BOM				Inventory ITEM	32		
Creates Source Docs as per Project Item Delivery Plan auto by trigger	Creates DCI, MR, PR and Triggers DCI to DWG, MR to PR Process, PR to PO Process	Creates Mfg Orders and Shopfloor Process	Creates Daily Plan for Construction Delivery	Creates Tender and WorkOrder Documents and Process	Review and Sign all documents created and send to Supplier	Inventory ITEM			
Task created for Warehouse Team to Issue Material	Issues Raw Material KIT to execute Manufacturing, Construction, Subcontracting Project Execution Process	Track consumption at each Workcenter of Shopfloor	Generates DPR and record Man, Material, Machinery Issued	Generates DPR and record Man, Material, Machinery used	Tracks Work Progress and modify system to accommodate any changes	Inventory ITEM			
Task created to Warehouse Team to update Inwards	MIR Receives Goods from Supplier to Warehouse OR Store	MIR Receives Goods from Shofloor to Warehouse	Receive Measurement Sheets and work completed reports	Receive Service Work Completion Report	Scans QR Code to receive goods and enter data in ERP System	Inventory ITEM			
Create Logistics Shipment Documents	Create Logistics Trip Booking and Shipment Process and Documents for final Delivery	Create Logistics Trip Booking and Shipment Process and Documents for final Delivery	Create Inspection Appointment	Create Inspection Appointment	Write Meetings/MOM with Warehouse, Transporter, Client				
Checks Delivery Progress	Delivery done marked In Project Billing Item wrt . Marked Item ready for Billing.	Delivery done marked In Project Billing Item. Marked Item ready for Billing.	Delivery done marked In Billing Item. Marked Item ready for Billing.	Delivery done marked In Project Billing Item. Marked Item ready for Billing.	Reviews Items Delivered and Ready for Billing	Delivery Item = Billing Item+ BBU Item e.g. Supply 40%	Supply 40% - 5/5/2025	Install 40% - 7/9/2025	Test 20% - 31/12/2025
Milestone or Monthly Trigger: **AI Billing Agent**	Creates RABill and Proforma	Creates RABill and Proforma	Creates RABill and Proforma	Creates RABill and Proforma	Reviews RABill and Proforma	Delivery Item = Billing Item+ BBU Item e.g. Supply 40%	Supply 40% - 5/5/2026	Install 40% - 7/9/2026	Test 20% - 31/12/2026
TABLES	MRP, ROP, DCI, MR, PR, PO, RABILL, STKCARD	MPS, MFGORDER, RABILL, STKCARD	WO, DPR, MS, RABILL, STKCARD	TENDER, WO, RABILL, STKCARD	MEETINGS, MOM, TICKETS				
TASK SCHEDULAR	ERPPROJECDET	ERPPROJECDET	ERPPROJECDET	ERPPROJECDET	ERPPROJECDET				

4. Billing Scheduler Agent : RABILL

Customer/Salesmen	AI Billing Agent	AI Planning Agent	AI GST Agent	AI Accounts Agent	Human Review / Work				
Checks Delivery Progress and raises Bill Request	Creates RABill and Proforma based on Delivery done marked In Project Billing Item	Updates Project Item Delivery Plan, MPS, MRP, ROP AND PERT/CPM Plan etc.			Reviews RA Bill				
Checks RABill	Sends RABill to customer for Approval				Reviews Proforma				
If RABill Accept	Creates Invoice and sends to customer	Update BBU Process Status	Posts in GSTR1 Return	Creates Sales Voucher	Reviews Invoice	Delivery Item = Billing Item+ BBU Item e.g. Supply 40%	Supply 40% - 5/5/2026	Install 40% - 7/9/2026	Test 20% - 31/12/2026
If RABill Rejected	Send Ticket to Project Dept for Review				Reviews Rejected RA Bill				
TABLES	RABILL, PROFORMA, INVOICE	STOCKCARD, DCI, MR, PR, PO, DPR	GSTR1	VOUCHER					
TASK SCHEDULAR	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET				

5. Customer Payment Followup Scheduler Agent

Customer/Salesmen	AI Project Agent	AI Planning Agent	AI Sales Agent	AI Accounts Agent	Human Review / Work
Receives invoice	Trigger Payment collection Process	Updates Project Payment Process	Receives Payments		
	Creates Design Payment Followup prc	Updates Status of this process			
	Creates Supply Payment Followup prc	Updates Status of this process			
	Creates Const Payment Followup prc	Updates Status of this process			
IF Payment Delayed	Send Resolve Discrepancies Ticket for HR	Send Payment Followup Email			Resolves discrepancies
IF Payments Processed			Records payment	Create Receipt Voucher	Checks Outstanding
Receives Receipt			Sends Receipts		
TABLES	DESIGNRA, SUPPLYRA, CONSRA	COLLECTIONS	RECEIPT		
TASK SCHEDULAR	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET

6. Supplier Bill Passing and Payment Scheduler Agent

Supplier	AI Bill Tracking Agent	AI Bill Passing Agent	AI Payment Agent	AI Accounts Agent	Human Review / Work
Sends Bills	Tracks Bills via Email AI and enters in ERP	Check bills 2,3,4 Ways			
Sends Rectified Bill	If Not OK--> Send Bill Errors for rectification	If NOT OK --> Send for Human Review			Checks Bill Errors and rectify
	If OK--> Send to Bill Passing Agent	If OK --> Create Payment Advise	Processes Payments	Creates Purchase Voucher	Checks Oustanding
Payments Received			Sends Payments	Creates Payment Voucher	
TABLES	PINVOICE	PAYMENTS	CHEQUE	VOUCHER	
TASK SCHEDULAR	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET	ERPPROJECTDET